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A Grammar of Matses

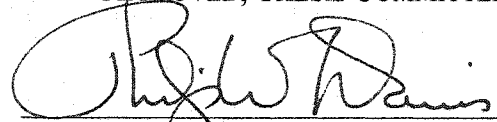
by

David William Fleck

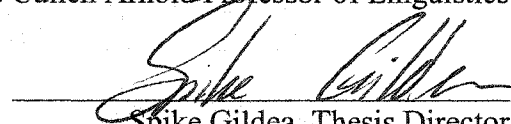
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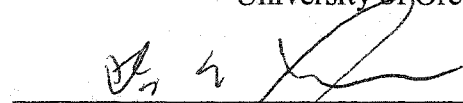
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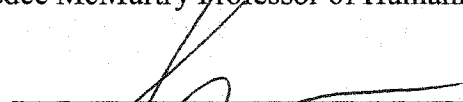
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ABSTRACT

A Grammar of Matses

by

David William Fleck

This dissertation is a synchronic description of the grammar of the Matses language (also known as Mayoruna; Panoan family) as currently spoken by the Matses people living in Amazonian Peru and Brazil. The Matses language is spoken by 2000-2200 people, Amerindians who were first contacted in 1969 and continue to pursue traditional subsistence practices. This is the first attempt at a comprehensive description of the grammar of Matses; full-length grammars of no other Panoan language exist.

Matses phonology, morphology, and syntax are the principal topics of this work. It follows a traditional format and is organized so that it can be used as a reference. The introductory chapter briefly provides information about classification of the language (particularly the Mayoruna subgroup), demography, physical setting, history, ethnography, literature review, and methodology. The second chapter describes Matses phonology, including an inventory of distinctive segments, syllable structure, morphophonology, prosody, sound symbolism, and borrowing. The next seven chapters are on morphology (an introduction to morphology, followed by six chapters describing the morphology of nouns, verbs, adjectives, adverbs, postpositions, and particles). All aspects of morphology are treated in these sections, including identification of word classes and subclasses, affixation, clitics, reduplication, and class-changing processes.

The last three chapters are on syntax (phrases, one-clause sentences, and multi-clause sentences). The appendix contains three parsed texts.

Matses has six vowels and 15 consonants. A word-level alternating rhythmic stress pattern characterizes the sound of the language. Morphologically, Matses stands between isolating and polysynthetic languages, and between agglutinative inflecting/fusional languages. It is the large number of morphological possibilities that is striking about Matses, not the length of its words. Interesting morphological properties include a complex system for coding evidentiality, an elaborate system of directional verbal suffixes, and adverb transitivity agreement. Constituent order is essentially free from syntactic restrictions. Subordination is achieved through expansion of syntactic slots through class-changing processes. Clause-chaining is a prominent feature of Matses discourse with sentences of up to ten clauses. Interesting syntax includes ergative-absolutive case marking alongside nominative-accusative person agreement, and three-place verbs with identical objects.

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LIST OF MORPHEME GLOSS ABBREVIATIONS

A	transitive subject	Inst	Instrumental
Abil	Abilitative	Intens	Intensifier
Abs	Absolutive	Intent	Intention
Adjzr	Adjectivalizer	Interr	Interrogative
Advzr	Adverbializer	Intr	Intransitive
Agt	Agent	Iter	Iterative
Antcaus	Anticausative	Loc	Locative
Antpass	Antipassive	Manr	Manner
Appl	Applicative	Mirat	Mirative
Aug	Augmentative	Narr	Narrative
Aux	Auxiliary	Neg	Negative
Cat.Ex	Category Extension	Npast	Nonpast
Caus	Causative	Nzr	Nominalizer
Charzr	Characterizer	O	object of transitive verb
Coll	Collective	Pass	Passive
Com	Comitative	Pat	Patient
Comp	Complimentary	Perf	Perfect
Cond	Conditional	Pl	Plural
Conjec	Conjecture	Poss	Possessee
Contr	Contrast	Poten	Potential
Counter	Counter-expectation	Purp	Purpose
Dim	Diminutive	redup	reduplication
Diff.Ref	Different Referents	Recip	Reciprocal
Dist	Distant	Rflx	Reflexive
Distr	Distributive	Rem	Remote
Dl	Dual	Separ	Separate
Dub	Dubitative	S	intransitive subject
Dur	Durative	Sg	Singular
Derog	Derogative	Tr	Transitive
Deintens	De-intensifier	Uncert	Uncertainty
Emph	Emphatic	Vzr	Verbalizer
Erg	Ergative	1	First Person
Ev.Init	Event Initiation	2	Second Person
Exper	Experiential	3	Third Person
Fut	Future	4	Fourth Person (= third-person co-referential)
Gen	Genitive	>	inter-clausal argument tracking (subordinate>main)
Hab	Habitual	- (dash)	morpheme break
Indic	Indicative	(space)	word break
Incep	Inceptive	:(colon)	divides sememes in a gloss
Incho	Inchoative	.(period)	divides words in gloss of a single sememe
Incompl	Incompletely		
Infer	Inferential		
Infin	Infinitive		

FOREWORD

When we were boys, whenever my friends and I met a kid who spoke a different language, we would sit around having a good time laughing as we asked intently what the words in their language were for fart, pee, poop, butt, and all those words. Who would have thought back then that one day I would receive a Ph.D. for doing just that sort of thing. Of course, I spent time learning a lot of other things about the Matses language, but eliciting “potty talk” as we lounged around in hammocks was always the funnest part. This enjoyment did not emanate just from the inherent comedy of this topic or even just from learning this extremely interesting language, but also from the friendliness of my Matses teachers as they generously shared their language with me. I always felt, as I learned their language and eventually became fluent, that I was being allowed to enter each time deeper into a magical world, into a way of thinking that could not be accessed or understood without knowing this “secret code.” This grammatical description is my way of sharing this experience with those who are interested. For this reason, I have strived to learn and include as much descriptive detail as possible about the Matses language in this work. I have tried to learn it correctly and thoroughly so that others can understand this language. I came to feel that it was my responsibility to describe and explain this treasure to the world and be true to its logic and intricacies. I have already been told that this dissertation is “too long.” I agree that it may indeed be too long for anyone who ventures to read it cover-to-cover. That is why, in addition to being organized into a logical sequence, this work is divided into numerous cross-referenced sections to help readers use it as a reference grammar, without having to read it all. I do not pretend to have done a complete or flawless job, but I have tried my best, with the hope that others will get some enjoyment from this description as they read it, and join me in the excitement and wonder of learning about the Matses language.

CHAPTER 1

GENERAL INTRODUCTION

1.1 Introduction

This dissertation is a synchronic description of the grammar of the Matses language as currently spoken by the Matses people living in Amazonian Peru and Brazil (Figures 1.1 & 1.2). The main part of this work is dedicated to the detailed description of all aspects of Matses morphology (chapters 3-9) and syntax (chapters 10-12). Chapter 2, on phonology, is included to orient the reader on topics relative to grammatical topics, such as morphophonology, definition of “word” vs. “phrase,” etc., but it is not intended to be an in-depth analysis of theoretical phonological issues in Matses. The principal goals were the detailed documentation of structure, function, semantics, and usage, rich exemplification, and identification of minor as well as language-wide grammatical patterns in the language.

The present chapter puts Matses in linguistic and ethnological perspective by reviewing comparative, historical, socio- and ethno-linguistic topics, as well as the language setting, including demography, physical and ecological environment, history, and ethnography (§1.4). This chapter also includes an exhaustive literature review on the Matses language and an abbreviated literature review of ethnographic studies among the Matses (§1.5). Section 1.6 describes the data collection and analysis methodology used in this study, including the author’s experience with the Matses and the field situation. The last section (§1.7) addresses some technical issues, including the format of the grammar, notational conventions and orthography, as well as an overview of the language.

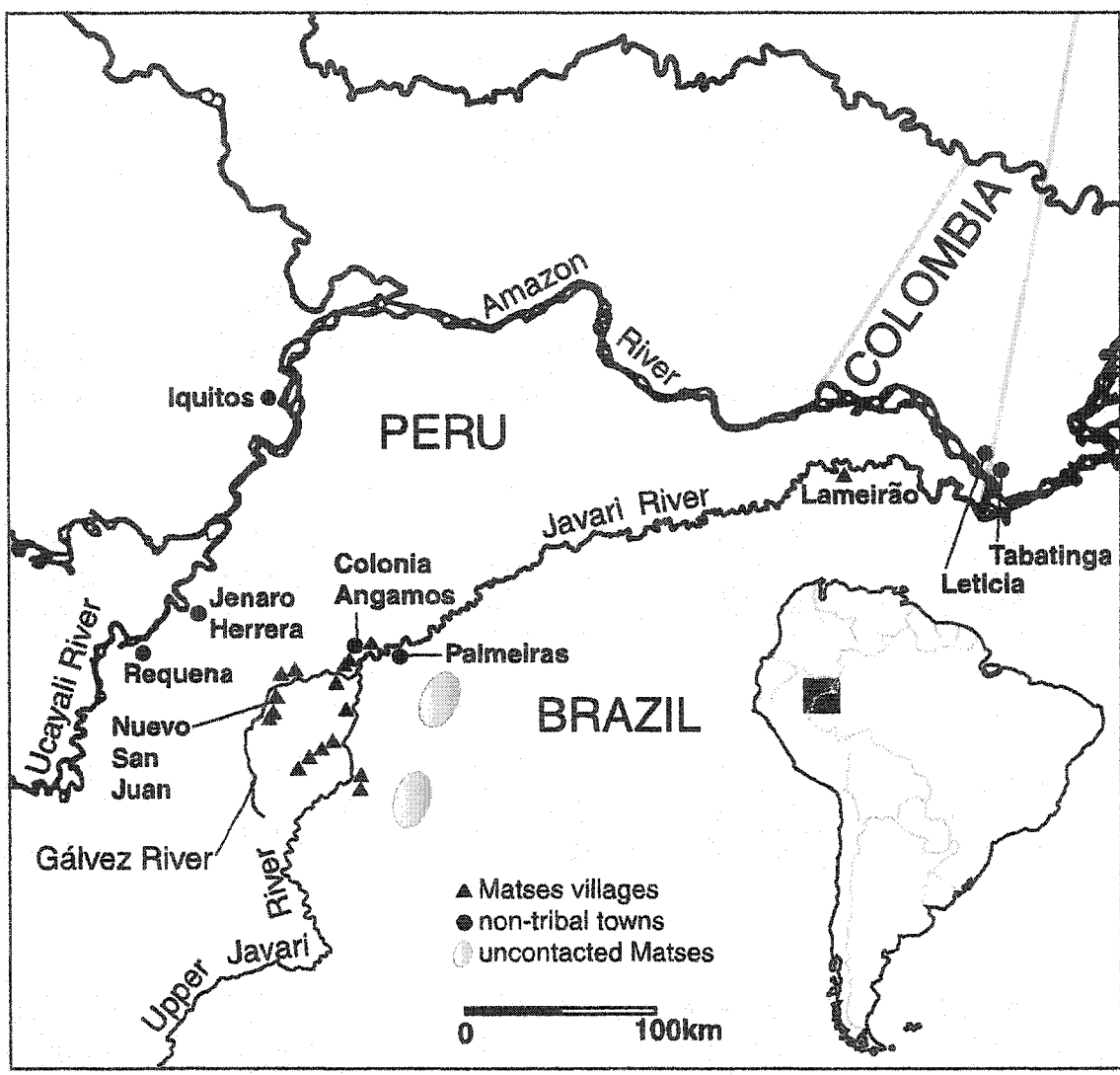


Figure 1.1. Map showing the location of all Matses villages inhabited in 2002 (14 in Loreto, Peru; 3 in Amazonas, Brazil), and nearby non-tribal towns and cities. This map also shows the areas where uncontacted Matses are believed to exist. The Matses village of Nuevo San Juan (73°9'50"W, 5°17'30"S, 150 m above sea level) on the Gálvez River is where most of the data for this study were collected. See Figure 1.2 for a closer view of the area with the highest concentration of villages.



Figure 1.2. Close-up view of the Gálvez River and Upper Javari River area where most of the Matses villages are located. This map shows all 14 of the Peruvian Matses villages and two of the three Brazilian Matses villages (see Figure 1.1 for the location of Lameirão, the third Brazilian Matses village, on the lower Javari River). Buenas Lomas Antigua, is the location of the SIL mission and airstrip.

1.2 Denominations and autodenominations

The group of people whose language this grammar describes are known as and call themselves “Matses” (*Matsés* in Spanish and Portuguese).¹ In their language, the term matses is polysemous: whereas it can refer to any human or to people as a general category, in other contexts it refers strictly to Matses speakers, who are arguably the category prototype (see §1.3.4 below for details on the semantics of the term matses and the Matses’ ethnic classification of humans). The academic literature on the Matses now uses the term Matses to refer to this group, a practice evidently initiated by Steven Romanoff (1976, 1983, 1984).² Prior to this, the Matses were referred to as “Mayoruna” (in both English and Spanish), and early linguistic and anthropological publications on the Matses can be found using this term (e.g., Kneeland 1979a, Fields and Merrifield 1980). The term Mayoruna can still be found today in journalistic sources, as well as a few recent academic publications (e.g., Milton 1991, 1994). The Matses now know that the term Mayoruna refers to them, but it is not a Matses word, and they claim to have been unfamiliar with it prior to contact with SIL personnel in 1969. The term Mayoruna

¹ The term Matses is both singular and plural, in Matses and in English. In Spanish and Portuguese the correct spelling of Matses is with a written accent on the *e* (*Matsés*), in accordance with the languages’ orthographic rules. But neither in SIL Matses orthography (which has no marking of stress) nor in a more accurate orthography that would capture phonemic stress (see the phonology chapter), would the word matses carry a written accent, so there is no reason to write one in English, although some recent authors have done so (e.g., Cooper 2000, Soares 2000, internet web pages). In Spanish and Portuguese, *Matsés* is likewise both singular and plural (e.g., Spanish: *los Matsés*, *un Matsés*). Note that in strictly formal Spanish writing, language and nationality/ethnic group names are not capitalized (e.g., *español*, *los españoles*; *vasco/vascón* ‘*Basque*’). Similarly, in standard written Portuguese, when referring to the Matses language (rather than the people) or when used as an adjective, the word should not be capitalized (i.e., *os Matsés*, but *a língua matsés*). However, it is common practice in South American linguistic and anthropological literature for Indian tribe/language names to be capitalized throughout instead, even as adjectives.

² Steven Romanoff, an American anthropologist, conducted dissertation research among the Matses in 1974-6, and was the first anthropologist to do so. To my knowledge, Romanoff (1976) contains the first published use of *Matsés* (in Spanish) to refer to the Matses; Romanoff (1983) contains the first use of the designation “Matses” in English. Romanoff (1984) argues for the use of Matses instead of Mayoruna to refer to this group of people.

was a term used since the late 1600s by Jesuit priests to refer to peoples inhabiting areas between the Huallaga and the Javari Rivers.³ There is reason to believe that at least some of these people were ancestors of the Matses, but due to sketchy historical records the exact nature of this descent is unknown, and some authors (e.g., Romanoff 1984) have asserted that there is no necessary connection between the Matses and the historical Mayoruna (see §1.4.4 on Matses history). More recently, Erikson (1994) has designated the term “Mayoruna” as a cover term to include the Matses, Matis, and some other closely related northern Panoan groups (see next section).

1.3 Matses comparative and historical linguistics

Based on a preliminary comparison of Matses with some other Mayoruna languages, this section shows the relationship of Matses to other similar languages in the present and past. Section 1.3.1 describes the classification of Matses into family, stock, etc., based on the published literature. Section 1.3.2 compares Matses to other extant Mayoruna varieties to explore their status as dialects vs. independent languages. Section 1.3.3 compares Matses to historical Mayoruna lexicons to determine which can be identified as closely related to Matses. And section 1.3.4 offers a brief explanation of Matses traditional classification of the different ethnic groups of people in the area.

1.3.1 Genetic classification

Matses is a member of the Panoan linguistic family (*Pano* or *pano* in Spanish, Portuguese, French, etc.). There seems to be no controversy at all about this, as the

³ The term Mayoruna has multiple variants and synonyms (mostly from the historical literature) including: Maxuruna, Majuruna, Mayiruna, Maxirona, Mayuzuna, Barbudo and Dallus (Steward and Métraux 1948:551). Matlock (2002) lists several more: Macurunas, Mayuzunas, Mairomas, Mayu, Maxiruna, Magirona, Majeronas, Mangeroma, Mangeronas, Mayruna and Maiyu. The etymology of the term Mayoruna is not completely certain: it is most likely of Quechua origin meaning either ‘river people’ or ‘people of the Mayo River.’

Panoan language family is fairly uniform linguistically (Shell 1965/1975) and culturally (Erikson 1992, 1993b; Erikson *et al.* 1994). The different Panoan groups occupy a fairly contiguous territory in eastern Peru, western Brazil, and northern Bolivia. The grouping of the Panoan and Takanan language families is generally accepted (“proved beyond doubt” according to Suárez 1973:137), but a few authors remain somewhat skeptical (e.g., Loos 1999). A Proto-Takanan reconstruction can be found in Girard (1971); see also Key (1968). Pano-Takanan is then usually placed into a stock called Macro-Panoan (called “Tacapano” by Swadesh 1960; “Macro-Pano” by Lathrap 1970; and “Macro-Pano-Takanan” by Suárez 1973). Much more controversial (e.g., Dixon and Aikhenvald 2000, Rodrigues 2000) is Greenberg’s (1987) classification of Macro-Panoan into his Ge-Pano-Carib phylum. Rhulen (1987:241; 374-377), following Greenberg (1987), provides the following classification (abbreviated; numbers in brackets represent number of extant languages):

AMERIND

VI GE-PANO-CARIB [117]:

A MACRO-CARIB [47]

B GE-PANO [70]:

1 MACRO-PANOAN [49]:

- a †CHARRUAN [0]
- b †LULE-VILELA [0]
- c MASCOIAN [5]
- d Chimane (= Moseten)
- e MATACO-GUAICURU [9]:
- f PANO-TACANA [34]:
 - i PANOAN [25]
 - ii TACANAN [9]

2 MACRO-GE [21]

Lathrap (1970:79) notes about the Panoan family:

Panoan is a relatively small linguistic family in terms of the number of constituent languages and in terms of the geographical range of its speakers. The diversity

among Panoan languages is not great, certainly less than that of the Maipuran family of Arawakan, suggesting that the dispersal of the Panoan speakers from the original hearth of Proto-Panoan has been a relatively recent development.

Erickson *et al.* (1994) list 34 different extant Panoan groups and Loos (1999) recognizes 30 languages in the Panoan family, of which only 19 are extant. Multiple different subgroupings of the Panoan family exist in the literature (e.g., Tovar 1961, Loukotka 1968, Shell 1965/1975, Rhulen 1987, Erikson *et al.* 1994, Fabre 1998); below I reproduce the most recent, offered by Loos (1999:229):

The Yaminawa subgroup

- 1 Yaminawa
- 2 Amawaca
- 3 Cashinawa/Honikoin
- 4 Sharanawa/Shanindawa/Chandinawa/Inonawa/Marinawa
- 5 Yawanawa
- 6 Chitonawa
- 7 Yoranawa/Nawa/Parquenawa
- 8 Moronawa
- 9 Mastanawa

The Chacobo subgroup

- 10 Chacobo
- 11 † Arazaire
- 12 † Atsawaca
- 13 † Yamiaka
- 14 Katukina/Camannawa/Waninnawa
- 15 Pacawara

The Capanawa subgroup

- 16 Capanawa/Pahenbakebo
- 17 Shipibo/Conibo/Xetebo
- 18 † Remo
- 19 Marubo
- 20 † Wariapano/Panobo/Pano
- 21 Isconawa
- 22 † Canamari/Taveri/Matoinahã

Ungrouped languages

- 23 Cashibo/Cacataibo/Comabo
- 24 † Culino
- 25 † Karipuná
- 26 Kaxariri
- 27 **Matses/Mayoruna**
- 28 † Nokamán
- 29 † Poyanáwa
- 30 † Tutxinawa

While Loos (1999) categorizes “Matses/Mayoruna” as one of 8 “ungrouped languages,” Erikson *et al.* (1994) place Matses into a subgroup termed “Northern Panoans” or “Mayoruna” together with Matis (autodenominated *mates*; Ferreira 2001a), Korubo, Maya, Kulina-Pano (all in western Brazil) and a dozen unknown uncontacted groups. According to Erikson (1994:20), the term would also include about a half-dozen probably extinct groups, some of whose survivors lived among the Matses, referred to by the Matses using the general term mayu ‘non-Matses Indian,’ and including the Nakwa, Pacha, Chekachama, and Kapishto. The Matses language or the Mayoruna language group has been identified as the most deviant in the Panoan family by Kneeland (1994), Izaguirre (1922-29; cited in Erikson 1994:17), Dorigo (2001), Dorigo and Costa (1996; cited in Dorigo 2001), Lanes (2002) and Lanes (2000; cited in Lanes 2002). I have not done comparative work on the Panoan family yet, so I cannot offer my own classification. However, having read Loos’ (1999) general description of the Panoan linguistic family, I note that Matses stands out as exhibiting exceptions to most of his generalizations of characteristic linguistic traits of the family.

On cultural grounds (and consistent with traditional habitation along major rivers vs. interfluvial upland forest), a binary distinction is often made between “riverine Panoans” and “backwoods Panoans” (e.g., Lathrap 1970). Matses (and Mayoruna in general) are considered part of the latter subdivision.

1.3.2 Mayoruna languages and dialects

The use of the term “Mayoruna” in the classifications mentioned in the preceding section brings up a very important issue about Matses and the similar northern Panoan languages listed by Erikson (1994). Loos (1999) does not list Matis, Korubo, Maya or Kulina-Pano in his classification, so one might infer that he considers them dialects of Matses, rather than separate languages. Unfortunately, Loos (1999), did not specify whether he means “Mayoruna” to be a synonym of “Matses,” or whether he uses the term as Erikson (1994) does (or perhaps he may have simply overlooked these little-known groups). Erikson (1994), by contrast, makes it explicit that he intends Mayoruna to be taken as a superordinate term, rather than a synonym of Matses, and provides ample justification for using the term thus. I agree with Erikson, and henceforth when referring to modern groups I will use the word Mayoruna in this superordinate sense, rather than as a synonym of Matses.⁴ Whether the Mayoruna varieties are dialects of a single language or independent but closely-related languages is a complex issue, as anecdotes about mutual intelligibility and the results of lexicostatistic comparisons are contradictory. There is essentially no linguistic data available for Korubo, Maya and Kulina Pano, the first two of which remain for the most part uncontacted. Philippe Erikson mentions that the Korubo claim to “speak the exact same language as the Matis” (1994:20), reports that the Matis claim to “speak practically the same language as [the Kulina Pano]” (1994:20), and cites a source reporting that “Matses interpreters for the FUNAI claimed to be able to understand [the Maya] (with some difficulty) during a brief encounter in 1978” (1994:22; all translations mine from the Spanish original). Additionally, one old Matses man told me that he has contacted the Matis by shortwave radio, and while he could not understand

⁴ Note, however, that in its historical usage, it is not so easy to be precise about the referents of the term Mayoruna, as will be seen in the following section and section 1.4.4.

most of them at all, he was able to find one Matis man with whom he able to communicate some simple ideas. One young Matses man who went to work on the Itui River among the Matis said that it took him two months before he could have meaningful conversation, though from the beginning he could convey simple ideas. In 2002, I showed a video tape of a documentary on the Matis (Jillings 1998) to several Matses people individually, and then to several large groups (in Iquitos and in Colonia Angamos), and they (and I) were able to recognize almost nothing of Matis speech (the very fast speech of the Matis seems to be a confounding variable). Thus, these accounts suggest that the Mayoruna varieties are linked by varying levels of mutual intelligibility (i.e., from readily mutually intelligible, for Matis, Korubo and Kulina Pano, to marginally mutually intelligible for Matses and Matis, and Matses and Maya), a recognized rule of thumb for identifying dialect vs. language status.

Paradoxically, my preliminary lexical comparison of Matis and Matses using a 200-word list provided by Ferreira (2001a)⁵ compared to Matses data elicited by me found that only 53-72% of the terms were cognate.⁶ According to Crowley (1997:184), a shared cognate percentage in core vocabulary of 55-81% indicates two independent languages in a subfamily (or under another system that does not consider subfamilies, 36-81% is indicative of two independent languages in one language family). A the range of 53-72%, then, assuming the accurate value lies somewhere in between, fairly squarely places Matses and Matis as independent languages in a subfamily, rather than dialects of

⁵ (Spanguero) Ferreira (2000) provides the exact same list (with some spelling discrepancies). The lists are in the form of Matis-Portuguese and Portuguese-Matis word lists. The lists contain 85% of the words in the Swadesh 200 word list (Swadesh 1955). The Matis word lists were revised by Philippe Erikson, and multiple entries were corrected, but some mistakes probably remain.

⁶ Due to the unreliable nature of some of the Matis data, I provide a range, rather than a single figure: the first figure, 53%, is a conservative one in that it excludes all questionable or (phonetically or semantically) marginal matches, the second figure 72%, in an inclusive figure that includes all questionable and marginal matches, including matches with Matses archaic forms.

a single language. Furthermore, my review of recent theses on Matis phonology (Ferreira 2000) and grammar (Ferreira 2001a) revealed enough grammatical differences with Matses, that I would hesitate to call them dialects of a single language.⁷ My impression is that the languages are even more dissimilar than Spanish and Portuguese.

One possibility is that mutual intelligibility is achieved through simplification of word and sentence structure and by reverting to archaic vocabulary, similarly, perhaps, to the situation described in Loos (1999) where speakers of Cashinawa and Sharanawa (two Panoan languages in Loos' Yaminawa subgroup) resort to a pidgin language when they communicate with each other. Thus, based on my lexicostatistic comparisons, preliminary comparison of Matses and Matis phonology and grammar, and the fact that Matses and Matis are only marginally mutually intelligible, I suggest here that Matses and Matis be considered separate languages. But they are similar enough to each other, and different enough from other Panoan languages that it makes sense to group them together into a subfamily (i.e., Erikson's Mayoruna subgroup). Korubo, Maya and Kulina Pano may very well be dialects of Matis, as suggested by the anecdotes reported by Erikson (1994), but I cannot make an informed judgment on that at this time.

To Erikson's Mayoruna category, I can confidently add Chankuëshbo,⁸ language currently spoken by only two known native speakers. Both of these speakers are old women who were captured as very young women by Matses raiders from a locality described by the captives and captors as what is most likely the east margin of the Ituí River in Amazonas, Brazil. One of these Chankuëshbo speakers lives in Nuevo San

⁷ Two examples are that Matis has 7 vowel phonemes compared to the Matses 6, and the two languages have completely different sentential negation strategies.

⁸ The term literally means 'toucan clan people.' It is the clan name of at least one of the living speakers (they have no autodenomination), and is the term by which Matses refer to them. It is pronounced [tʃáj.kwɨʃ.bó] by the speaker I worked with, and the Matses pronounce it either the same way or as [tʃjáj.kwɨʃ.bó].

Juan, and I have collected long word lists from her language. She is an old woman now, and although she is very honest, consistent and enthusiastic, she unfortunately has trouble remembering some terms. Preliminary comparison of a core lexicon I collected from her shares 71-85% cognates with Matses, and 58-68% with Matis (Table 1.1). However, numbers may be inflated for the Matses-Chankuëshbo comparisons since she may be innocently producing Matses vocabulary for forgotten Chankuëshbo terms.⁹ These languages were probably all dialects of a single language several hundred years ago.

Table 1.1. Preliminary lexicostatistic comparisons of three extant Mayoruna languages.

	Clear cognates ^a	All cognates	Number of comparisons
Matses-Matis	53%	72%	198
Matses-Chankuëshbo	71%	85%	189
Chankuëshbo-Matis	58%	68%	187

^a Excludes marginal and questionable cognate matches, as well as any archaic forms.

At the other end of the dialect spectrum, it is possible to identify two very similar Matses dialects. These can be called the Brazilian Matses Dialect and the Peruvian Matses Dialect. The Brazilian Matses Dialect is spoken by the people living on the Brazilian side of the Javari River and in the Matses village of Nuevo Cashishpi, which is located on the Peruvian bank of the Upper Javari, literally a stone's throw from Brazil (if there were any stones to throw) (Figure 1.2). The Peruvian Matses Dialect is spoken in the rest of the Peruvian villages¹⁰. The first village I worked in (as a zoologist) was

⁹ I had expected the Chankuëshbo language to be more similar to Matis, considering their probable homeland is near the present location of the Matis. There is some indication that Chankuëshbo might be the same language as Korubo.

¹⁰ The Matses village of San José de Añushi stands in between the two dialects, being located geographically among the Peruvian Matses villages (on the lower Gálvez), while having closest kinship ties to the Brazilian and Nuevo Cashishpi Matses.

Nuevo Cashishpi, and I have contact with Matses from Nuevo Cashishpi occasionally at Colonia Angamos, so I have first-hand experience with the Brazilian dialect, though I have not studied it linguistically and I have never been to the Brazilian villages. In 2001, a Peruvian Matses man who had married a woman from the Brazilian Matses village of Trinta e Um visited in Nuevo San Juan for several weeks, and I was able to converse with the woman and hear her husband's impressions of her speech. I have noticed several lexical differences; the ones I jotted down are listed in Table 1.2.

Table 1.2. A few lexical differences between the Brazilian and the Peruvian Matses Dialects.

Nuevo Cashishpi/Trinta e Um	Nuevo San Juan
<u>bada</u> 'shotgun'	<u>chompian</u> 'shotgun'
<u>bedcate</u> 'flashlight'	<u>tabote/cachita iste</u> 'flashlight'
	<u>bedcate</u> 'photographic camera'
<u>ampada</u> 'plate'	<u>pada padaid</u> 'plate'
<u>anshodo</u> 'bowl'	<u>tasun</u> 'bowl' (Spanish borrowing)
<u>chështe chiun</u> 'spoon'	<u>cuchada</u> 'spoon' (Spanish borrowing)
<u>nunte/cano</u> 'canoe' (synonymous)	<u>nunte</u> 'palm trunk canoe'
	<u>cano</u> 'hardwood dugout canoe'
<u>bata</u> 'papaya'	<u>dectad</u> 'papaya'
	<u>bata</u> 'sweet; species of wild trees with tiny sweet fruits'
<u>padu/acte</u> 'river' (both in common usage)	<u>padu</u> 'river' (never used, considered archaic)
<u>tëshë</u> 'meat'	<u>acte</u> 'river' (the term in common usage)
	<u>pambid</u> 'meat'
<u>siabud</u> 'vomit'	<u>tëshë</u> 'piece of something (e.g., meat)'
<u>bimbi/mimbi</u> 'you: Ergative'	<u>ucbud</u> 'vomit'
<u>bibi/mibi</u> 'you: Absolutive'	<u>mimbi</u> 'you: Ergative'
<u>iqui/nuqui</u> 'we/us (1+2)'	<u>mibi</u> 'you: Absolutive'
	<u>nuqui</u> 'we/us (1+2)'

Note: Most Matses that speak the Peruvian Matses Dialect are familiar with all the terms in this table, but do not use the Brazilian Matses Dialect terms on an every-day basis, and remark that they consider them odd.

As can be seen in Table 1.2., many of the differences are for objects that were recently introduced into Matses culture. Also, the Brazilian Matses are in contact with Portuguese speakers, and borrow more from Portuguese than from Spanish (although sometimes it is not evident whether a word was borrowed from Spanish or Portuguese). The Matses at Nuevo San Juan remark that the Brazilian Matses speak slower, and exaggeratedly imitating the Brazilian “slow speech” is a great source of merriment for them. Using Brazilian Matses Dialect terms like those in Table 1.2 also frequently elicit laughter for the Peruvian Matses. My impression is that the two dialects differ about as much as Midwestern and Southern American English, and somewhat less than Lima and Loreto Spanish.¹¹

1.3.3 Comparisons with early “Mayoruna” lexicons

As noted above and will be discussed in section 1.4.4, the historical literature has many references to Mayoruna groups based on dubious identifications with respect to the relationship of the people in question to other historical Mayoruna and to the present-day Mayoruna (Matses, Matis, etc.). Several of these sources provided short lexicons, and the purpose of this section is to try to understand more about the identity of Mayoruna in the historical record by comparing the lexicons to each other and to modern Matses.

The first of such lexicons to enter the available literature (to my knowledge), is Johann Baptist von Spix’s 137-word Maxuruna lexicon collected in Tabatinga around 1820 (Spix and Martius 1831:III,1188).¹² Francis de Castelnau (1851:V,299-300) later

¹¹ I know almost nothing about the language variety spoken by the Matses at Lameirão located on the lower Javari River (see Figure 1.1). However, their separation from the main group of Brazilian Matses on the Upper Javari occurred in 1978 (following a conflict with other Matses) (Melatti 1981), so it is not expected that their speech should deviate much from that of the other Brazilian Matses.

¹² I got Spix’s list as a Latin-Maxuruna lexicon reproduced in Martius (1867:II,236-237); possibly the original was German-Maxuruna. The editions of Spix and Matius (1867) that I have been

provides two lexicons for two recognized Mayoruna varieties: a 54-word lexicon for the *Mayorunas civilisés* ('civilized Mayoruna') and an 80-word lexicon for the *Mayorunas sauvages* ('savage Mayoruna'); both are French-Mayoruna and collected around 1845. These lists, despite being short, contain words that could be considered for the most part core vocabulary, and therefore not so likely to change over time. While comparison of Matses and Matis with other extant languages can be improved by studying the languages more closely, for these historical groups we cannot obtain more precise quantitative results due to the finite number of possible comparisons that can be made among the lexicons. And for the comparisons of these historical lexicons with modern Matses there is the additional diachronic variable (157/182 years). Therefore, any conclusions we draw are tentative and unavoidably imprecise. The comparisons produced the results in Table 1.3:

Table 1.3. Comparisons of historical Mayoruna lexicons and modern Matses.

Languages compared		Clear cognates ^a	All cognates	Number of possible comparisons
M. civilisés	& M. sauvages	73%	81%	52
M. civilisés	& Maxuruna	61%	74%	31
M. sauvages	& Maxuruna	55%	71%	49
Maxuruna	& Matses	48%	74%	136
M. civilisés	& Matses	41%	70%	56
M. sauvages	& Matses	40%	71%	83

^a Excludes marginal and questionable cognate matches.

If, for the sake of argument, we make the assumption that the relative similarity of these lexicons reflects the actual relative relatedness of these languages, one trend that stands

able to view (e.g., Spix and Martius 1966) do not include the lexicon. Perhaps only the original edition contains it, or the reference in Martius (1867) is erroneous. Martius (1867:II, 238-239) also reproduces Castelnau's Mayoruna lexicons (as Latin-Mayoruna word lists).

out is that Castelnau's two groups are the most closely related to one another. In fact, if we consider Crowley's (1997) ranges mentioned in the preceding section (81-100% = dialects of a single language; 55-81% = independent languages in a subfamily), it looks like Castelnau's two Mayoruna varieties border on dialect status. Meanwhile, Spix's Maxuruna appear to have spoken a separate, but closely-related language. Comparison with Matses also suggests that these historical varieties are closely related to Matses (and therefore all appropriately considered part of Erikson's Mayoruna subgroup), but in my impression is that these historical Mayoruna are not the direct predecessors of the Matses, but rather that Matses came from a fourth similar variety.¹³ With this information in hand, it is tempting to speculate that the linguistic situation at the time was that of a dialect continuum, where neighboring groups spoke closely-related, readily mutually intelligible languages (like Castelnau's two groups) while groups at the extremes of the continuum spoke languages distinct from each other. This is a likely scenario in light of the apparently fairly contiguous nature of Mayoruna territory at the time. It is also possible, however, that some Mayoruna groups spoke distinct languages, unrelated by intervening dialects, perhaps due to geographical isolation, earlier separation from the core/other groups, and/or unfriendly (hostile or avoidance) relationships with other Mayoruna groups. This hypothesis of a Mayoruna language continuum is made more compelling by the fact that there are many captives among the Matses that are the last living speakers of Mayoruna varieties that are very similar to Matses (e.g., Chankuëshbo), the implication being that more than 50 years ago there were a lot more Mayoruna groups in the area. The dialect continuum would have at least partially broken down as the extinction of intervening Mayoruna varieties left the extant Mayoruna groups isolated from one another. Simplification of word and sentence structure, use of archaic

¹³ I still have not compared Matis and Chankuëshbo to these historical Mayoruna lexicons, but it is possible that the results will suggest some linear relationships.

lexicon and/or familiarity with the other languages may have facilitated inter-group communication between more distinct Mayoruna languages. The Mayoruna groups familiar to the seventeenth-century Jesuits were likely even more similar to each other at the time, so that these priests, arguably the people most intimately familiar with historical Mayoruna languages, were not compelled to label them as different groups, though they probably noted some differences, as did Castelnau.¹⁴

The situation is different with the only Mayoruna word list available from the early twentieth-century. The list in question is Tessmann's (1930:378) 35-word German-Mayoruna lexicon (plus about 79 glossed terms in his prose) collected in Peru at Requena (at the confluence of the Ucayali and the Tapiche River; Figure 1.1). Tessmann's lexicon appears to not even be from a Panoan group¹⁵: of the 109 comparisons I was able to make; only 4 are clearly cognates and an additional 5 terms are questionable/marginal cognate forms (= 4-8%; a range of figures that suggest they are not even in the same stock, according to Crowley's [1997:173] ranges). Therefore, this represents a misidentification, at least as far being a group closely related to the ancestors of the present-day Matses (or Mayoruna). It is possible that Tessmann's informant was being dishonest about the denomination of his group, but it is more likely that the term Mayoruna (and variants of the term) were initially used to refer to more than one circumscribed group of Indians by Jesuits, and that later it began to be uncritically overused in the centuries after the Jesuits left due to the lack of familiarity with the then mostly uncontacted groups, including non-Panoan groups in the area. See section 1.4.4

¹⁴ The Barbudos, a group known during the period of the Jesuit missions (fifteenth and sixteenth centuries), may have been a recognized Mayoruna subgroup (see Matlock 2002).

¹⁵ Loukotka (1968:146) identified this group (autodenominated "Morike," according to Tessmann 1930) as an ungrouped language (called "Morique or Mayoruna," by Loukotka) in his Arawak stock, and little else has been written about it. Aikhenvald (1999) lists Morike/Mayoruna as an extinct language in her South-Western Arawak group. More comparisons need to be done to see if it can be identified as an extant language, but most likely it is extinct.

and Matlock (2002) for a historical perspective on this topic. The only other relevant word list with which I am familiar is Alviano's (1957) Portuguese-Maioruna/Magirona list of 503 words and phrases, collected on the Jandiatuba River in Brazil from the self-proclaimed last living speaker of the language, who claimed that his tribe recently arrived there from the Ucayali River in Peru. The language that Alviano documented is clearly Panoan, but is clearly not identifiable as Matses, Matis or Chankuëshbo. I have not done a quantitative or careful comparison of Alviano's list to the extant and historical Mayoruna languages, so I cannot say yet whether it belongs in the Mayoruna subgroup or not (a forthcoming paper will explore this issue).

1.3.4 Matses ethnic classification

The notions of the Panoan family and the Mayoruna subgroup are reflected to some extent in the prototype structure of Matses terminology for classifying groups of humans. The Matses classify humans primarily using three words: matses 'Matses/Indian/human' mayu 'non-Matses Indian' and chotac 'non-Indian.'

The term matses is polysemous: whereas it can refer to any human or to people as a general category, in other contexts it refers strictly to Matses speakers, who are the category prototype.¹⁶ By inference, then, (and confirmed by older speakers) the Matses, at least traditionally, consider themselves humans *par excellence*, but do not necessarily consider outsiders non-human. The term Matses can be used to designate categories of intermediate inclusiveness, as well, such as Matses-like Indians or Indians in general. The term matses utsi 'other Indian' is typically used to refer to closely related Indians,

¹⁶ This type of multi-level polysemy, where the general category term is also the prototype term, is a common feature of Matses classification. The fact that the term matses-quio refers only to the Matses in any context supports the prototype analysis (the enclitic -mbo/-quio marks prototypes, meaning "real" or "true" following noun phrases; §4.6.6). Captives living among the Matses, for example, are not matses-quio 'true Matses.'

especially those with similar languages that the Matses claim to be able to at least partially understand (such as those which I have been identifying as Mayoruna languages). These languages, according to Matses speakers I have worked with, include those spoken by captive women living among the Matses, including Chankuëshbo (introduced above), Dēmushbo (see third text in the appendix), Kapishto, Paud Usunquid and others. Phrases like cun matses ‘my people,’ min matses ‘your people’ debin matses ‘David’s people,’ etc., are used to refer to members of one’s tribe (in the case of Indians) or race/country (in the case of non-Indians). In still other contexts, the word matses may refer to the speaker’s co-resident or closer kin. (See the third text in the appendix for examples of various different usages of the term matses.) As with some Matses kinship terms, the exact referent depends on context (see Romanoff 1984 on siblings and parallel cousins).

The term mayu can be a generic term to refer any non-Matses Indian, and has as its prototype non-Panoan Indians. With the augmentative enclitic ‘-mbo/-quio,’ mayu-mbo refers to an Indian whose language cannot be understood and sounds very different from Matses (“sounds like a frog when they talk” is a frequent description of mayu-mbo speech offered by Matses speakers). Nowadays, the term mayu might also be translated as ‘uncivilized Indian,’ as most Matses consider themselves to be more civilized¹⁷ than anybody else, whether it be with respect to traditional or newly-acquired cultural traits. Some Matses frequently called me “mayu” in jest when I went hunting barefoot or when I preferred food without salt, since now many young men hunt with tennis shoes or rubber boots, and most Matses now like their food salty (but did not a generation ago). Similarly, boys who always shuck their clothes are sometimes jokingly called “mayu.”

¹⁷ What I mean by “civilized” here is not assimilation to Western culture, but civilized in the sense of behaving in a correct and human-like manner. So non-Indians are still considered inferior at least by most older Matses, and they often criticize local non-Indians’ (stereotyped) behavior, such as dishonesty, greed, laziness, eating of taboo animals, etc.

The term mayu matses is frequently employed instead of just mayu, but rather than being somehow a blending of the terms mayu and matses, it just means ‘mayu.’ Note that while any group of non-Matses Indians may be referred to as “mayu” by the Matses, it is not a Matses denomination for any particular group.¹⁸

The term chotac is reserved for non-Indians, and the category prototype is the Peruvian *mestizos* (the local non-tribal Peruvians, almost all of whom are of mixed Spanish/Portuguese-Indian descent) who may also be called chotac chëshë ‘black/dark-colored non-Indian,’ to refer to them more specifically. (Light-colored) Americans and Europeans are referred to simply as chotac or more precisely as chotac ushu ‘white/light-colored non-Indian’ or as matses ushu ‘white/light-colored person.’¹⁹ The term chotac is a noun, but like most nouns it can be used as an inchoative intransitive verb (i.e., to become X) by simply adding verbal inflection. So, for example, the expression chotac-ac (nonIndian-Inferential) ‘S/he has turned into a non-Indian’ is used to joke or criticize people for adopting typical non-Indian behavior, such as charging money for food, justifying being lazy because it is Sunday, wearing make-up, etc. A generation ago, a

¹⁸ Fields (1970) (also in Jackway 1975) provides a short word list elicited from two Matses men whose mother had been kidnapped from a group Fields designated as “Mayu.” While I suggest that this was not the Matses denomination (nor, as Fields acknowledges, an autodenomination), of the several lexicons she provides, this is the only one that is clearly not Panoan, and therefore the one most prototypically “mayu.” Interestingly, of 19 comparisons that could be made between Fields’ “Mayu” (including words collected by Steven Romanoff from of these same men) and Tessmann’s (non-Panoan) Mayoruna/Morike (introduced in the preceding section), 10 were clear, almost identical matches (55%), and an additional 7 were probable/possible matches (total = 53-89% cognate matches).

¹⁹ It is interesting that the category prototype of a term that means ‘non-Indian’ should be *mestizos*, who are partly, mostly and even in some cases possibly full-blooded native Amazonians, and therefore many are similar in stature and appearance to the Matses, as opposed to Americans/Europeans who could be considered “more non-Indian.” Their prototype status seems to be motivated by several other factors: i) *mestizos* are the most numerous non-tribal people in the area, while Americans/Europeans are more of an oddity; ii) the Matses saw *mestizos* long before they met any white Americans/Europeans (presumably the first being SIL missionaries); and iii) there is racial tension between Matses and *mestizos* living nearby and, for the most part, they dislike each other and are in conflict over natural resources in Matses territory.

male captive might be referred to as a pet. Some old Matses recognize the term naua as meaning 'non-Indian,' but it is considered an archaic or a Dēmushbo Indian term, and is not used by the Matses.

1.4 Setting

1.4.1 Demography

Current estimates of the number of Matses speakers vary (currently, all Matses speak Matses), ranging from “fewer than 1000” (Dorigo 2002:102) to 2500 (Pozzi-Escot 1998). Many of these figures appear to be based on guesswork, so here I attempt to give more substantiated figures. The most accurate current estimates of Matses population numbers can be found in Matlock (2002), who estimates a total of about 2000-2100 Matses in 1998. Matlock (2002) used a 1993 national census, a 1996 local government census, and a census conducted by him in 1998 to calculate a total of 1314 Matses living in the Peruvian Matses villages plus about 35 Matses living in non-tribal towns and cities in Peru. Data for Brazil are less current and accurate: Matlock (2002) estimates fewer than 500 living in contacted villages (CEDI 1987 reported 370 Matses in Brazil) and perhaps a few hundred living in an uncontacted state. During the past five years, it is likely the population has gone up considerably due to the high birth rate combined with a low infant mortality rate, perhaps by 50 or 100. My current estimate would be 2000-2200 for 2003. In 1976, there were only approximately 823 Matses (508 in Peru) (Romanoff *et al.* to appear), so in the last 27 years the Matses population has more than doubled. This is consistent with the levels of moderately high fertility and moderate childhood mortality estimated on the basis of fertility histories gathered at the start of that period (Romanoff 1984). It is hard to estimate the Matses population prior to their first permanent contact with outsiders in 1969, but it appears that there was significant

depopulation during and after the rubber boom as well as the beginning of the recovery that has continued to date, despite several epidemics and some disruption of subsistence practices following contact.

The closely-related Matis live only in Brazil, and Ferreira (2001a) reports only 210 Matis speakers. For the less-known Mayoruna subgroups, populations are even less accurate: Erikson (1994) mentions 300 as an estimated population for the Korubo, while Morán (2002) gives a (probably inflated) figure of 1200. The respective estimated figures for the Maya and the Kulina Pano are 100-200 (Erikson 1994) and 88 (CIVAJA 2001).

The Matses live in 14 villages in Peru, and three villages in Brazil. Populations of individual Peruvian villages in 1998 ranged from 24 to 435 (Matlock 2002), with the typical small villages having about 40-60 people, and the large aggregate SIL missionary village having had as many as 650 people in the mid 1990s. I discuss Matses settlement patterns briefly again below in section 1.4.6. There are only two non-Matses towns in the vicinity of the main concentration of Matses villages. One is Colonia Angamos, the seat of the district of Yaquerana, which has a military garrison, and is located just below the confluence of the Upper Javari and Gálvez Rivers. The other is the Brazilian town of Palmeiras, also with a military garrison, located a few kilometers downriver from Colonia Angamos (Figures 1.1 & 1.2).

1.4.2 Environment

It is useful when reading a description of a language to be familiar at least superficially with the physical and ecological setting where the language is (or was) spoken. For example, knowing their location, ecology and environment, it should come as no surprise that the Matses have no terms for 'ocean,' 'cactus' or 'skiing,' while having 47 terms for rainforest land cover types. Fleck (1997), Harder and Fleck (1997)

and Fleck and Harder (2000) provide detailed descriptions of the physical setting of the Matses territory, including weather patterns, terrain, vegetation and ecology. Here I will only provide a brief description.

Matses territory is located in northeastern Peru (department of Loreto) and western Brazil (state of Amazonas). The locality where most of the data for this grammar was collected is at the Matses village of Nuevo San Juan ($73^{\circ}9'50''\text{W}$, $5^{\circ}17'30''\text{S}$, 150 m above sea level) on the Gálvez River (a left-bank tributary of the Javari River), in the district of Yaquerana, department of Loreto, Peru (Figures 1.1 & 1.2). Estimates of average annual rainfall (2900 mm/116 inches) and average annual temperature ($25.9^{\circ}\text{C}/78.6^{\circ}\text{F}$) are only available from Jenaro Herrera, the nearest weather station, 100 km west of Nuevo San Juan (Marengo, 1983). The weather is uniformly warm all year long, with a few short (2-3 day) cold spells typically in June and July (emanating from Patagonian storms). Temperature varies more during the 24-hour cycle than yearly, with a characteristic “pre-dawn chill” starting around three in the morning that makes one want to grab a light blanket in the middle of the night. It is hot and humid during most days, but not unbearably so; daytime temperatures seldom exceed 32°C (90°F). The seasons are marked by rainfall, so that it is possible to recognize a dry season (or, more accurately, a “less wet season”) between about mid-May and early September, and a wet season that generally starts gradually in September and comes into full force from late December through April. During the dry season, it rains on average about two to three days per week, the sky is usually clear, and the river levels drop considerably, exposing riverine beaches. During full-force rainy season, it rains about five or six days a week, sometimes continuously for several days. During the rainy season, river levels rise 8-10 meters (26-33 feet), and forest on low terrain along the rivers floods (up to 1 km inland for the Upper Javari River; less for the Gálvez River).

The area around most Matses villages is primary ("virgin") rainforest except for gaps caused by windfalls and active and abandoned swiddens (0.5-2 hectare agricultural plots). Around villages close to the non-tribal town of Colonia Angamos and around the SIL aggregate village, secondary forest predominates. There are no natural grasslands or other areas not vegetated by trees, except the seasonal river beaches. The local rainforest can be divided into two main terrain types, low-lying relatively flat floodplain forest, and non-flooding upland forest in the areas between the rivers. There are no mountains or rocky substrates or even stones in Matses territory, but, except for the low-lying floodplain forest, the terrain is marked by low hills and ridges (up to about 50 meters/160 feet above the surrounding terrain) separated by valleys and gullies. Travel was traditionally overland by paths through the rainforest along these ridges, but now river travel has become the principal means of transportation. Small ox-bow lakes exist along rivers in the floodplain forest, but no lakes occur in the large tracts of upland forest. These lacustrine and riverine habitats are now important resource centers for the Matses (fish, caiman, turtles, turtle eggs, frequented by game animals, etc.), although traditionally they avoided rivers and exploited principally the upland rainforest.

Around smaller villages, like Nuevo San Juan, the abundance of some game animals (e.g., woolly monkeys and spider monkeys) has declined noticeably over the years, whereas the densities of game species adapted to secondary forest (e.g., pacas [dog-sized rodents] and agoutis [cat-sized rodents]) have apparently increased. There is no evidence that any species has been extirpated from these areas, and game is still easily encountered on half-day hunts. In villages around Colonia Angamos and larger villages like the SIL aggregate village, game is very scarce, tapirs and large monkeys are absent, and good agricultural land is now distant from Matses homes.

1.4.3 Subsistence strategies

Currently, most of the Matses still meet almost all their nutritional needs through traditional subsistence activities including hunting, fishing, trapping, horticulture and collection of wild foods. In particular, they continue to procure the majority of their dietary protein by hunting, primarily for peccaries (pig-like mammals), tapirs (donkey-sized mammals), deer, some species of monkeys, and large gallinaceous birds (e.g., curassows, guans, trumpeters and tinamous); they also hunt two-toed sloths, armadillos, some large rodents, caimans (alligator-like crocodilians), tortoises, river turtles and some species of frogs. Fleck (1997), Fleck *et al.* (1999), Fleck and Harder (2000) and Romanoff (1976, 1983, 1984) describe the different Matses game species and hunting methods (see also Romanoff *et al.* to appear); Redford and Robinson (1987) compare hunting by 15 South American communities including the Matses. The Matses also trap tapirs at mineral licks and small rodents in forest surrounding villages and in and around swiddens. Fishing was traditionally done only with fish poisons and performed infrequently (due to the devastating effects of poisoning streams), but now fishing with hook-and-line, gigs and gill nets has become an important means of obtaining protein, especially during the dry season.

The Matses traditionally farm, using the slash-and-burn horticultural technique typical of Amazonia. These swiddens²⁰ are always made on hilltops and hillsides in upland forest, traditionally in primary forest, where the soil is most productive. Due to the generally mineral-poor nature of Amazonian soils, Matses abandon their swiddens after 2-4 years, and the head of a household fells new swiddens at the rate of about one per year, and so at any one time a family generally has several swiddens at various stages

²⁰ The term for these slash-and-burn horticultural plots that I use in this grammar is *swidden* (rather than the less accurate terms *farm*, *plantation* or *garden*), which in Peruvian Spanish are referred to with the term *chacra*, and *roça/roçado* in Brazilian Portuguese.

of production. They plant primarily manioc (only the “sweet” kind; *yuca/cassava/macaxeira*) and plantains/bananas, but also plant a variety of other foods including maize (possibly more important historically), peach palm (an important seasonal carbohydrate supplement), various potato-like tubers (consumed infrequently, to add variety to the diet), papaya, pineapple, sugarcane (these last three to be eaten as snacks), chili peppers, etc., as well as non-food crops, like tobacco, cotton, fish poisons, arrow cane, gourds, annatto (*achiote/urucu*), etc. All the Matses crops are listed in Erikson (1994:51) and Romanoff *et al.* (to appear). Most of their dietary carbohydrates come from these swiddens, and is supplemented with seasonal collection of wild foods, including swamp palm (*aguaje/moriche/buriti*) fruits, other fruits, palm hearts and wild tubers. They also collect river turtle eggs seasonally and wild honey sporadically.

In the early 1970’s, many Matses began to raise chickens, and to a lesser extent pigs and ducks. At least in Nuevo San Juan where I lived, this was a commercial activity, not meant as a source of food for the owners of the livestock (although occasionally they were), but to be taken downriver to Colonia Angamos to sell or to sell to the occasional visitor. Matses are now beginning to enter the market economy, and will sell smoked game meat and extra produce (mainly plantains) in Colonia Angamos. Therefore, generally speaking, Matses acquire money, not to purchase food, but by producing a surplus of food. Other sporadic commercial activities that the Matses engage in include logging (either independently or as laborers), wage labor in Colonia Angamos, and transporting and guiding the occasional tourist. Matses that are teachers in the bilingual school system (43 men and 4 women in 2001) earn a salary, but just the same engage in the usual subsistence pursuits, albeit to a lesser extent due to time constraints. With the money that they earn, Matses primarily purchase clothing, shotgun shells, fishing tackle,

gasoline for boat motors, medicine, flashlight batteries, soap, salt and occasional travel to Iquitos.

1.4.4 History

The Matses have their own history in the form of oral tradition, but it is mainly in the mythical realm. Some stories, about topics such as past funerary endocannibalism and learning to use medicinal plants from other Indians, are in the non-mythical realm. In some cases, their oral tradition and events recalled by older individuals match external published reports, but only for 20th century events. The discussion of Matses external history has one main problem: that we cannot be certain of the relations of the modern Matses to the people referred to as Mayoruna that appear in historical records (the reasons for this will become evident in the ensuing discussion). Thus, we can get at the Matses past by four means, each specific to a particular time period: i) looking at the prehistorical migrations of the early Panoan family as inferred from archeological and linguistic evidence; ii) referring to the historical Mayoruna of Jesuit archives and similar sources of the era, keeping in mind that those people may or may not have included the ancestors of Matses; iii) considering Matses oral history and recollections of the early 20th century events that correspond with available published information that refers to the Mayoruna; and iv) relying on the several published accounts of contact (1969) and post-contact events, now with positive identification of the Matses. Due to the recentness of this latest time period, it was still possible for me to directly obtain information about contact and other events during this period as recalled by the Matses. More detailed descriptions of Matses history can be found in Erikson (1994) and Matlock (2002), and for 20th century events, Romanoff (1984). Here I provide only a brief overview.

There is fairly convincing archaeological evidence that early Panoans migrated northward from northern Bolivia to Peru and Brazil (e.g., Lathrap 1970, Lathrap *et al.*

1985, Lathrap *et al.* 1987), arriving in the Ucayali basin about 300AD. There being no rivers connecting Bolivia and northwestern Peru, this would suggest that “the major part of Panoan expansion was on foot rather than by watercraft, an impression strengthened by the fact that many Panoan groups have poorly developed watercraft or lack them completely” (Lathrap 1970:81). Erikson (1992) notes that the fact that the Chácobo and other Panoan groups still live in Bolivia, where Tacanan speakers are found, supports the hypothesis of a southern origin of Panoan groups in light of the linguistic classification of Panoan and Tacanan (§1.3.1). Due to their northernmost geographic position, and the fact that the language and culture of the contemporary Mayoruna subgroups seem most divergent from that of other Panoans (e.g., Kneeland 1994, Dorigo 2001, Lanes 2002; see end of §1.3.1), suggests that the Panoan ancestors of the Matses were among the first Panoans to move north out of Bolivia into Peru (and presumably away from the main body of Panoan speakers).

The first historical records of people possibly related to the ancestors of the Matses according to some authors are mission log reports of the Barbudos involved in trading in 1649 in the Huallaga River area, in the present-day department of San Martín, about 300 kilometers (a bit under 200 miles) west of the current Matses territory. (I have not read these historical sources; the historical information in this paragraph is drawn from Matlock 2002, to which I refer the reader for a detailed discussion.) The Barbudos are identified by some scholars with the Mayoruna, while others suggest the two are completely different groups. Matlock (2002) considers the Barbudos to be a Mayoruna subgroup. From 1687 to 1767 (when the Jesuits were expelled from the Spanish colonies), there are multiple reports of Mayoruna residing at several different Jesuit missions along the upper Amazon and the Ucayali Rivers, much closer to the present-day location of the Matses. However, it is evident that only a very small percentage of the

people being called Mayoruna at the time were integrated into the mission system. But, nevertheless, this minority would have had interaction with uncontacted members of their group, and most of those that did not die from the epidemics eventually retreated from the missions. After the Jesuits were expelled from Peru, participation of Mayoruna in the mission system became insignificant. They appear to have avoided contact by remaining far from navigable rivers and by maintaining hostile relations with Europeans and other Indians all the way up to recent times. During the 1800s, records of the Mayoruna are sporadic and sketchy, and most references to encounters with the Mayoruna are based on unreliable identifications. The fierce reputation of the Mayoruna was more popular in this era than any actual knowledge about them or their precise whereabouts, and the term Mayoruna was likely overused to refer to a large number of different uncontacted people living between the Amazon-Ucayali and the Javari River. The lack of continuous contact keeps us from being certain that the present-day Matses are the descendents of the Mayoruna that appear in the historical record. However, if the contacted historical Mayoruna were not the ancestors of the Matses, it is quite likely that the ancestors of the Matses were related to at least some of the people referred to as Mayoruna (and probably would have been labeled Mayoruna, as well). Matlock (2002) considers that the term Mayoruna was not historically used to refer to a single tribe. He puts forth a likely scenario, which allows for the possibility, but does not entail, that the ancestors of the Matses ever established contacts with non-Indians (Matlock 2002:46):

I do not think we need assume that the Mayoruna constituted one large tribe, as some have done. Rather, I suggest that as awareness grew of the widespread presence east of the Ucayali of peoples culturally and linguistically similar to the Barbudos, the name Mayoruna came to be applied to them all. Later, as differences between local groups became known, the name became restricted in reference to that now known as Matses...

Inspection of historical Mayoruna lexicons does not completely resolve the issue, but it gives us some information about the linguistic scenario of the Mayoruna ensemble. One thing it tells us is that some references to the Mayorana were misidentifications, while others were references to groups linguistically similar to the Matses and Matis, and (by the definition given in §1.3.3) appropriately considered Mayoruna. The fact that Castelnau (1851) lists two separate lexicons (for “savage Mayoruna” and “civilized Mayoruna”) suggests that even back then people recognized that there was more than one subgroup of Mayoruna.

During the early 1900s, the Matses initially avoided other people. They were aware of the presence of rubber tappers in the area, but for the most part avoided them. But by the 1920s a few had had minimal sporadic contact—sometimes violent—with rubber estates, and in the end they broke all or almost all friendly contact with outsiders by retaliating and/or retreating further into the interfluvial areas. We know this from interviews described in Romanoff (1984) where elderly Matses told him about experiences their fathers had. Meanwhile, this non-mythical aspect of Matses oral history is confirmed by general descriptions of rubber tapping and other Peruvians’ and Brazilians’ activities in the area as described in Romanoff’s (1984) interviews with non-tribal Peruvians in the area, and from published sources, like Izaguirre (1922-1929). More specific events can be matched for events occurring between around 1930 and 1969, when the Matses began a period of intensive warfare and raiding, initially against other Indian groups and then also against non-tribal Peruvian and Brazilian villages, capturing women and children and obtaining manufactured items. One example is that of a military and civilian expedition that set out against the Matses in 1964, where injured expedition members had to be rescued by helicopter (e.g., *El Comercio* 1964; see Matlock 2002 for the story and more references to published accounts of this event).

Even Matses that I spoke to could recall this incident and others like it. Thus, we can be fairly certain that some of these 20th century events referring to “Mayoruna” Indians were in fact references to the Matses. Meanwhile, it appears that other reports of encounters with the “Mayoruna” were most likely based on mistaken identity of other hostile nearby groups, such as the Remo and Capanahua (e.g., reports from Javari exploration expeditions described in Matlock [2002] and some reports from interviews with non-Indians by Romanoff [1984]). Not to mention Tessmann’s (1930) family-level “misidentification” noted in section 1.3.3.

Summer Institute of Linguistics (SIL) personnel had been actively attempting to initiate contact with the Matses (called Mayoruna by them at the time) from 1963-1969. SIL missionaries Harriet L. Field and Harriet Kneeland had been working indirectly on the Matses language since the mid-1960s working with people who had been captured by the Matses and managed to escape. They initiated contact by air-dropping manufactured items, speaking to the Matses via loudspeakers attached to planes, and by camping out along the Yaquerana River near spotted settlements (Hefley and Hefley 1972, Vivar 1975). In 1969, they accomplished their goal and established permanent contact with the Matses. A large number of epidemic diseases plagued the Matses following the airdrops and initial contact, and members of the contacted groups were sent to attract more Matses to the SIL mission by telling them that people were not dying at the mission under SIL medical care. At the missionaries’ insistence, the Matses built a runway at the SIL mission, and a large aggregate village was formed near Chobayacu Creek on the Peruvian side of the Yaquerana River. Since contact in 1969, there have been many waves of illness that resulted in death, and most became ill from introduced epidemic diseases. The SIL missionaries, equipped with Western medicines and having the means to evacuate Matses to Yarinacocha by plane, were able save many. Some groups moved

away from the inland villages in the 1980s and settled on the banks of the Yaquerana (Upper Javari) and Gálvez Rivers. The Matses of Nuevo San Juan, where I did most of my fieldwork, were some of the first to leave.

1.4.5 Sociolinguistic situation and cultural assimilation

When Steven Romanoff (1984) conducted his fieldwork among the Matses in the mid 1970s, there was a very large number of captives and children of a captive and a Matses person living among the Matses,²¹ including speakers of similar Panoan languages, very distinct Amazonian languages, Spanish, and Portuguese. However, there were not enough of any one of these non-Matses groups to where any challenged Matses as the main language spoken in a community (or sub-community), nor were any of these languages the first language of captives' new children (though some learned their non-Matses parent's language to varying extents). When I first started to work with the Matses in 1994, I knew of no Matses that did not speak Matses as a first language. In recent years, I have found three small children, born of *mestizo* women married to Matses men, who speak Spanish very well and cannot speak Matses very well. I have not done a quantitative study on the topic, but it is my impression that presently, of Peruvian Matses, 75-80% *cannot* speak Spanish fluently (by "fluently" I mean able to have a meaningful conversation in Spanish), and most of those that can do so with many flaws. For the most part, it is men between the ages of 17 and 45 that converse effectively Spanish. At least 50% of the Peruvian Matses can communicate at some level in Spanish, and perhaps everyone knows a few words and phrases in Spanish. I have not been to the Brazilian villages, and so I can offer no estimates on these people's ability to speak Portuguese, but

²¹ Romanoff (1984:69) reports that in 1975, "Captives comprise 21 percent of the women and six percent of the men."

I am aware that at least some can speak Portuguese.²² Prior to 1969, only non-Indian captives and sometimes their sons and daughters knew Spanish or Portuguese, so it is evident that the situation is changing quickly. Spanish is taught in the Peruvian schools (although initial instruction is in Matses) and young men spend more time in distant towns where indigenous languages and cultures are looked down upon. I have found that many of the younger men—less than about 35 years old—are ashamed to speak Matses and dislike being identified as Indians. While visiting non-tribal towns and cities, there is a lack of self-pride that one usually does not detect while in Matses villages. There is a move by bilingual speakers to carry out at least the introductory part of village meetings in Spanish, which has the effect of marginalizing older men and giving prestige to those younger men who have learned Spanish. If we can predict the future by looking what has happened with other Amazonian languages in the past, the Matses language will be lost in 50 to 100 years.

As mentioned in section 1.3.2, I have recognized two contemporary regional dialects of Matses: the Brazilian Matses Dialect and the Peruvian Matses Dialect. In addition to this source of socio-linguistic variation, as is typical in most speech communities, there are also noticeable differences between young and older people's speech. Older people utilize a long list of "archaic" words, interchanging them to varying extents with words that are in common usage. It is not certain if these synonyms really represent historical Matses vocabulary, or represent borrowings from the languages of other Panoans, especially from captives, but both young and old people alike consider them archaic. Similarly, older people interchangeably utilize some grammar that younger people never use. Meanwhile, young people are always making up new words and

²² Carvalho (1992) reported that she encountered almost no bilingual Matses during her fieldwork among the Brazilian Matses. She found only one Matses in Lameirão in 1988 who was reasonably fluent in Portuguese, and only one in Trinta e Um and none in Lobo in 1990.

usages (like calling isan palm fruits “tsaues ‘armadillo’”). Older people criticize the younger speakers for changing the language, saying that they are trying hard to be hip but just sound ridiculous (in Nuevo San Juan, they accuse lazy young men in Buena Lomas of being the source of these innovations). They refer to young people’s speech as bacuëbon onquete ‘baby talk,’ and advised me that I should not waste time documenting this young people’s speech because it is not valid. Young people, on their part, make fun of the older people’s talk and snicker when I use the archaic forms. Old people prefer to refer to western manufactured items and foods using Matses terms, usually derogatory coinages (e.g., ‘army ant larvae’ for rice, ‘old man’s tendons’ for noodles, and ‘instrument for watching demons’ for televisions), while young people prefer to borrow the Spanish terms. When old people pronounce borrowed words, they do so following Matses phonological rules (e.g., *plato* ‘plate’ is pronounced [pi.rá.tu]; see §§2.6.4.1 and 2.10 on borrowing), while younger people try to approximate Spanish pronunciation.

Although most of the speakers I worked with were male, I worked with one woman as a salaried language consultant during my last 9-month field season, I recorded how-to texts from one old woman, and I conversed with and overheard women speakers on a daily basis. I was not able to detect any consistent phonological, grammatical or lexical difference in male and female speech, the exception being a few pairs of gender-specific interjections/exclamations (§9.6.2). A speech type I call “emphatic monotone” is used mostly by old women (§2.7.4). I have also noted that young women sometimes talk emphatically using an intonation that was reminiscent of “valley girl talk.”

Assimilation to the national culture is progressing at a rapid pace, and many cultural traits have already been lost in the time since SIL contact in 1969, including all ceremonies, dancing, chanting, facial tattooing and piercing, and most other rituals. However, due to their essentially complete isolation prior to SIL contact, older

individuals still possess undiminished traditional knowledge and language that is essentially uninfluenced by European languages. Money was introduced initially by SIL missionaries, and now most Matses expend much effort trying to acquire money in order to purchase manufactured goods. Because money can be obtained by selling excess meat and agricultural products, the level of generosity has declined (to various levels in different villages), compromising the traditional network of kinship-based reciprocity. In some villages, like Buen Perú and Remoyacu, even the nutrition of some families is compromised in order to sell meat and plantains in Colonia Angamos. The Peruvian Ministry of Education in collaboration with the SIL has established a bilingual education program for the Matses and presently there are schools and trained Matses school teachers in all the Peruvian villages, and attendance is obligatory. Therefore, time traditionally spent learning subsistence skills is now spent learning the national curriculum. 16-gauge, full-choke, breech-loading, single-barrel shotguns have become the standard hunting weapon; bows and arrows are now supplementary weapons or non-existent in some villages.²³ One-cycle motors outfitted with a six-foot propeller shaft (*peque-peques*) mounted on large dugout canoes have made their appearance in all the villages, either as donations from the government or as credit advances from lumber buyers. Contact with non-tribal locals is becoming very frequent at the non-tribal town of Colonia Angamos. In the last two years, the local and federal governments have built cement mini-soccer fields and cement sidewalks in most of the villages, in addition to the many brick schoolhouses built during the past 10 years. Tourism is not a prominent activity in the area yet. Perhaps an average of five groups of tourists make it to the Gálvez River every year. Tourists are often disappointed that save for Matses' speech, gait and gesture, they can hardly tell they are in an Indian as opposed to a *mestizo* village.

²³ According to Matses oral tradition, blowguns were replaced by bow and arrow around the first third of the 20th century.

1.4.6 Other ethnographic traits

Some general aspects of Matses culture include a Kariëra-style kinship system and cross-cousin marriage (Fields and Merrifield 1980, Romanoff 1984, Erikson 1994, Matlock 2002). I have noted that polygamy is common; wife-sharing among brothers is acceptable, or at least tolerated. Marital and extra-marital sexual partners are chosen from among cross-cousins, and sexual relations with people in other kinship categories are especially unacceptable. Social obligation is based around kinship relations.

Division of labor is based primarily on gender: men hunt, clear fields, build houses, harvest wild foods, make arrows, etc; women butcher meat, cook, take care of children, harvest swidden products, make women's artifacts, and nowadays, spend a lot of time washing clothes; both men and women fish and weed fields. Traditionally, age was also very important for the division of labor. For example, old women and men had certain craft specializations that resulted in a wide-ranging exchange network. As aluminum pots replace pottery and shotguns replace bows, these networks have diminished.

Children nowadays spend six hours a day, five days a week in school, but girls, even very young ones, are additionally expected to help their mothers cook, wash clothes, fetch water and help take care of younger siblings while not at school. Boys occasionally help their fathers or go fishing, but mostly play and train with their bows and arrows. There are no specialized professions; some individuals are sought-after medicine men²⁴ or

²⁴ I make a distinction here between medicine men and shamans. The last living Matses shaman (the late husband of my adopted mother), I was told, died in the early 1970's after having to practice secretly to avoid persecution by SIL personnel. This shaman reportedly used a hallucinogenic drink made by boiling a species of frog with toxic skin secretions (the description suggests a species of *Leptodactylus*), used tobacco in various ways, followed special dietary restrictions, and was able to enter the spirit world to heal people. Most old Matses men can be considered medicine men, as they know many medicinal plants and apply them mostly externally as infusions or tied onto the problem area (sort of like a dry poultice), but, while animal and plant spirits are often implicated in the causes and cures, the medicine man does not deal directly with the spirits, as a shaman would. Matses medicine men identify the culprit spirit by experience

midwives, but this does not allow them to stop or decrease normal subsistence pursuits. Hard work, generosity, reciprocity and commitment to family and community are still important Matses values, at least in principle, but in recent times these traditional values are being replaced by some Western values, such as procurement of material wealth and individual social status. Many Matses have learned Christian social values from missionaries, and use this knowledge to criticize those living a more traditional lifestyle and to try to gain social prestige among the younger members of the society. The current trend is a shift in focus from the co-resident group (traditionally the longhouse and now the village) to the individual and the nuclear family. For more general information on Matses ethnography I refer the reader to the references listed in section 1.5.2.

In my opinion, all aspects of culture are relevant to the description of a language. However, admittedly, some have a more direct (or at least obvious) impact on the language, and these are the ones I focus on below. Other references to Matses culture can be found throughout this grammar where relevant to the topic being discussed.

Inclusion of captives is an evident case of a cultural trait with high potential for impacting the language. The capacity of the Matses to absorb relatively large numbers of captives while maintaining or creating a uniform culture (not just linguistically but in physical objects, body decoration, social patterns and more) is remarkable. It is not just a matter of conservatism, because in their oral histories they note fundamental changes during preceding generations: the shift from blowguns to bows, abandonment of use of hallucinogens, etc. (see Romanoff 1984 for a discussion of means for incorporating captives).

Traditionally, hunting prowess was one of the principal means for a man to obtain prestige in his community. The most direct measure of hunting ability is hunting returns,

with symptoms and trial and error with different plant remedies, but they do not enter the spirit world to learn the identity of the spirits or to extract them from the patient, as a shaman would.

but another important mark of a good Matses hunter is extensive natural history knowledge. One aspect of this knowledge is the large repertoire of synonyms and hyponyms (i.e., named subclasses) for game animals. For example, the woolly monkey has five synonymous names, and three hyponyms (see Fleck *et al.* 1999 for lexical overdifferentiation of primates). A good hunter is expected to know all these, and whenever Matses from other villages came to Nuevo San Juan, they enjoyed quizzing me on these terms. Everyone knows the one or two terms that are in contemporary usage, but the rest of the synonyms are considered “archaic” and in the realm of old men’s and good hunters’ hunting lore.

The Matses system of name taboo, perhaps as much as the absorption of captives, has probably had the most impact on the lexicon of the language. Although not adhered to so closely now, there is a taboo in Matses that dictates that people must not say out loud the name of a recently-deceased person for a year, especially in the presence of the close relatives. The reason for this, I was told, is to avoid reminding people of their recent loss. Beyond this notion of tact of avoiding reminding people of their recently lost relative, there is a belief that if one calls out a person’s name loudly, especially in the forest, the spirit of their deceased namesake(s) may cause some harm to the person pronouncing the name.²⁵ The linguistically interesting aspect of this taboo is that along with the person’s name, some words that sound like the deceased person’s name are also tabooed. For example, one man told me that if I died, they would stop saying débin ‘dove’ (sounds like Davy), or dabidiate ‘blanket’ (sounds like Spanish *David*). This taboo may in part explain why there are so many terms in contemporary usage in Matses that are not pan-Panoan, and why there is this intricate system of synonymy, with the “archaic” forms, some of which are recognizable as pan-Panoan, probably representing

²⁵ I am told that in the past, those who knew how to deal with spirits could call out a deceased person’s name loudly in the forest to ask for help in finding game or for other types of help.

formerly tabooed words. The name taboo seems to affect nouns more than words in other word classes, particularly verbs. Evidently because verb roots generally occur in various forms due to the large number of different inflections and large repertoire of derivational verbal suffixes, while nouns occur much more frequently in discourse as bare roots. The very productive system of nominalization also allows new (descriptive) nouns to be readily created as substitutes for tabooed terms. It seem to me that animal, plant and artifact names have the highest turnover. Kneeland (1973:55-56, 100-102) discusses this name taboo in her article on Matses relative clauses.

The Matses traditionally marry their cross-cousins, but during the period of raiding, many women (and some children) were captured from other tribes. It is likely that these languages contributed to the Matses lexicon and especially to their intricate system of synonymy. One practical function of retaining this system of synonymy would have been to facilitate communication with speakers of other Mayoruna languages.

Myths utilize some archaic vocabulary and grammar, since, in principle at least, myths are expected to be told without altering the original story (thereby bypassing the name taboo). This is especially true of quoted material in myths (i.e., what the characters say). When people heard a recording of someone else's version of a myth, they often criticized the narrator, saying that he got something wrong or should not be altering it. As a result, myths contain some vocabulary and grammar that is not used in every-day speech, so data from myths should be analyzed somewhat separately from every-day speech. This grammar makes minimal use of myths as language data.

Traditionally, the Matses had chants. I have several recorded, but none translated. Some chanting was done in the context of ceremonies (Romanoff 1984), but the ones I recorded were in the context of trying to ease tensions during an encounter with another Mayoruna tribe. Several of my recorded chants are in (a) language(s) that my Matses

assistants and I (including the chanter) could not understand at all; others can be understood somewhat, but contain unfamiliar grammar and vocabulary. During one of the main ceremonial cycles, the caped “spirits” communicated with women using a special vocabulary understood by all (see Romanoff *et al.* to appear)

Matses traditional settlement pattern is relevant to such topics as dialect formation and inter-speaker linguistic variation. Traditionally, the Matses lived in communal longhouses with 50 to about 150 people, and they moved the locations of their homes/farms every few years (Romanoff 1984). This settlement pattern was an effective adaptation to game and soil depletion. Longhouses often formed clusters, and they would move together, split up, and sometimes rejoin, or join another longhouse or longhouse cluster. Sometimes longhouses/longhouse clusters would be but an hour’s walk away, other times they were several days’ walk away (within an area of about 11,000 square kilometers, according to Romanoff 1984), but visiting for feasts and to announce deaths was common before SIL presence, and so some level of interaction was maintained among the non-coresident groups of Matses. Now that there is pressure from the government to remain sedentary, most of the Matses villages are small (the small villages have about 40-60 people). Keeping population numbers small allows a village to remain sedentary without depleting resources faster than they can be naturally replenished in an area within a half day’s walk from the village. Besides the nutritional benefits of living in small, dispersed communities, this residence strategy had that added benefit of containing potentially large-scale contagion of epidemic diseases.

In the aggregate SIL mission village, on the other hand, there was pressure from the missionaries to form an unnaturally large and sedentary village, and as a result there was little game or available land in the surrounding area. This resulted in an innovative subsistence pattern involving temporary residence in distant swiddens where game was

still plentiful (Romanoff 1984). However, this dual residency pattern nevertheless increased the amount of energy expended to obtain protein and calories, and compromised Matses nutrition (Romanoff 1984) and ability to resist disease. As a result of this (and sometimes also other factors), since the 1980s Matses groups have been leaving the SIL mission and establishing communities on the Gálvez River, the Javari River, and further downstream on Chobayacu Creek. The different Peruvian villages still interact occasionally, joining for soccer tournaments and elections; families and individuals visit relatives in other villages, and Matses often meet in Colonia Angamos. Inter-marriage is common among the current villages. The Peruvian Matses have almost no contact with the Brazilian Matses nowadays, Peruvian Matses from Nuevo Cashishpi being the ones with the most regular contact with the Brazilian Matses.

1.5 Literature review

Comprehensive bibliographies on Panoan and Matses/Mayoruna linguistic and anthropological sources can be found in Erikson *et al.* (1994), Fabre (1998) and Erikson (2000), the first and third of which are annotated. A Pano-Takana bibliography by Chavarría Mendoza (1983) is outdated, but is nevertheless interesting in that it gives paragraph- or page-length summaries of some linguistic and anthropological works on the Matses. Kensinger's (1985) Panoan bibliography is likewise outdated, but includes prose describing the content of some of the listed sources. Wise (1986) lists all the SIL works produced up until 1986 on the Matses (136-138) as well as on Panoan comparative linguistics (207). Here I try to point out all the existing linguistic sources on the Matses language, but I only highlight a few ethnographic sources of more general relevance.

1.5.1 Previous and current work on the Matses language

To date, no one has attempted to write a comprehensive grammar of the Matses language. The first people to study the Matses language were SIL missionaries Harriet L. Fields and Harriet Kneeland, who helped initiate contact with the Matses. They studied the language with escaped captives as informants prior to initial contact in 1969, and have produced linguistic descriptions of varying quality. The most extensive hitherto published grammatical description is an SIL pedagogical work directed at teaching the Matses language to Spanish speakers (Kneeland 1979a), which focuses on morphology, but has some phonological and syntactic (and ethnographic) descriptions. I have found this work hard to use as a linguistic reference, since the explanations often do little more than account for the listed sample sentences, and the speakers I worked with reject many of the sample sentences or provide different meanings for them. Since that work is not meant to be an academic publication, I do not cite it frequently in the body of my grammar, though I must acknowledge that it was an initial source for generating elicitation topics. The only other readily available SIL materials dealing with Matses linguistics are a handful of short articles on selected aspects of Matses phonology, morphology and syntax (Fields 1973; Kneeland 1973, 1982, 1996; Kneeland and Fields 1978). These are aimed at a linguistic audience (Kensinger 1981 reviews Fields 1973 and Kneeland 1973 among other SIL works on Panoan linguistics), and although my analyses vary considerably from theirs, I do make reference to these works in the relevant sections in this grammar. These are all in-house SIL publications available from the SIL International Bookstores in Dallas and/or Lima, Peru.

There is much more SIL material on Matses linguistics in the form of microfiches, mostly in an unedited series entitled *Información de Campo*. Unfortunately these microfiches are not available at libraries, but are archived only in Dallas and Lima.

Individuals wishing to view them may purchase copies from the SIL permanent archive in Dallas (if available). Philippe Erikson kindly lent me his copies, and I found that for the most part they were copies of hand-written field notes, unsegmented, un glossed, and sometimes even untranslated texts, lists of glossed morphemes unaccompanied by any analysis, and unedited preliminary analyses; many are partially or completely illegible. These microfiches are all dated prior to 1982 and are listed in Wise (1986), Fabre (1998) and Erikson (2000). Here I list all the ones with linguistic content, i.e., phonological descriptions (Fields and Wise 1976; Kneeland 1973-5, 1975a), grammatical descriptions (Fields 1966?, 1974, 1975; Kneeland 1972?, 1974, 1975b, 1975c, 1979b, 1981), collections of texts (Fields 1970-2, 1970-4?; Kneeland 1970-3, 1970-5a, 1970-5b; Kneeland and Fields 1976), and word lists (Fields 1970, 1970-1; Jakway 1975). SIL personnel have also translated the new testament into Matses, and have produced multiple primers in Matses, most of which are available from the SIL International Bookstore in Dallas in the form of microfiches.

James Matlock includes an analysis of Matses as an agentive language in an appendix to his dissertation (Matlock 2002).

Brazilian linguist Carmen Teresa Dorigo de Carvalho has been conducting linguistic analyses based on fieldwork among the Brazilian Matses. Her more substantive contributions are a Master's thesis on Matses sentence structure (Carvalho 1992a) and a Ph.D. dissertation on Matses phonology, specifically an optimality theory treatment of Matses syllable structure and several other aspects of Matses phonology (Dorigo 2001). She has also produced an article on Matses tense and aspect (Dorigo 1995), an article on split ergativity in Matses (Dorigo 2002) and an evidently unpublished paper on negation in Matses and Marubo (Dorigo and Costa 1996).

Lexicons for the historical Mayoruna exist: Spix and Martius (1823-31:V,1188), Castelnau (1850-1851:299-300), Martius (1867:236-239; reproduces the preceding two lexicons), Tessmann (1930:378) and Alviano (1957:44-56). I discuss these and their validity as Mayoruna lexicons in section 1.3.3 above. The most extensive modern lexicon for Matses is an approximately 800-word Matses-Spanish glossary (with some sample sentences) in Kneeland (1979a). Wise (1973: 85-90) contains a Spanish-Matses word list with approximately 150 entries (as well as medical expressions). (Wise 1979 may contain additional words, but I have not yet seen it.) Fields and Merrifield (1980) contains a fairly exhaustive kinship lexicon. Key (1968:101-102) contains a 57-morpheme Mayoruna-English list. Kneeland and Fields (1978) also include lists of words and short phrases. There are also two SIL works on microfiche. One, Fields (1970), contains a 500+ Matses lexicon plus shorter word lists elicited from captive women living among the Matses, some of which are be Mayoruna languages. And Jakway (1975) is a comparative list with data from Panoan languages, including some of the data in Fields (1970); Fields revised the Matses data for Jakway (1975).

There are few useful Matses texts available. Kneeland (1973) contains a parsed 109-sentence text in an appendix, and Kneeland (1996) contains a parsed 21-sentence text. A reader produced by SIL personnel (Ministerio de Educacion 1985) contains transcribed recorded natural history texts with free translations (but the texts are not parsed). And another SIL reader (Ministerio de Educacion 1988) has a large collection of Matses myths, but with no translations. There are other readers (listed in Erikson 2000 and Wise 1986) and a translation of the New Testament, but these do not contain original Matses language data. Rather, they are either translations from Spanish or material created by SIL missionaries. Several of the SIL microfiches on Matses are collections of texts, but as mentioned above, these are mostly illegible, usually unparsed and often

not even translated. A large collection of texts will soon be published as a book for the Matses (Romanoff, Jiménez, Uaquí and Fleck to appear), which will include texts composed by two Matses authors and some transcribed texts that I recorded in 1998. These texts will be accompanied by photographs by Romanoff, free Spanish translations and English summaries (but the texts are not parsed). (See also the three texts in the appendix of this dissertation and the 22-sentence parsed text on bat natural history in Fleck *et al.* 2002).

My contributions to the published linguistics literature on the Matses language include: Fleck (2002), a general description of causation in Matses (superseded with minor changes in this grammar); and Fleck (2001), an ethno-linguistic description of culture-specific notions of causation in Matses grammar (only briefly summarized in this grammar; §4.7.4.1). Additionally, my publications on ethnobiology (see next section) contain some relevant linguistic data, including biological lexical items (Fleck 1997, Fleck *et al.* 1999, Fleck and Harder 2000, Fleck *et al.* 2002, Harder and Fleck 1997), linguistic analysis of rainforest habitat terminology (Fleck and Harder 2000) and segmented-and-glossed Matses sentences and texts about bats (Fleck *et al.* 2002). Available upon request is a 27-page not-yet-published manuscript, the written version of a 2002 conference presentation on ergativity in Matses (Fleck n.d.).

Other than for Matses (and the historical Mayoruna lexicons mentioned above), linguistic descriptions of other languages in the Mayoruna subfamily are restricted to Matis. The more substantive works are the Master's theses of Rogerio V. Ferreira (2001a) on Matis grammar and of Vitória R. Spanghero Ferreira (2000) on Matis phonology; these have recently been published (evidently without revision) as Ferreira (2001b) and (Spanghero) Ferreira (2001). Other published sources on Matis linguistics include a handful of short articles: Ferreira (2000) and Spanghero (1999, 2000). As for

the rest of the Panoan family, no full-length grammars have been written yet. References to grammar sketches, pedagogical grammars, a transformational grammar and articles on various linguistics topics on Panoan languages can be found in Erikson *et al.* (1994) and Fabre (1998), so I will not list them here, particularly since I have not looked at them yet. Substantive Panoan comparative works include a reconstruction of Proto-Pano by Shell (1965/1975), (which does not include Matses data), and a general description of Panoan phonology and grammar (Loos 1999). A few other works that include (Peruvian) Matses data are several articles on various topics in comparative Panoan grammar, including Loos (1973a, 1973b, 1973c, 1976). Some comparative material using Brazilian Matses data include an article describing Panoan rhythmic stress, (Soares *et al.* 1993), an article describing the relation between rhythmic stress and syntax in Matses, Marubo and Tukano (Soares 2000), a Master's thesis on comparative Panoan phonology (Lanes 2000), and an article on acoustic analysis of Panoan vowels (Lanes 2002).

1.5.2 Ethnographic and Ethnobiological sources

The most comprehensive, monograph-length descriptions of Matses culture can be found in Romanoff's (1984) dissertation on Matses culture in general, focusing on subsistence patterns, Erikson's (1994) general discussion of the history and culture of the Mayoruna subgroup, and Matlock's (2002) dissertation on Matses history and contemporary culture. Steven Romanoff was the first anthropologist to work among the Matses, but unfortunately, in addition to his Ph.D. dissertation, he has only published an article on Matses land use (Romanoff 1976) and a short article on Matses women as hunters (Romanoff 1983). There is also an unpublished manuscript on Matses responses to game scarcities (Romanoff n.d.). And then there is the forthcoming book for the Matses mentioned in the preceding section (Romanoff *et al.* to appear), which contains much ethnographic description by the Matses and many photographs by Romanoff.

Philippe Erikson, a French anthropologist, has published many excellent ethnographic studies of the closely-related Matis in Brazil (e.g., Erikson 1990a, 1993a, 2001). These publications are relevant to the description of the Mayoruna subgroup (see Erikson 1990b, 1994), but his fieldwork was not among the Matses, and so provides no first-hand data on the Matses. James Matlock, an American anthropologist, conducted ethnographic doctoral research among the Peruvian Matses (Matlock 2002). Matlock's only publication on the Matses is a description of recent Matses dispersals (Matlock 1998; superseded by his dissertation). A Peruvian anthropologist, Luis Calixto Méndez has been working with the Matses for many years. He initially did some ethnographic research among the Matses, but lately his activities among the Matses have been restricted to administrative work for the NGO CEDIA. He has published but one article (Calixto Méndez 1986a); the rest of his writings on the Matses are in the form of hard-to-get manuscripts (Calixto Méndez 1981, 1985, 1986b, 1987), which are summarized to some extent in Erikson (1994). The SIL missionaries (Harriet L. Fields and Harriet Kneeland) have also described multiple aspects of Matses culture, but unfortunately most of these are in the form of unedited and often illegible microfiches in the unedited *Información de Campo* series mentioned above. Their two accessible publications on Matses ethnography are Fields and Merrifield (1980) and Kneeland (1994). I am less familiar with the ethnographic literature conducted among the Brazilian Matses. Some examples are Borja (1981), Melatti (1981), Cavuscens and Neves (1986) and Milton (1991, 1994). I refer the reader to Matlock (2002) for more references. Brief second-hand overviews of Matses history and culture can be found in Flowers (1994) and Ribeiro and Wise (1978:139-142), the latter of which includes some first-hand data from Harriet Fields and Harriet Kneeland.

Several journalists and travelers have published non-academic descriptions of the Matses in the form of articles and books. Some are interesting but misinformed (e.g., McIntyre 1990: 141-142), while others contain outright fabrications (e.g., Gorman 1990a, 1990b, 1995). The main attraction of these publications for the person interested in the Matses is the photographs, which tend to be scant or absent in most academic works. Erikson (2000) comments on many more publications in this genre.

My biological colleagues and I have been conducting ethnobiological research among the Matses since 1994, focusing primarily on classification of mammals, palms and rainforest habitats. The available sources include my M.S. thesis on Matses habitat classification, knowledge of mammal natural history, and classification and nomenclature of mammals (Fleck 1997). Harder and Fleck (1997) is mostly about marsupial ecology, but contains a section describing Matses knowledge of marsupial natural history and of seasonal weather, hydrology and fruiting patterns. Fleck, Voss and Patton (1999) describe Matses lexical overdifferentiation of saki monkeys. Fleck and Harder (2000) describe the Matses rainforest classification system. Simmons, Voss and Fleck (2002) describe the role of Matses as field assistants and introduce a new species of bat (*Miconycteris matses*) that the Matses at Nuevo San Juan helped discover. And Fleck, Voss and Simmons (2002) describe the use of recorded texts and other methods to understand Matses sublexical classification of bats. Cooper (2000) describes Robert Voss' and my collaborative research among the Matses.

1.6 Methodology

Field methodology in linguistics is always influenced by the researcher's goals, previous experience with the language, and the field situation. Before describing the particulars of data collection and data analysis methodology, I will describe my

motivation and goals for writing this grammar, my experiences with the Matses prior to my linguistic fieldwork on the language, and the field research conditions.

1.6.1 On the need for description and research goals

The need for good and detailed description of all languages is, from the viewpoint of linguistics, quite evident: language descriptions are the very foundation of linguistic science, without which abstract models and generalizations cannot be made or tested. While the Amazon basin is arguably both the least-known and the most complex linguistic region in the world today (Dixon and Aikhenvald 1999), it is also one where language death is occurring at the fastest rate: Kaufman (1990) has predicted that most South American languages now spoken will disappear in the next 50 years. Of the approximately 20 language families in Amazonia, the Panoan language family is among the most poorly described; and of the 30 Panoan languages recognized by Loos (1999), 11 are already extinct. In Peru alone, 9 languages have become extinct during the last 50 years (García Rivera 2000). This is particularly alarming in light of Derbyshire and Pullum's (1998) finding that most linguistic theories and typological generalizations have been formulated without including Amazonian languages in the linguistic database. Thus, there is a sense of urgency to take advantage of the small window of time we have to describe Amazonian languages before they are gone.

It is my opinion that if a language is described with too strong a focus on fitting the framework of the latest linguistic theory, as soon as people realize that this latest theory is just another misguided linguistic fad, the description becomes little more than a curiosity, of little use for testing new theories or comparison with other grammars.²⁶ While the author of the theory in question will be certain to treasure such a grammatical

²⁶ A case in point for the Panoan family is Robert L. Russell's (1965/1975) *A Transformational grammar of Amahuaca*.

description, if the language is a little-known one that is disappearing, I feel that such a waste of an opportunity to conduct fieldwork is regrettable. To me, it is as if we had a one-time chance to send a painter back through pre-history in a time machine and he came back with nothing but abstract expressionist paintings. It would be unrealistic to believe that it is possible to be 100% objective in linguistic description, but this is not an excuse to not try to be as objective as possible. In view of that, I would like to emphasize, as stated in the introduction, that the grammatical description that is the topic of this dissertation has a clear goal: *a detailed synchronic description of Matses grammar*. The present goal is not to use Matses data to prop up any modern academic theories, to conduct typological research, to reconstruct a proto-language, or to perform comparisons with other Panoan languages to describe and classify the family. Instead, this grammar is designed to provide a permanent database documenting a unique medium of human communication, that, through extinction or language change, will otherwise not be accessible by scientists in the future.

This goal does not represent a value judgment about descriptive linguistics vs. comparative, historical or theoretical linguistic work, but rather it reflects my wish to make the most of a rare field research opportunity. It is my hope that this grammar will be a useful reference to linguists wishing to include Matses in general theoretical, typological and historical research, as well as for linguists and ethnologists studying the Panoan family. I, myself, plan on taking on some of these tasks in the future, particularly once I start spending less time in the field, but I am of the opinion that sound, in-depth grammatical descriptions should be the basis of such studies, rather than vice-versa. The contents of this grammar reflect my emphasis on synchronic description, as do my data collection and analysis methods. Details on semantics and usage, rich exemplification, and identification of minor as well as language-wide grammatical patterns were what I

strived for, and I felt this was better accomplished by observing the language in the environmental and cultural context where it evolved and is still used as the everyday means of communication. Minor theoretical analyses, comparisons and internal reconstructions are included in the grammar, but only in passing, because, in my view, to focus on these topics would have detracted from the amount of details about the language that I could collect, analyze and describe. This dissertation is not meant to dazzle the reader with new hypotheses or application of in-vogue theories, but to be as useful and complete as possible given the finite time frame I had to work with.

1.6.2 Author's experience with the Matses

My first encounter with the Matses was in 1991 as an Ohio State University undergraduate conducting a zoology honor's senior thesis on marsupial ecology (Fleck 1993, Fleck and Harder 1995, Harder and Fleck 1997) in a Peruvian biological research station at Jenaro Herrera (Figure 1.1), a town that the Matses occasionally visit. During a casual conversation with two bilingual Matses who were visiting Jenaro Herrera, I was impressed by the extensiveness of their knowledge of rainforest natural history. I expressed an interest in learning more from them, and they graciously invited me to come to their village where they would teach me about animals. In 1992, I made the four-day hike, mostly through virgin rainforest, with the town baker and my Peruvian-Navy-appointed body guard. I was expecting to arrive in Colonia Angamos, where the path was supposed to go, but the uncommunicative baker had taken a short cut that came out on the Gálvez river, and thus I unexpectedly arrived for the first time in a Matses village. I was cordially welcomed at this village, Nuevo San Juan, where the chief invited me to work and live in his village, and offered teach me about rainforest natural history. I hiked again to Nuevo San Juan in 1993 and spent several days making plans for future research there with the chief and other Matses. Having entered the Ohio State Master's program

in zoology, I flew to Colonia Angamos in 1994, to begin field research for a Master's thesis about Matses classification of rainforest habitats and their knowledge of mammal natural history. In 1994, I spent four months among the Matses: I worked two weeks in Nuevo Cashishpi, visited the villages on Chobayacu Creek, and spent the rest of the time in Remoyacu/Buen Perú and Nuevo San Juan. During this time, I mainly elicited mammal terminology, conducted interviews about mammal natural history with bilingual Matses hunters, and spent much time hunting with Matses. In 1995-1996, I spent a 20-month-long field season with the Matses at Nuevo San Juan (I was on an NSF fellowship) collecting mammal and plant specimens, recording their rainforest habitat classification system, and making vegetation measurements in rainforest plots. During this time, I became moderately fluent in their language, got accustomed to their way of life, and was adopted by a Matses family.

During my Master's field research, I became interested in studying the Matses language. I entered the Rice University doctoral program in linguistics in 1997 and have been working on the Matses language since then. I have spent a total of 24 months doing linguistics dissertation research among the Matses during five field seasons ranging from 2 months to 9 months. Most of this time was spent in Nuevo San Juan, but I frequently made day trips to Remoyacu/Buen Peru and visited all the other Peruvian villages at least once, sometimes for several days. The data collected during these 24 months is the basis of the grammar that is the topic of this dissertation. During my 1998 and 1999 field seasons, in addition to my linguistics research, I worked in collaboration with the American Museum of Natural History (New York) and the Museo de Historia Natural de la Universidad Nacional Mayor de San Marcos (Lima) on a project called "Rainforest Mammal Diversity and Matses Ethnozoology in the Peruvian Amazon." My part in this project involves recording, transcribing and translating Matses texts about mammal

natural history. These texts serve four purposes: i) they will form part of the corpus of texts used for my dissertation; ii) English translations will complement mammal natural history accounts in a future monograph describing the fauna of the Gálvez river; iii) they will be used to understand Matses biological classification (e.g., as in Fleck *et al.* 2002); and iv) they will be published in Matses as an illustrated field guide that will be distributed to the Matses.

1.6.3 Field situation

I was lucky to have what I consider to be the ideal field situation while conducting my linguistics fieldwork, and I am deeply indebted my Matses friends for taking care of me at Nuevo San Juan, and to the Matses of the other villages for always receiving me as a welcome guest. Being either an adopted relative or a good friend of everyone in Nuevo San Juan, I was not expected to pay for lodging or for food. In fact, the chief's wives made sure I never missed a meal (even when I said I wasn't hungry). Nevertheless, I always brought gifts (machetes, shotgun shells, sewing needles, clothing, salt, etc.) for my hosts. Most days I spent most of my time eliciting language data, recording, transcribing, translating and double checking texts, writing on my laptop, and other linguistic pursuits, but I hunted once or twice a week and sometimes fished (always together with a Matses) in order to not feel guilty about consuming their food, and to learn the language in context. In 2000, the Matses helped me build my own house, and in 2001 they helped me fell and plant my own swidden. While living with the Matses (always justifying these fun activities as learning the language in context), I learned to make most male-fabricated artifacts, including arrows, bows, bowstrings, arrow sharpeners, spears, pounded bark arrow storage bags, tobacco snuff, tobacco mortars, tobacco drying racks, as well as on-the-spot disposable tools and weapons, such as digging sticks, woven palm-leaf trays and baskets, climbing rings, clubs, and overnight

shelters. I observed women fabricating many female-fabricated artifacts, including woven bracelets, anklets, headbands and carrying straps, cotton thread, palm fiber twine, hammocks, manioc strainers, and necklaces. The only thing I really got good at was making the tobacco snuff and always had a ready supply, so that, ironically, Matses from other villages frequently came to Nuevo San Juan to ask me for some of my snuff. I also participated in the few traditional rituals and sports that the Matses still practice, including application of frog venom to skin burns, stinging by bullet ants, wrestling, and, of course, mutual blowing of tobacco snuff up each other's noses with a tube. This latter activity was a nightly one, in which groups of men participate during long visits to the chief's house, my house or someone else's house. After these visits, which began at dusk and ended around 8:00 or 9:00, I would write for a few hours and then go to sleep. My participation in these activities allowed me to take part in conversations, to see the language used in context, was especially useful for understand texts (especially how-to texts) and had the effect of winning the Matses' friendship and of being treated less like an outsider.

1.6.4 Data collection and analysis

A discourse analyst once told me that he thought that a grammar should be written exclusively based on recorded text material, and that elicited sentences are not valid language data. At the risk of creating a straw man argument, I will nevertheless state that I think such a methodology is akin to building a chair using only a saw while having a toolbox full of other tools. While elicitation can potentially be leading (in the sense of putting words in the speaker's mouth), and can lead the researcher to wrong conclusions, if not careful, so can recorded narrative and conversation data lead the unwitting linguist to erroneous analyses. What I tried to do is utilize both methods, keeping in mind the strengths and pitfalls of both methods, revising texts with several speakers, and

replicating elicitation sessions with multiple speakers as much as possible. While recorded texts provide more natural data on the usages of forms, the meaning and function of the forms is often hard to isolate due to often complex nature of the sentence and a frequent lack of a similar sentence that differs by only the form in question, particularly for languages that do not have a large available corpus. (Indeed, I have examples of Matses morphemes and constructions that never occurred in recorded texts.) Also one must be on the lookout for performance errors in any recorded text. Elicitation, on the other hand, allows us to obtain illustrative pairs of sentences that serve as minimal pairs, to test our hypotheses about meanings and functions of forms and constructions we encounter. Having been a zoologist, I liken it to the study of animal behavior, which benefits both from observation and hypothesis formation in the animal's natural habitat, and from controlled experimentation in the laboratory or other controlled environments.

Research on most topics generally begins in the library. It is my personal opinion that in some cases (depending on the goal of the researcher) this can be a mistake for grammatical description. I feel that a full-scale in-depth study of a language should have original data as its foundation, rather than the work of other researchers, or comparisons with similar languages. To me, reading someone else's work before doing one's own research is like trying to finish a crossword puzzle that somebody else started with some mistakes in their answers²⁷: I would prefer to start from scratch and then identify the other person's and my mistakes by comparing them afterwards, rather than unwittingly being led to make the same mistakes. Those who think they are not subject to this type of human error allow it to go on unchecked and are most affected by it. Similarly, looking at descriptions of related languages prior to analyzing one's research language, especially for a graduate student, is like an amateur painter painting a portrait of a wild bison using

²⁷ Even the best grammatical descriptions inevitably contain some mistakes, the present work included.

a picture of a cow as an aid: I can bet the picture of the buffalo is going to look like a cow in many subtle ways. It can have an effect similar to trying to walk due north across a cornfield with rows running NNW.

But I do think it is a good idea to look at other sources late in the analysis of the language. I have practiced what I'm preaching with one unfortunate exception. While still working as a zoologist, I obtained Harriet Kneeland's (1979a) pedagogical grammar from the author, and spent many nights reading it over and trying to memorize the vocabulary. In retrospect, this was a mistake, as upon studying in detail many of the topics treated in that work, I found that they had been analyzed incorrectly, and my early analyses contain multiple mistakes influenced by this work. And even now, many of the pronunciation and grammar mistakes that I make regularly in conversation are as a result of my study of that work, and identifying these mistakes does not mean I can automatically correct them in fast speech. I must acknowledge, however, that Kneeland (1979a) isolated many morphemes, and it helped me learn the SIL Matses orthography, and much of my early experience with Matses linguistics stemmed from this work. It was in this sense a source of shortcuts, but once I realized most of the shortcuts were leading me in the wrong direction, I put it aside. Only after returning from the field in 2002, did I begin to look at other SIL descriptive sources on Matses. I was not able to obtain most the works on Matses by Carmen Dorigo de Carvalho until my last year of writing this dissertation.

Despite my objection in section 1.6.1 to writing a grammar with the purpose of propping up a linguistic theory, it must be acknowledged that it is impossible for a linguist to write a grammatical description without some theoretical orientation. Conscious of this fact, one can minimize the deleterious effects of this unfortunate circumstance by trying to use theories as descriptive tools, rather than getting carried

away and ending up using the language to illustrate a theory. This latter method has the undesirable effect of guiding data collection and analysis in such a way that the information in the grammatical description is of a restricted nature and of limited utility for application to new future theories or for comparison to other grammars. I tried to overcome this by recording as much structural, semantic, usage and function information as possible, and including it in this description. My theoretical orientation is a functional one, and this will probably be evident to any linguist reading this grammar. This is more an accident of my linguistics training than a conscious choice, since at Rice University formalist linguistics is not practiced. Nevertheless, I find functional linguistics a practical tool for language description, and embrace it in my discussions, but hopefully the reader will find that the data and discussion are not restricted to functional concerns. I used Payne (1997) and Shopen (1985; all three volumes) as guides while in the field, and used Meira (1999) as a model.

I will describe the particulars of my linguistic data collection by describing my field activities during each of my five field seasons:

1998, 3 months: During this period, I recorded approximately 20 hours of texts from Matses speakers in Nuevo San Juan, Buen Perú, Nuevo Estirón and Buenas Lomas Antigua, from 10 different speakers, men and women, young and old. The texts were about mammal natural history, palm natural history, how-to texts, and several myths. Recording was done using a Sony Minidisk digital recorder with a stereo microphone, either in the house where I was lodged or in the speaker's home. While in the field, I began transcription and translation of some of these texts with the help of Matses speakers. During this time, two Matses who knew how to write in their language well were asked to write 100 short essays each over a two-week period on such topics as mammal and palm natural history and how-to texts about Matses artifacts. Two speakers

were paid a fixed salary to come to my house several times a week for about an hour to help me translate texts; other speakers were given trade items each time they helped me. Little grammatical elicitation was done during this time. Only a fraction of the 20 hours of recording were transcribed and translated. Dr. Robert Voss accompanied me during this field season and he spent his time trapping, mostly marsupials, rodents and bats. I elicited names for these animals using their fresh carcasses (these ethnobiological field methods are described in Fleck *et al.* 2002). Upon return to the U.S., I entered all transcribed and translated texts into the Shoebox parsing program, and tried my hand at transcribing and translating some texts on my own.

1999, 4 months: Prior to this field season, I printed out three copies of the unbroken text lines of the parsed texts, and upon arrival in Nuevo San Juan, I had three literate Matsigenka speakers review them for any errors, and I had a ready list of grammar questions that had arisen while parsing them. This way I was able to detect transcription errors as well as speaker performance errors. I did some elicitation, primarily on nominalization and causation (in anticipation of an upcoming symposium presentation). Two Matsigenka were paid a salary to help me on a daily basis for one hour; other speakers who helped me occasionally were compensated as usual with trade items each time they helped me. During this time, I was also in charge of directing Matsigenka collection of bats at roosts and hunting at night for small mammals, which involved them writing relevant collection data in field notebooks, which I translated into English in the field (this is described in Simmons *et al.* 2002 and Fleck *et al.* 2002). During this field season, I took a laptop computer and solar power equipment to run it, and used it primarily to input text data.

2000, 6 months: During this period, I collected a few more texts from genres I had not collected before, mostly personal history, myths, and non-mythical oral tradition. I

worked mostly transcribing and translating these texts with the help of speakers, parsing them on the computer. Elicitation was restricted primarily to topics that came up while translating texts. During this and all field seasons, I opportunistically jotted down overheard speech and then asked speakers to help me understand it. Elicited and overheard data were also input into the Shoebox program (although I'm a little behind). During this field season and the next, I was not involved in any biological fieldwork. This time, five Matses were paid a salary to help me. Three of them (bilingual literate speakers), in addition to daily one-hour elicitation sessions, transcribed and translated recorded texts onto notebooks, which I used as a guide when I transcribed and translated these texts. Unfortunately, I have not had time to work on most of their transcribed texts.

2001-2002, 9 months. During this period, I only recorded a few texts, specifically natural conversation. One of my Matses assistants would take my recorder around and turn it on when people were having conversations, but I instructed him to not do it secretly and to ask for permission before he turned the recorder on. This time, elicitation topics were guided by the need to address certain topics in my grammar. I worked especially on phonology and syntax (phonology data collection methods are described in section 2.1). Six Matses speakers, this time including one woman, were paid salaries to attend one-hour elicitation sessions four to five days per week. Three of these Matses were also employed in revising my transcribed texts. As usual, in addition to salaried personnel, people were compensated with trade goods for intermittent linguistic consultation. During this time, I also started working with one of the two last living speakers of the Chankuëshbo language, mainly collecting word lists. Time was also spent trying to learn the "archaic" words from the older speakers. At the end of this and other field seasons, one or two Matses accompanied me to Iquitos, where we spent several days to two weeks working in hotels, restaurants and bars.

2002, 2 months. During this final field season, I took a complete draft of this dissertation and re-checked all the examples, sample sentences and texts with several Matses speakers. I also had a long list of questions that had come during the six months I spend in the U.S. writing the dissertation. Elicitation on these topics filled another 200-page field notebook. I also worked a bit more with the Chankuëshbo speaker at Nuevo San Juan. On the 17th of November, at the end of this last field season, Peruvian municipal elections were held. Voting being obligatory in Peru, most of the Matses that have voting documents (almost all the adult Peruvian Matses) came to Colonia Angamos to vote. I spent a week in Angamos, where I worked with speakers from Nuevo Cashishpi (who speak the Brazilian Matses dialect), with a captured woman who spoke Kapishto (another Mayoruna language, perhaps a dialect of Matses) and was able to obtain and double-check archaic lexical items from the old Matses men.

The data base for this study consists of:

- 156 recorded texts of various lengths that have been entered as 3042 entries in a searchable database (Shoebbox). This is only a fraction of the recorded texts, and many transcribed and translated texts have not been input yet. Note that due to the many long sentences created by clause chaining, the average sentence has about three clauses, some sentences having more than 8 linked clauses—each sentence, not each clause, counts as an entry.
- 200 short written texts composed by Matses speakers, comprising 1058 parsed entries in Shoebbox (these are only used when there are no recorded text examples).
- 8 (150- or 200-page) field notebooks with elicited and overheard data, this includes 2997 parsed entries in Shoebbox, which represent about one fourth of the notebook data. (Grand total of sentences in Shoebbox = 7097.)

As a final relevant note, it should be mentioned that my primary elicitation language was Spanish and that Spanish is my first language. Also, during my nine months in Amazonia doing zoological research, I learned the rural Loreto Spanish dialect, which is deviant from standard or Lima Spanish in many ways, especially for plant and animal terms. Occasionally I also worked with monolingual Matses speakers, initially with the help of translators, and afterwards by myself.

1.7 Overview of this grammar

The first subsection of the present section gives a very brief overview of the language. For a more detailed overview, read the introduction sections of the rest of the chapters. The rest of the subsections here address some technical issues, including the layout of this grammar (§1.7.2), the orthographies used (§1.7.3), the format of examples and sample sentences (§1.7.4), and, finally, a list of notational conventions (§1.7.5).

1.7.1 Overview of the language

Phonologically, Matses is relatively simple, it has 6 vowels and 15 consonants. Phonemic glottal stops and a high central vowel make Matses sound different from European languages. A word-level alternating rhythmic stress pattern also characterizes the sound of the language.

A general statement about Matses grammar is that many of its grammatical functions are accomplished by morphology and by clause-chaining. Morphologically, Matses is hard to classify. It stands between isolating languages (where most words consist of a single morpheme, as in Chinese) and polysynthetic languages (where words tend to consist of many morphemes, as in Eskimo). While single-morpheme words are common, and very long words up to about 10 morphemes are grammatically acceptable,

in practice, about 3 to 4 morphemes per word is usual, with verbs generally longer than nouns, adjectives, adverbs, postpositions or particles. It is the large number of morphological possibilities that is striking about Matses, not the length of its words. Similarly, Matses stands between agglutinative languages (where each bound morpheme represents a single meaning, as in Eskimo) and inflecting/fusional languages (where bound morphemes tend to represent several meanings at once, as in Romance languages). Verbal inflection and class-changing suffixes tend to have several meanings associated with them, while most (non-class-changing) derivational suffixes and most enclitics have single meanings associated with them. Interesting morphological properties of Matses include a metrical tense system (i.e., recent past, distant past, remote past, etc.), an obligatory and complex system for coding evidentiality (source of knowledge), and a separate, also complex system for coding epistemic modality (certainty). There is also an intricate system of nominalizing suffixes, and an elaborate system of directional spatial deictic verbal suffixes. Adverbs and postpositions exhibit transitivity agreement with verbs.

SOV appears to be the basic constituent order, but constituent order is essentially free from syntactic restrictions, responding more to discourse motivations and perhaps sometimes just style. Subordination is for the most part achieved through expansion of syntactic slots through class-changing processes (e.g., nominalization is the basis of relativization, most types of adverbial clauses are formed around adverbialized verbs, etc.). Clause-chaining is a prominent feature of Matses discourse with some sentences being up to about 10 clauses long. But note that clause-chaining just represents multi-level subordination, mostly involving adverbial clauses. Clause coordination is not widespread, most coordination-type functions being accomplished instead by subordination. Interesting features of Matses syntax include ergative-absolutive case

marking on nouns alongside nominative-accusative person agreement on verbs. Also of typological interest is that Matses have double-object constructions with no way to distinguish indirect from direct objects.

1.7.2 Format of this work

Organizing a written grammar is an awkward enterprise. It involves taking a multi-dimensional entity and reducing it to a one-dimensional string of words. Separating topics into chapters inevitably entails treating some aspects of single topics in separate locations within the grammar. The best one can do is to acknowledge this limitation and try to make up for it by organizing the grammar into chapters and sections in such a way that will maximize descriptive clarity and efficiency, and by thorough cross-referencing of related disjunct sections. The format of this work becomes obvious upon inspection the table of contents. Basically, to make this grammar more accessible, I used a traditional format (using Meira 1999 as a model), with the first chapter a general introduction, the second on phonology, the next chapters on morphology (an introduction to morphology, followed by 6 chapters describing the morphology of each of the 6 recognized word classes), this followed by three chapters on syntax (phrase structure, simplex sentences, and complex sentences). Rather than having a separate chapter on the lexicon and lexical semantics, the chapters on nouns, verbs, etc. contain sections describing subclasses of open word classes, semantic analysis of the words in closed word classes. The appendix is a collection of three texts of different genres.

1.7.3 Orthography

I tend to agree with one of my linguistics professors that “phonology is just something you have to do to get to the interesting part.” When I began to work with the Matses, there was already an existing “phonemic” writing system in place, which was

developed by SIL missionaries for bible translation and pedagogy. And I had already used this orthography in my M.S. thesis and ethnobiology publications. Therefore, I decided to put off the phonological analysis and jump straight to the “interesting part.” To my dismay, when I finally studied Matses phonology in depth, I found that there were significant flaws with the SIL writing system, including two missing phonemes, no marking of phonemic stress, ignoring of geminate fricatives, etc. (§2.11 lists all of the problems). As a result, I had to review all my lexicon and much of my other data with Matses speakers to note all the relevant missed details. The other problem with the SIL writing system involves the confusing convention transplanted from Spanish orthography that involves the use of both qu and c to represent the phoneme /k/, and the use of u to represent both /u/ and /w/. Therefore, this puts me in a difficult situation: should I present my dissertation in SIL orthography despite its flaws, or should I adopt a phonemic writing system that is more useful to linguists? I have decided to stay with the SIL orthography primarily because it would be a lot of work to convert all my examples, but also because it will make it easier for the reader to compare to SIL publications and my own previously published materials (although, even as I write this, I’m very tempted to do away with it). The SIL writing system, however, is completely inappropriate for a phonological description, and so in chapter two, an IPA phonemic writing system is used, while in the rest of the grammar I use the SIL orthography. While some Matses thought that I should use the established orthography in this description of their grammar, other Matses, particularly schoolteachers who have themselves noted the deficiencies of the SIL writing system, are talking about reforming it.

1.7.4 Examples and sample sentences

The examples used in this grammar, excluding elicited examples, contain unique text references, so that the reader can refer to the full text to see the sentence in context

(recorded text references begin with a letter, those from notebook essays begin with a number). If the relevant text occurs in the appendix, I mark the reference number with a plus (+) sign. Unfortunately, due to space constraints, I was not able to include all of the full texts from which examples were drawn; however, these texts are all already in a format where they could be easily published or made available on the internet, and at least some of them will be made available soon. My future publications will use this same text referencing system.

Examples in this work usually contain three line types: a morpheme break text line (underlined), a morpheme gloss line, and a free translation line. The example below is illustrative of a typical example in the morphology and syntax chapters

- (1) utsi-bi-Ø cuëte da-diad-tsëc-ec ush-e-c
 other-Emph-Abs dicot.tree trunk-hang-Dim-while:S/A>S sleep-Npast-Indic
cuëte tëdion
 dicot.tree below
 ‘Still other (small) [bats] sleep hanging on the trunk of a tree, on the underside of the [fallen] tree.’

A-I 051 cuesban 21

The morpheme gloss line is always directly below the morpheme break line, with the words (but not individual morphemes) vertically aligned at the left margin. The notational conventions used in example (1) are explained below in Table 1.4 along with other notational conventions. Example (1) helps explain my convention on the use of parentheses (grammatically coded or implied, but backgrounded information) and brackets (information added by me) in sample sentence translations. I chose to put ‘small’ in parentheses in the translation because it is coded indirectly by -tsëc ‘Diminutive’ on the verb, rather than on the noun. On the other hand, I included the word ‘bat’ in brackets to help the reader understand this sentence out of context; within the text, which is about bats, this would be unnecessary. A slightly different use of brackets

is my inclusion of 'fallen' to help the reader understand the scene: it is information that I know from experience, and that the speaker expects the listener to know, but that the reader of this grammar may not otherwise deduce. Some special notations are used inconsistently in the description; these are pointed out in the prose that refers to the examples in question. The most important point to keep in mind about sample sentences is that throughout the grammar *only the basic morpheme forms are included in the morpheme break line, not allomorphs*. When the surface form is relevant, an unbroken text line will be added above the morpheme break line, either in phonemic or phonetic representation. Where the example consists of a single morpheme, as is common in the phonology chapter, there will be no morpheme break line.

Many of the speakers wished that sentences elicited with their names should not appear with their names, particularly because some made-up sentences were about things like lying, someone being dumb, hitting someone, etc. Therefore, I changed all names to my own name, debi (Davy), which is what the Matses most frequently call me. Therefore, readers will see the name Davy frequently in examples, but this does not mean that I always used my name in elicitation (though I frequently did).

Matses does not distinguish gender grammatically, and plurality marking is optional, even for pronouns (third-person pronouns are covert), and speakers generally did not use overt third-person pronouns in their Spanish translations. Therefore most third-person anaphoric references in my Matses data are ambiguous with respect to gender and number, and Spanish data are ambiguous with respect to gender. Since translation into English generally requires overt third-person pronouns, as in example (2), for convenience, I use the singular third-person masculine pronouns (*he/him/his*) to represent a generic third-person pronoun in English translations of examples.

- (2) nid-o-sh Spanish: 'Se fue/fueron.'
 go-Past-3 English: 'He/She/It/They went.' = 'He went.'

Elicited examples that illustrate paradigmatic contrasts are numbered as (1a), (1b), (1c), etc., as opposed to simply (1), (2), (3), etc. Sample text sentences are numbered using letters, as in (3a) - (3c) below, only when they are sequential in the original text.

- (3a) ubi dësi ne-e-c que-onda-sh "I am Dësi," she told me.'
 1Abs woman's.name be-Npast-Indic say-Dist.Past-3
 + K-XXII 006 chema 054
- (3b) ma min champi nëid
 how.about 2Gen daughter.this.one
 "How about your daughter, this one here?" (I asked).'
 + K-XXII 006 chema 055
- (3c) cun champi tupa ne-e-c que-onda-sh
 1Gen daughter.woman's.name be-Npast-Indic say-Dist.Past-3
 "My daughter is Tupa," she said.'
 + K-XXII 006 chema 056

1.7.5 Notational conventions

All the notational conventions that I use in this grammar, both in the prose and in sample sentences, are listed in Table 1.4 (next page). Several are illustrated in example (1) in the preceding section. A few additional special notational conventions specific to phonetic transcription are listed in section 2.2.

Table 1.4. List of notational conventions used in the prose and in sample sentences.

Notation	Example	Explanation
underline	<u>matses</u>	Words in Matses (always in lower case).
italic font, 1	<i>español</i>	Words in foreign languages, including other Panoan languages.
italic font, 2	<i>English</i>	English as language data.
bold font, 1	matses-n	Highlights relevant morphemes in sample sentences.
	Matses-Erg	
bold font, 2	A clause is a...	First-time technical definition of a term.
brackets, 1	[ma.tsés]	Phonetic representations of any language (in regular font, using IPA symbols).
brackets, 2	‘He went [home].’	Information added to translations by me to help the reader, but not coded in the example.
parentheses	‘He went (long ago).’	Backgrounded or implicit information coded in the grammar.
slashes	/matsesën/	Unsegmented phonemic representation.
capitalization, 1	Agent	Semantic roles.
capitalization, 2	-e ‘Nonpast’	Grammatical glosses.
lower case, 1	-ua ‘again’	Lexical glosses.
lower case, 2	<u>matses</u>	Matses language data, even if a proper noun or the first word in a sentence.
single quotes, 1	<u>cuête</u> ‘tree’	Glosses in the prose.
single quotes, 2	‘He went.’	Translations in examples.
double quotes, 1	“... all verbs.”	Quotation from publications (followed by the citation)
double quotes, 2	‘He said, “go!”’	Direct quotation in example translations, used in alternating fashion with single quotes.
dash, 1	<u>ma-</u> ‘head,’ - <u>o</u> ‘Past’	Affixes in the prose.
dash, 2	- <u>uid</u> ‘only’	Enclitics in the prose.
dash, 3	<u>matses-n</u>	Separates morphemes in morpheme-break and morpheme-gloss lines of examples.
(no dash)	<u>chodque</u> ‘rot’	Roots, even those that can’t occur as bare roots.
colon	‘run off: Plural’	Separates glosses of portmanteau morpheme.
slash	<u>dada</u> ‘man/body’	Separates glosses of polysemous morphemes.
period, 1	run.off:Pl	Separates words in a single gloss in the morpheme-gloss line.
period, 2	[ma.tsés]	Syllable boundary in phonetic representations.
abbreviation	-Antpass	Only in break line grammatical glosses.
asterisk	* <u>nid-e-sh</u>	Ungrammatical or unattested forms.
question mark	? <u>bun-e-mbi</u>	Single-speaker ambivalence or inter-speaker variation in grammaticality judgments.

CHAPTER 2

PHONOLOGY

2.1 Introduction

The goal of this phonological analysis is twofold. I attempt to provide as detailed a description as possible of phonetic and phonological phenomena in the language that may be interesting to typologists or those working on comparative Panoan linguistics. At the same time, I establish a phonological basis for describing grammatical phenomena in further chapters, such as allomorphic patterns, compounding, lexicalization, definitions of “word” and “phrase,” etc. This I do with as little theoretical application as possible, chiefly to avoid biasing my description and burying it under theory-specific jargon that may soon become obsolete, and to avoid losing sight of the above goals. The principal data base for this chapter stems from 10 weeks of fieldwork at Nuevo San Juan (September-November, 2001) dedicated exclusively to the study of Matses phonology. Six speakers (one woman and five men) assisted me (usually separately) in one-hour daily (five days per week) elicitation sessions (= about 300 hours elicitation time) where I asked them to pronounce words, phrases and sentences, which I transcribed into a notebook and sometimes recorded, asked them to evaluate whether I was reproducing words correctly, and three of the speakers who were literate in their language were asked to also write the elicited words in their notebooks (using a mix between SIL orthography and additional special symbols including stress marks and letters for phonemes missing in the SIL orthography). Additionally, I listened to previously recorded texts, and opportunistically asked other Matses including children and old people to pronounce words, phrase and sentences for me during this period. During the years prior to this

period, I had already started working on Matses phonology, but in a less focused fashion. Some instrumental analysis was used, but most of the data represents my transcriptions based on careful and repeated elicitation. A very different presentation of Matses phonology can be found in Dorigo (2001), where she evaluates the Matses syllable, stress and other aspects of Matses phonology using optimality theory. Not just her analyses, but also her data are for the most part incompatible with mine, so I will not carry out a detailed comparison the present work with Dorigo (2001). Some very basic phonological and morphophonological information can be found in Kneeland and Fields (1978) and Kneeland (1979), which is generally compatible with my data analyses.

Matses has 21 distinctive segments (phonemes), 15 consonants and 6 vowels; there are no trills, lateral consonants or rounded segments (§2.2). There is a small inventory of syllable types, all conforming to the (C)(V)V(V)(C) template (CV, CVC, CVV, and CVVC being the most frequent). There are many vowel sequences (§2.4.2), but no syllable-internal consonant clusters (§2.5), and the limited distribution of consonants syllable-finally is notable (§2.4.3). There is a system of word-level alternating stress, primarily cued by pitch and vowel length, with alternating syllables stressed in either an even-stressed (preferred) or odd-stressed pattern and not sensitive to syllable weight (§2.7.1). Stress is contrastive in Matses: iambic (even-stressed, counting left to right) vs. trochaic (odd-stressed, counting left to right) stress patterns are lexically determined for all roots (§§2.2.3, 2.7.1), but can be shifted by some morphological processes (§2.6.5). While stress is associated with vowel length, vowel length is not contrastive in Matses independently of stress (§2.2.2.2). Words of sound-symbolic origin make up a large class of verb roots with anomalous behavior, both phonologically (§§2.6.6.4, 2.8.2, 2.9) and grammatically (§5.3.1.4). Onomatopoeic animal names containing repeated syllables also have unexpected phonological properties (§2.8.3).

Regular morphophonological processes include: fricative place assimilation (§2.6.1.1), diphthong and glide formation (§2.6.2), vowel insertion (§2.6.4) and stress movement/reassignment (§2.6.5); vowel harmony (§2.6.6.2), segment deletion (§2.6.6.3) and (arguably) ablaut (§2.6.6.4) occur sporadically. Reduplication is productive and has the interesting property of (usually) producing a single grammatical word composed of two phonologically independent adjacent components (§2.8). The phonological word, as defined in this chapter (§2.3.2), and the grammatical word in Matses are not isomorphic; i.e., they do not necessarily exhibit one-to-one correspondence (§3.2.2).

2.2 Phoneme inventory

Matses has 21 distinctive segments: 15 consonants and 6 vowels (Tables 2.1); these, along with contrastive stress, make up the phoneme inventory (the phoneme is controversial theoretically, but very useful for language description, so I will use it here). I will use the IPA symbols in Table 2.1 to represent Matses phonetic/phonological data (phonemes enclosed by slashes, phones enclosed by square brackets). Morphological data will be represented with the same symbols in Table 2.1 (underlined) in this chapter, but in other chapters I will use the SIL “phonemic” orthography (underlined), which is the only writing system used by the Peruvian Matses (Table 2.2). Phonetic data will be regularly transcribed only to the level of the major allophones listed in Table 2.1. The following conventions will be adopted for presenting phonetic data:

·	(period)	syllable boundary
	(space)	word boundary
ˈ	(accent)	stressed syllable, placed above the most prominent vowel in syllable
:	(colon)	vowel length
ʔ		unreleased, following stops
~	(tilde)	nasalization, placed above vowels.

Table 2.1. Matses phonemes (major allophones in parentheses) represented with IPA symbols.

	Consonants						Vowels		
	lab	alv	ret	pal	vel	glot	front	central	back
voiceless stops	p	t			k	(ʔ)	glides (j)		(w)
voiced stops	b	d					high i	i	u[u]
nasals	m	n			(ŋ)				
flap			(r)				mid e(ɛ)		o[y]
fricatives		s	ʃ	ʃ					
affricates		ts	tʃ	tʃ			low	a	
approximants	w			j					

Note: the back vowels /u/ and /o/ are unrounded, and therefore more accurately transcribed using the IPA [u] and [y], but I prefer to follow Ladefoged (1993:224) and generally use [u] and [o], reserving [u] and [y] for only the most narrow transcriptions.

Table 2.2. Matses phonemes as represented in SIL “phonemic” orthography.

	Consonants					Vowels		
	lab	alv	ret	pal	vel	front	central	back
voiceless stops	<u>p</u>	<u>t</u>			<u>c/qu</u>	high i	<u>ē</u>	<u>u</u>
voiced stops	<u>b</u>	<u>d</u>						
nasals	<u>m</u>	<u>n</u>				mid e		<u>o</u>
fricatives		<u>s</u>	<u>sh</u>	<u>sh</u>				
affricates		<u>ts</u>	<u>ch</u>	<u>ch</u>		low	<u>a</u>	
approximants	<u>u</u>			<u>y</u>				

Narrower transcriptions will be provided only for illustrating particular points relevant to the discussion at hand. Syllable boundaries will be marked for all polysyllabic phonetic data. Word-level stress (which is contrastive in Matses, §2.2.3) will be marked for all polysyllabic phonemic data as well (only in this chapter). Vowel length (§2.2.2.2) and nasalization (§2.2.2.1) are not contrastive and will be included in phonetic transcriptions only where relevant to the discussion. Utterance-level stress occurs on the final syllable of an utterance, and is not contrastive (§2.7.2), so in the examples in this chapter I do not mark utterance-level stress unless utterance-level stress is being

discussed; therefore, the reader should keep in mind that sample sentences, as well as any examples that could be interpreted as one-word sentences (e.g., verb roots as imperative commands, or nouns as one-word answers to questions) will/can have a stressed final syllable.

2.2.1 Consonants: simple complementary distribution and free variation

The Matses phoneme inventory contains the following 15 consonants: 3 voiceless and 2 voiced stops, 2 nasals, 3 (voiceless) fricatives, 3 (voiceless) affricates, and 2 approximants. It is notable that there are no liquid phonemes (although one allophone of /d/ is a retroflex flap). All the consonants are introduced in the subsections of the present section, grouped with respect to manner of articulation.

2.2.1.1 Stops

The stops are /p/, /t/, /k/, /b/, and /d/. The absence of a voiced velar stop phoneme (/g/) in Matses is notable because it produces an asymmetrical inventory of stops. Considering the concept that symmetrical phoneme inventories are more natural, a /g/ would be expected here because both labial and alveolar stops have voiced and unvoiced counterparts, so it in this respect Matses has a slightly skewed phonological system. The phone [g] does not even occur as an allophone of /k/, as one might expect between vowels in words like those in (1).

- (1) a. [a.ká]/*[a.gá] ‘egret’ b. [ta.pú.ku.té]/*[ta.pú.gu.té] ‘shoe’

It is easy to find minimal sets that distinguish stop phonemes with respect to both voice and position (2-5).

- | | | | |
|-----|--|-----|--|
| (2) | a. [pa.pá] ‘father’
b. [ba.bá] ‘grandchild’ | (3) | a. [tan] ‘try, imitate’
b. [dan] ‘suppose incorrectly’
c. [pan] ‘wash’ |
| (4) | a. [pe] ‘eat’
b. [te] ‘cut’
c. [ke] ‘say’
d. [de] ‘carry’ | (5) | a. [bin] ‘rubber’
b. [din] ‘in the hammock’
c. [tin] ‘mash’ |

The phonemes /p/ and /t/ (which occur only syllable-initially) are similar to those of European languages and do not seem to vary much, with some aspiration perceptible. With /b/ there is often a lack of complete closure in some environments (unsurprising in the absence of bilabial or labio-dental fricatives in the Matses phoneme inventory), so some friction is often produced, so that others (e.g., the SIL missionaries) have transcribed /b/ as [β] in all intervocalic environments. Other linguists upon hearing Matses may prefer to write it thus, but for me there is not enough friction to compel me to say that [b] alternates with a bilabial fricative ([β]). In fact, instrumental analyses show that [b] actually often occurs more like an approximant ([w]) in many intervocalic environments. The phonemes /d/ and /k/, by contrast, do exhibit complementary distribution with markedly different allophones.

- | | | |
|--|-----|--|
| /d/ → [r] / V__V
→ [dʰ] / __. (i.e., syllable-finally)
→ [d] / elsewhere | (6) | a. /dadá/ [da.rá] ‘man, body, trunk’
b. /tsad/ [tsadʰ] ‘sit!’
c. /danış/ [da.niʃ] ‘knee’ |
| /k/ → [ʔ] / __. (i.e., syllable-finally)
→ [k] / elsewhere | (7) | a. /makták/ [maʔ.táʔ] ‘mineral, salt lick’
b. /kukú/ [ku.kú] ‘cross uncle’ |

The [r] is a retroflex flap, which, despite the absence of a lateral approximant phone in the language, appears to never exhibit any lateral release. Syllable-initially, the [d] is

pronounced further back than the [d] in English or Spanish, with the tip of the tongue closer to the back edge of the alveolar ridge, apparently never touching the backside of the teeth, so it sounds a bit like an [r]. The [d] is not released syllable-finally, but is always clearly voiced, especially clearly so following [a]¹. As a result, Matses speakers tend to have a noticeable accent in all Spanish words containing a [d]: intervocalically, they pronounce the [d] as a flap (8a), word-initially (and syllable-initially, following consonants) their [d] sounds noticeably retracted (8b), and word-finally the [d] is unreleased and less distinct compared to the word-final Spanish [d] (8c).

	Spanish		Matses pronunciation	
(8)	a. <i>codo</i>	[kó.do]	‘elbow’	[ko.ró]
	b. <i>dame</i>	[dá.me]	‘give me’	[dá.me] (a bit backed)
	c. <i>comunidad</i>	[ko.mu.ni.dád]	‘village’	[ko.mú.ni.rádʔ]

The glottal stop can be subtle (at least to the non-Matses), but always shows up in spectrographs as an absence of energy (i.e., as a horizontal line). When I first began transcribing Matses words, I frequently left out glottal stops. This is a common mistake in other works on Matses, but the glottal stop can be crucially contrastive (9-12; see also 17).²

¹ In their earlier work, the SIL missionaries used [t] instead of word-final [d], especially after [i] (e.g., Fields 1973; Kneeland 1973, 1979). Also, Dorigo (2001) transcribes these as [t]. This could be dialectal variation since she worked exclusively with the Brazilian Matses; however, I have not noted this dialectal difference in any Brazilian Matses’ speech. Also, Spanguero Ferreira (2000) transcribes these as [tʰ] for Matis. Therefore, I have been extra careful to make sure I transcribed these accurately. Instrumental analyses of a few recorded words and phrases clearly show all word-final /d/’s to be followed by voicing. See also the phonological evidence below.

² There is some free variation word finally for a few morphemes. The ones I have identified are the particles ma/maʔ ‘but’ (§9.4.3) and ada/adaʔ ‘Uncertainty’ (§9.4.1) and the verbal suffix -ta/-taʔ ‘Imperative’ (§5.6.4). The forms with the word-final glottal stop are used mostly in an emphatic or dramatic manner, generally uttered followed by a pause.

- (9) a. [i.sá] 'porcupine' (10) a. [ni.ró] 'go (Recent Past: Interrogative 1/2)
 b. [iʔ.sá] 'bad, ugly' b. [ni.róʔ] 'go (Recent Past: Indicative 1/2)
 c. [iʔ.sáʔ] 'it got ruined'
- (11) a. [ka.sí] 'skinny' (12) a. [se.té] 'instrument for piercing'
 b. [kaʔ.sí] 'pygmy squirrel' b. [seʔ.té] 'strainer, stingray'

There are two lines of evidence for allophonic alternations involving /k/ and /d/: i) complete complementary distribution in the phonetic data; and ii) morpho-phonological alternations (13-15).

- (13) a. [pjaʔ] b. [pja̰.ken] c. [pjaʔ.tsɛn]
piak piak-en piak-tsen
 'nephew' nephew-Contrast nephew-next
 'nephew (contrasted)' 'the nephew next'
- (14) a. [se.nádʔ] b. [se.ná.ren] c. [se.nádʔ.tsɛn]
senád senád-en senád-tsen
 'deer' deer-Contrast deer-next
 'deer (contrasted)' 'the deer next'
- (15) a. [dídʔ] b. [ta.rí.ra.róʃ] 'He cut himself on the foot with an ax.'
did ta-did-ad-o-ʃ
 'cut with ax' foot-cut.with.ax-Rflx-Past-3

The only stop that can occur in series in a word is /k/, which is realized as a glottal stop followed by a full [k] (16 & 17a).

- (16) a. /ʃokkódo/ [ʃoʔ.kó.ro] 'wild banana species'
 b. /ʃúkka/ [ʃúʔ.ka] 'fan'
 c. /okkásad/ [oʔ.ká.sad] 'be nauseous'
 d. /ikkós/ [iʔ.kóʃ] 'was'

- | | | | | | | |
|------|----|-----------------|--------------------|----|----------------|-------------------|
| (17) | a. | [taʔ.kwés] | ‘hit on the belly’ | b. | [ta.kwés] | ‘hit on the foot’ |
| | | /takués/ | | | /takués/ | |
| | | <u>tak-kues</u> | | | <u>ta-kues</u> | |
| | | venter-hit | | | foot-hit | |

All cases of /kk/ are word-internal and heterosyllabic and can occur morpheme-internally (16a-c) or at morpheme boundaries (16d & 17a). Note the phonemic contrast between /kk/ and /k/, as in (17). See section 2.6.6.1 for the morphophonological process of “/k/ duplication.” A few speakers allow (heterosyllabic) sequences of /d/ at some morpheme boundaries, but for most speakers there is always voice dissimilation of /d/ when it follows another /d/. See section 2.6.1.2 for a description of this morphophonological process.

2.2.1.2 Nasals

The nasals are /m/ and /n/. Nasals can be readily distinguished from stops with minimal sets (18-21).

- | | | | | | | | |
|------|----|------|-----------|------|----|-------|------------------|
| (18) | a. | [ma] | ‘so that’ | (19) | a. | [min] | ‘2:Genitive’ |
| | b. | [na] | ‘do’ | | b. | [nin] | ‘with poison’ |
| | c. | [ta] | ‘mother’ | | c. | [tin] | ‘mash’ |
| | d. | [ka] | ‘say’ | | d. | [bin] | ‘rubber’ |
| | | | | | e. | [din] | ‘in the hammock’ |
-
- | | | | | | | | |
|------|----|---------|------------|------|----|---------|-------------------------|
| (20) | a. | [ma.ró] | ‘son’ | (21) | a. | [ná.ro] | ‘Did you do like this?’ |
| | b. | [pa.ró] | ‘deceased’ | | b. | [tá.ro] | ‘Did you plane it?’ |
| | c. | [ka.ró] | ‘raise’ | | c. | [dá.ro] | ‘Did you ask for it?’ |

The phones [m] and [n] contrast syllable-initially, both in word-initial (18, 19, 22 & 23) and word-medial positions (24-28), but only [n] occurs word-finally (in slow speech, at least).

- (22) a. [mwa] 'lie, liar' (23) a. [ma.tʃi] 'manioc flour'
 b. [nwa] 'large' b. [na.tʃi] 'mother-in-law, cross aunt'
- (24) a. [di.d.má] 'weak' (25) a. [ti.má] 'few'
 b. [bi.d.núd] 'lose something' b. [ti.ná.mis] 'palm crown fiber'
- (26) a. [tʃiʃ.mé] 'suckle' (27) a. [wis.má] 'not wary'
 b. [biʃ.ní] 'eye brow' b. [wes.níd] 'curassow (large bird)'
- (28) a. [njun.má.ne]
niun-mane
 knock.down-Fut:Poten:1
 'I might accidentally knock you down.'
- b. [njun.ná.ne]
niun-nan-e-Ø
 knock.down-Recip-Npast-Interr:1/2
 'Are you going wrestle each other?'

The phoneme /m/ is a bilabial nasal, similar to that found in European languages; /n/ is more variable. Nasals have complementary distribution preceding stops, i.e. nasals exhibit regressive (anticipatory) homorganic assimilation (29 & 30):

- /n/ → [m] / __ [p,b] (29) a. /kanpúk/ [kam.púʔ] 'tree toad'
 → [ŋ] / __ [k] b. /tsanká/ [tsaŋ.ká] 'squirrel monkey'
 → [n] / __ elsewhere c. /nantán/ [nan.tán] 'in/among'
- (30) a. [am.púʔ]
an-puk
 inside-line
 'line the inside'
- b. [an.djád]
an-diad
 inside-hang
 'hang inside'
- c. [aŋ.kí.ní]
an-kiní
 inside-enclosure
 'inner enclosure'

Note in (29a) that I have chosen to represent the nasal as an /n/ in the phonemic transcription, implying that this is the underlying form. If I had chosen to use an /m/ instead, it would not really matter, as there is no possibility for contrast between [m] and [n] in this position (i.e., syllable-finally). Nevertheless, my choice to pick /n/ as the basic underlying form at syllable-final position is not arbitrary, as argued below. It might be interesting to note first that in the Matses practical (SIL) orthography, m is used in places like (29a), i.e., preceding bilabial stops, and it happens that one of Matses speakers' most

common spelling “mistakes” is alternations between m and n preceding stops, while they almost never confuse m and n in other environments (where they do contrast).

Thus, there is a loss of contrast between /n/ and /m/ syllable-finally, but /n/ nonetheless seems to be the underlying form in all syllable-final forms: [n] can occur geminated, and it does not labialize when [m] directly follows it; these patterns occur both morpheme-internally (28, 31 & 32a) and at morpheme boundaries (32b & 33). Additionally, only [n] occurs preceding suffixes that begin with vowels (34).

- (31) a. [sin.nád] ‘palm species’ b. [din.má] ‘get weak and break’
- (32) a. [man.nán] ‘hill’ b. [ma.nán] ‘put on top’
 ma-nan
 top-put
- (33) a. [pa.nú] b. [pan.nú] c. [pan.mé]
 ‘giant armadillo’ pan-nu pan-me
 wash-Intent:1 wash-Caus
 ‘I’m going to wash it’ ‘let/make him wash it’
- (34) a. [bwá.noʃ] ‘He carried it.’ b. [ka.sé.naʔ] ‘He (evidently) got thin.’
 buan-o-s kasén-ak
 carry-Past-3 get.thin-Infer

The phone [m], by contrast, does not occur geminated, does not occur preceding [n], and never occurs preceding suffixes that begin with a vowel, despite otherwise occurring intervocalically morpheme-internally (35, also 25a).

- (35) a. [ko.móʔ] ‘tree species’ b. [tʃe.má] ‘cacique (bird)’

(Note that the two possible nasal sequences, /nn/ and /nm/, only occur word-internally and heterosyllabically.) Most convincing, however, is the fact that no words end in nasals other than /n/ (except in fast speech where some word-final /n/’s assimilate to the

place of the initial consonant in the following word; §2.6.1.3). Thus, I treat /m/ as an underlying form only in syllable-initial position; only /n/ occurs syllable-finally (syllable-initial and syllable-final positions are the only two positions where nasals occur). This is not an unexpected pattern if one considers the limited distribution of consonants that occur syllable-finally (§2.4.3), where bilabial stops likewise never occur syllable-finally.

It is notable that in Matses there is no bi-directional assimilation (fusion) in consonant clusters involving nasals; i.e., voiceless consonants do not become voiced following nasals (30a, 30c & 36) as is commonly found in other languages.

- | | | | |
|------|-----------------|----------------|---------------------------|
| (36) | a. [an.tín] | ‘palm species’ | e. [an.tád]/*[an.dád] |
| | b. [win.sád] | ‘frightening’ | <u>an-tad</u> |
| | c. [an.ʂán.tuʔ] | ‘swamp’ | inside-plane |
| | d. [man.tsés] | ‘levee island’ | ‘plane the inner surface’ |

Note that even those consonants that do not have voiced counterpart phonemes, namely /k/ and the fricatives and affricates, are not voiced following nasals.

Loos (1999:231) states that a common phonological process in Panoan is that “syllable-final *m* and *n* reduce to leftward-spreading nasalization on any preceding contiguous string of vowels and semivowels...” As an example see Costa (1997) for Marubo. Even Dorigo (2001) represents syllable-final nasal consonants phonetically as nasalization on vowels for Matses. Although there is some anticipatory nasalization of vowels preceding nasals, as might be expected, with speakers I have worked with, I have yet to see any nasal consonant, syllable-final or otherwise, fail to be articulated in slow speech. (As is common in any language, in fast speech some consonants are not fully articulated; this occurs with nasals, but only in *some* instances.)

2.2.1.3 Fricatives

The fricatives are /s/, /ʃ/ and /s̺/. They are always unvoiced, and it is notable that they do not have voiced counterparts. Fricatives can be readily distinguished from stops and nasals with minimal sets (37-42).

- | | | | | | |
|------|------------|---------------------------|------|-----------|-----------------|
| (37) | a. [san] | 'put:Plural O' | (38) | a. [s̺id] | 'smell' |
| | b. [tan] | 'try, imitate' | | b. [did] | 'cut with ax' |
| | c. [pan] | 'wash' | | c. [mid] | 'point at' |
| | d. [dan] | 'be wrong' | | | |
| | e. [nan] | 'put' | | | |
| (39) | a. [ʃi.rí] | 'bullet ant' | (40) | a. [miʃ] | 'touch' |
| | b. [ki.rí] | 'barb' | | b. [min] | '2:Genitive' |
| (41) | a. [mi.sé] | 'pierce hand' | (42) | a. [bus] | 'owl species' |
| | b. [mi.ʃé] | 'Will you weed?' | | b. [buʃ] | 'furry, fluffy' |
| | c. [mi.ʃé] | 'spider monkey' (archaic) | | c. [bud] | 'descend' |
| | d. [mi.pé] | 'bite hand' | | d. [bun] | 'want' |
| | e. [mi.té] | 'cut hand/tree limbs' | | | |
| | f. [mi.né] | 'knock out of hand' | | | |

And fricatives can be distinguished from each other with minimal pairs (41-45)³:

- | | | | | | |
|------|--------------|-------------------------------|------|-------------|------------|
| (43) | a. [si.ríʔ] | 'stripe' | (44) | a. ?[pa.ʃú] | 'soft ear' |
| | b. [ʃi.ríʔ] | 'wrinkled, rolled up' | | b. [pa.ʃú] | 'deaf' |
| (45) | a. [táʃ.kjo] | 'Did you poke your head out?' | | | |
| | b. [táʃ.kjo] | 'very hard' | | | |

The phoneme /s/ is a typical [s], and does not seem to vary much. The phoneme /ʃ/ sounds like /ʃ/ in English, perhaps a little more fronted. The phoneme /s̺/ was initially somewhat difficult for me to produce. It is usually a voiceless apico-alveolar retroflex

³ Many speakers reject the form in (44a), but agree that if it was valid, that's how it would be pronounced.

fricative, but some speakers seem to pronounce it producing a very similar sound by pressing their tongue against the inner surface the premolars of one side of the mouth instead of bending back the tip of their tongue. Initially, I did not distinguish /ʃ/ from /ʂ/, but subsequent careful investigation revealed that these phones do not occur in free variation in any environments, and in fact exhibit phonemic contrast in some environments.⁴

The phones [ʃ] and [ʂ] may appear to be in complementary distribution because their distribution is biased: [ʃ] occurs in syllables containing [i] and [j] (except at some morpheme boundaries), and [ʂ] generally occurs elsewhere. Furthermore, there is sociolinguistic variation where some syllables containing /ʃ/ are palatalized, as in (46), while no such palatalization occurs in association with /ʂ/.

- (46) a. [poʃ.tó] ~ [poʃʃ.tó] 'woolly monkey'
 b. [ʃi.rí] ~ [ʃʃi.rí] 'bullet ant'
 c. [bi.ʃú.ru] ~ [bi.ʃʃú.ru] 'saki monkey'
 d. [ko.kéʃ] ~ [ko.kéʃʃ] 'tree frog species'

This might lead one to suspect that [ʃ] is an allophone of /ʃ/ that occurs with high vowels and that /jʃ/ and /ʂj/ are realized as [jʃ] ~ [ʃ] and [ʃʂ] ~ [ʃ], respectively. With this analysis, the only underlying difference between pairs like the one in (47) would be the /i/ in (47b), rather than also contrasting in the final consonant; i.e., /niʃ/ vs. /niʂ/ ([j] here is an allophone of /i/; §2.2.2.3).

⁴ The Matses, of course, have no problem distinguishing these, and often corrected my incorrect pronunciation of /ʃ/ as [ʃ]. Their explanation is that /ʃ/ sounds like the /ʃ/ in the local Spanish (which has many borrowings from Quechua and other Indian languages, e.g., *shiui* 'tamandua [a medium anteater], *cosho* 'palm trunk canoe,' *mashque* 'seedling' and *Ancash* 'city in Peru.'). while /ʂ/ is a sound they only know from Mayoruna languages.

a historical origin or might represent a new phonetic pattern⁵. The practical orthography developed for the Matses by SIL personnel does not recognize these as separate phonemes, representing them both with the digraph sh.

Fricatives can occur geminated. Like /nn/ and /kk/, fricative sequences only occur word-internally and heterosyllabically; but unlike /nn/ and /kk/, they do not occur morpheme-internally. They do, however, clearly occur at morpheme boundaries, with many minimal pairs distinguishing single from geminate fricatives (52-54).

- | | | | | |
|------|---------------------|--------------------------|-----------------------|--------------------|
| (52) | a. [ʃiʃ.ʃún] | ‘after shaving’ | b. [ʃi.ʃún] | ‘tree species’ |
| | <u>siʃ-sun</u> | | | |
| | shave-after: S/A>A | | | |
| | | | | |
| (53) | a. [is.sún] | ‘after seeing’ | b. [i.sún] | ‘urine’ |
| | <u>is-sun</u> | | | |
| | see-after: S/A>A | | | |
| | | | | |
| (54) | a. [kwiʃ.ʃó] | ‘while splitting (wood)’ | b. [kwi.ʃó] | ‘while warming up’ |
| | <u>kui-ʃo</u> | | <u>kui-ʃo</u> | |
| | split-when: S/A/O>O | | warm.up-when: S/A/O>O | |

Sequences of fricatives sound much more like a drawn out consonant, than a repetition of the consonant. See section 2.6.1.1 for morphophonological place assimilation rules governing fricative sequences.

2.2.1.4 Affricates

The affricates are /ts/, /tʃ/ and /tʂ/. Affricates can be readily distinguished from stops, nasals and fricatives with minimal sets (55-60).

⁵ Loos (1999:230) lists *s*, *f* and *ʃ* as proto-Panoan fricatives, and notes that “Sharanawa and Cashinawa have lost the distinction between *f* and *ʃ* in some environments.”

- (55) a. [ma.tsú] 'pot' (56) a. [tʂu.kú] 'wet'
 b. [ma.kú] 'grub, caterpillar' b. [tʂu.kú] 'muscle'
 c. [ma.rú] 'demon' c. [pu.kú] 'stomach'
 d. [ma.mú] 'saki monkey' d. [ku.kú] 'cross uncle, father-in-law'
 e. [bu.kú] 'tree species, cord'
- (57) a. [tʂu] 'sister' (58) a. [tʂo.ró] 'makeshift basket'
 b. [tʂu] 'hot' b. [po.ró] 'arm, wing, branch'
 c. [ku] 'cross uncle' c. [ko.ró] 'crooked'
 d. [bu] 'hair' d. [no.ró] 'fly from ground to tree'
 e. [ʂu] 'unripe' e. [ʂo.ró] 'steep-sided'
- (59) a. [tsin] 'gather into a pile' (60) a. [tse.ró] 'tie across'
 b. [tʂin] 'wring' b. [tʂe.ró] 'too/et cetera'
 c. [tin] 'mash' c. [be.ró] 'did you get it?'
 d. [bin] 'rubber' d. [de.ró] 'carry'
 e. [din] 'in the hammock' e. [ʂe.ró] 'demon'
 f. [min] '2.Genitive'
 g. [nin] 'with poison'
 h. [sin] 'ripe'
 i. [ʂin] 'red' (archaic)

And affricates can be distinguished from each other with minimal pairs (56, 57, 59-64):

- (61) a. [wiʔ.tʂún] 'bird' (62) a. [tʂóʔ.ka] 'put down basket of palm fruits'
 b. [wiʔ.tʂún] 'saliva' b. [tʂóʔ.ka] 'draw liquid (e.g., with a straw)'
- (63) a. [tʂo.tʂóʂ] 'acouchi (small rodent)' (64) a. [tsú.da] 'who'
 b. [tʂo.tʂóʂ] 'several came' b. [tʂú.da] 'sister (uncertainty)'

The palatal affricate, /tʂ/, sounds to me much like the English or Spanish palatal affricate. The retroflex affricate /tʂ/ on the other hand, sounded exotic to me and was hard to pronounce with approval of Matses speakers, despite being difficult for me to distinguish from /tʂ/ in the beginning. It is pronounced with the tip of the tongue in contact with the alveolar ridge and the blade of the tongue lying at the bottom of the

mouth. The phoneme /tʂ/ has a limited distribution, occurring only before the back vowels /u/ and /o/ and the high central vowel /i/, as opposed to the palatal affricate, /tʃ/, which occurs in all environments. But /tʃ/ nevertheless does not occur in free variation with /tʂ/ (or other consonants) and is not pronounced less distinctly in those environments where /tʂ/ does not occur. Note that while both retroflex consonant phonemes have limited distribution (/ʂ/ does not seem to occur in syllables containing /i/ except at some morpheme boundaries; §2.2.1.3), the retroflex/lateral fricative contrasts with the retroflex affricate in that /ʂ/ is much more common than its palatal counterpart, /ʃ/, while with the affricates, /tʃ/ is more common than /tʂ/. As with the fricatives, in the Matses practical orthography these pairs of phonemes are conflated, being represented with the digraph ch.

There is some sociolinguistic variation of between /ts/ and /s/ in word-initial position (65).

- (65) a. [tsi.sé] ~ [si.sé] ‘coati’ b. [tsi.sú] ~ [si.sú] ‘charcoal’

Only a few lexical items exhibit this sociolinguistic alternation between /ts/ and /s/, and there exist minimal pairs distinguishing [ts] and [s] in both word-initial (59a&h; 66) and word-medial (67-68) positions. Note in (68) and (69) that [ts] and [s] can exhibit contrast word-medially even in words where the initial [ts] occurs in free variation with [s] in other parts of the same word.

- (66) a. [se] ‘pierce’
 b. [tse] ‘tie’
- (67) a. [tsa.tsí] ‘wire, grass species’
 b. [tsa.sí] ‘hard’

- (68) a. [tsi.sú] ~ [si.sú] 'charcoal'
 b. [tsi.tsú] 'buttocks'
- (69) a. [tsi.sé] ~ [si.sé] 'coati'
 b. [tsi.tsé] 'tie the base'

It is tempting to call the phone [ts] an allophone of /s/ where it is in free alternation and a consonant cluster (/t/ + /s/) where it occurs in contrastive distribution with /s/. However, the phones /ts/, /tʃ/ and /tʃ/ are treated here as affricates, rather than as sequences of two segments, primarily because all three occur word-initially and following other consonants word-internally, so if these were considered two separate segments, they would be the only exception to the observed patterns that word-initial consonant clusters and three-consonant sequences do not occur in Matses (see §2.5 for consonant clusters in Matses).

None of the affricates ever occur geminated anywhere in the language, and affricates never occur syllable-finally. Thus, as a manner-defined class, affricates have the most limited distribution among the classes of consonants, with the possible exception of approximants (§2.4.3).

2.2.1.5 Approximants

The approximants are /j/ and /w/. These two approximants can be distinguished from each other and from the other consonants with minimal sets (70-72).

- (70) a. [ma.ján] 'demon'
 b. [ma.wán] 'flooded'
 c. [ma.pán] 'wash head/top'
 d. [ma.tán] 'bitter'
 e. [ma.kán] 'rat-Ergative'
 f. [ma.mán] 'woman's name-Ergative'
 g. [ma.nán] 'put on top'
 h. [ma.sán] 'put many on top'
- (71) a. [je] 'Gross!' (interjection)
 b. [we] 'lay'/'rain'
 c. [pe] 'eat, bite'
 d. [te] 'cut'
 e. [ke] 'say'
 f. [de] 'carry'
 g. [ne] 'be'/'toss'
 h. [se] 'pierce'
 i. [tʃe] 'eat (soft food)'

- (72) a. [ʃu.bú.jáʔ.no] b. [ʃu.bú.waʔ.nó]
subú ic-ak-no subú-wa-ak-no
house be-Act.Nzr-Loc house-make-Act.Nzr-Loc
‘where the house is’ ‘where they were making a house’

The phoneme /j/ sounds similar to that in English. /w/ is a labiovelar approximant that is pronounced without lip rounding, like the back vowels, /u/ and /o/ (next section).

In one possible analysis, the less prominent phones in on- and off-glides in Matses, which occur in contrastive distribution with the approximants, could be treated as allophones of the phonemes /j/ and /w/. However, for reasons presented in section 2.4, I treat the phones in on- and off-glides as allophones of the vowels /i/ and /u/ (73 & 74).

- (73) a. /piak/ [pjaʔ] ‘nephew’ (74) a. /kues/ [kwes] ‘hit’
b. /nǎid/ [nǎjd] ‘this one’ b. /daun/ [dawn] ‘stripe’

In this grammar, I will use the term **approximant** to refer to the consonants /j/ and /w/, and the term **glide** to refer to the less prominent phones in on- and off-glides, which are represented by the symbols [j] and [w] in the phonetic transcriptions (and as /i/ and /u/ in the phonemic transcriptions).

Approximants do not occur geminated.

2.2.2 Vowels

The vowels are /i/, /ī/, /u/, /e/, /o/, and /a/ (see Table 2.1). The front vowels, /i/ and /e/, and the low vowel, /a/, to me sound similar to the /i/, /e/, and /a/ in Spanish. /ī/, by contrast, is a vowel that Spanish speakers in the Matses area have a hard time hearing and reproducing. I have heard Spanish speakers substitute /ī/ with [u], [i], and [e]. The back vowels /u/ and /o/ sound to me similar to the Spanish vowel [u] and [o], but, like the labiovelar approximant /w/, are not rounded (nor are any segments in Matses rounded).

2.2.2.1 Simple complementary distribution and free variation

The minimal sets in (75) - (82) show contrastive distribution for all 6 vowel phonemes in Matses.

- | | | | |
|------|--|------|--|
| (75) | a. [ni] 'poisonous plant' | (76) | a. [tʃi] 'grandmother' |
| | b. [ni] 'here' | | b. [tʃu] 'warm up' |
| | c. [ne] 'throw out' | | c. [tʃe] 'eat (soft food)' |
| | d. [na] 'do' | | d. [tʃo] 'come' |
| (77) | a. [bi] 'smoothen' | (78) | a. [pi.nú] 'humming bird' |
| | b. [bi] 'bring' | | b. [pu.nú] 'vein, tendon' |
| | c. [bu] 'hair' | | c. [pe.nú] 'I'm going to eat.' |
| | b. [bo] 'male's parallel uncle/nephew' | | d. [pa.nú] 'giant armadillo' |
| (79) | a. [tʃi.ró] 'woman, wife' | (80) | a. [ka.ní] 'grow' |
| | b. [tʃi.ró] 'toucan species' | | b. [ka.ní] 'woman's name' |
| | c. [tʃu.ró] 'did you have sex with her?' | | c. [ka.nú] 'I'm going to say X' |
| | d. [tʃe.ró] 'too, et cetera' | | d. [ka.né] 'throw on back/roof' |
| | e. [tʃo.ró] 'makeshift basket' | | e. [ka.nó] 'canoe' |
| | | | f. [ka.ná] 'macaw' |
| (81) | a. [sin] 'ripe' | (82) | a. [u] 'there (far from 1 st & 2 nd pers)' |
| | b. [sin] 'saw' | | b. [a] 'there (by 2 nd person)' |
| | c. [san] 'put: Plural O' | | c. [i] 'stingray' (archaic) |

There is phonologically-conditioned complementary distribution in the pronunciation of the phoneme /e/, but rather than there being two alternating allophones, the pattern is best described as a continuum. In closed syllables ending in a glottal stop, /e/ is pronounced as [ɛ] as in the American English *check* (83a), but in open syllables it is pronounced closer to the [e] in the Spanish *se* (83b). In closed syllables ending in other non-nasal consonants, the pronunciation of /e/ is intermediate. In syllables ending in /d/, the pronunciation of /e/ is notably lax (i.e., more like [ɛ]), but not quite as lax as in (83a)

or in the American English *bed* (84a), while in closed syllables ending in /n/, it is pronounced almost as in open syllables (84b).

- (83) a. /pek/ [pɛʔ] 'eats' b. /pe/ [pe] 'Eat!'
 (84) a. /bed/ [bɛd] 'Take it!' b. /ten/ [ten] 'as many as'

In the rest of the closed syllables ending in consonants besides /k/ and /d/, /e/ is pronounced more like [e] than [ɛ]. Also, [ɛ] in closed syllables ending in /k/ but beginning in /n/ are pronounced less tense than in other syllables ending in /k/. The continuum can be roughly characterized as in Figure 2.1 (note that there is a limited distribution of consonants syllable-finally in the language; §2.4.3):

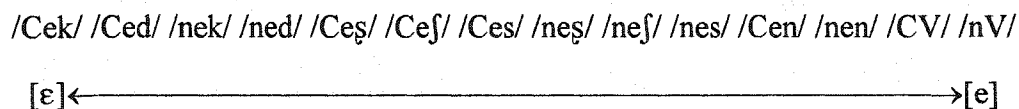


Figure 2.1. Continuum of pronunciation of /e/ in Matses syllables. (C = any consonant except /n/)

There *is* one minimal pair where [e] and [ɛ] contrast, but the contrasting form in (85b) is an (optional) vowel reduction of a trivocalic sequence with an underlying off-glide (§2.6.2.5), so I will not consider this substantial enough to claim that /ɛ/ is a full phoneme in Matses.

- (85) a. /tied/ [tjɛd] 'swidden' b. /tiaid/ [tjajd] ~ [tjed] 'thing that was cut'

The other five vowels, particularly /o/, tend to similarly sound slightly more tense in open syllables and a bit more lax in syllables ending in /k/, exhibiting a continuum parallel to that in Figure 2.1. However, the variation in vowel quality for these vowels is very

subtle, hardly justifying positing an alternate allophone. For example, the difference in vowel quality in (86a & 87a) is noticeably tenser than in (86b & 87b), but still much closer to [ɥ] than to [ʌ] or [ɔ], and not at all similar to the [ɔ] in the American English *chalk* [tʃɔk]⁶.

- (86) a. /bok bok/ [bɥʔ bɥʔ] ‘trogon (bird)’ b. /tʃo/ [tʃɥ] ‘Come!’
 (87) a. /ódka/ [ýd.ka] ‘suck liquid’ b. /pon/ [pɥn] ‘bird species’

In their earliest work, the SIL missionaries conflated /u/ and /o/ (writing them both as o), and even in more recent work, they continue to write many /u/’s as o. There is some sociolinguistic variation between /u/ and /o/ in some unstressed, non-word-initial, open syllables (i.e., usually third syllables), as in (88).

- (88) a. [meŋ.kuí.ru] ~ [meŋ.kuí.rɥ] ‘naked-tailed armadillo’
 b. [ka.sí.ru] ~ [ka.sí.rɥ] ‘beads’

And some semantically closely-related words differ only in /u/ vs. /o/ (89 & 90).

- (89) a. [kwi.nuí] ‘sharp’ (90) a. [diuun] ‘snot’
 b. [kwi.ný] ‘sharpen’ b. [diɥn] ‘top incisors, area under nose’

And there is some vowel harmony alternation between /u/ and /o/ in some suffixes and enclitics (§2.6.6.2). So it is not hard to see how this might cause some confusion, but the fact is that most of the time /o/ and /u/ phones are not variable. The /o/ ([ɥ]) and /u/ ([u]) in Matses sound just a bit different than in Spanish or English, differing at least in that the

⁶ Recall from section 2.2 that the back vowels /u/ and /o/ are unrounded, and therefore more accurately transcribed using the IPA [u] and [ɥ], but I prefer to follow Ladefoged (1993:224) and generally use [u] and [o], reserving [u] and [ɥ] for only the most narrow transcriptions.

Matses vowels are unrounded. We find that in Spanish borrowings, the Spanish /o/ is often, but not always, realized as a Matses /u/:

	Original Spanish		Matses Borrowing
(91)	a. <i>uno</i> [ú.no]	'one'	/únu/ [úí.nu]
	b. <i>cinco</i> [sín.ko]	'five'	/sín.ku/ [sín.kuu]

I cannot say why the Spanish [o] tends to be pronounced as [u] rather than the more similar (at least to me) vowel [ɤ]; perhaps the rounding of the Spanish [o] makes it sound higher to Matses speakers.

It is perhaps surprising that the similar phones [i] and [u] should contrast, yet they are easily distinguishable to me, and clearly do contrast as shown in (77b&c), (79b&c) and (80b&c). Nevertheless, there is socio-linguistic variation between /i/ and /u/ for a small number of words (92)⁷.

(92)	a. [i.bí]	~	[u.bí]	'1Abs'
	b. [im.bí]	~	[um.bí]	'1Erg'
	c. [i.muí]	~	[u.muí]	'grue (green+blue)
	d. [tsi.sjý]	~	[tsu.sjý]	'old man'
	e. [i.ké]	~	[u.ké]	'on the other side'

As is typical, vowels preceding nasals are nasalized, invariably so if they occur in the same syllable:

(93)	a. [õn]	'frog species'	b. [ãm.pé]	'steal, thief'
	c. [taʔ.pán]	'palmwood floor'	d. [mĩn]	'2 Genitive'

⁷ For (92a-c), the forms with /i/ are older forms; I'm not sure about (92d-e). There is also variation with /i/ for a very few lexical items: [wi.dín] ~ [wĩ.dín] 'resist,' [intʃiʃin] ~ [intʃĩʃin] 'in the dark.'

However, nasalization of vowels is not contrastive and is completely predictable, and so in my transcriptions I will not bother to mark nasalized vowels (mainly because it is a source of unnecessary distraction).

2.2.2.2 Vowel length

Vowel length *per se* is not contrastive in Matses, but vowels in stressed syllables are often notably longer than in unstressed syllables, particularly open syllables containing only one vowel (i.e., CV syllables; §2.4.1). This is most noticeable to me with /i/, which is considerably reduced in unstressed syllables. In fact, during my first weeks among the Matses (prior to any linguistics training), I sometimes did not perceive it all in unstressed position, transcribing words like [bi.rám.bo] ‘good’ as brámbo.

Because stress is contrastive in Matses (§2.2.3), and vowel length is a phonetic correlate of stress, one could argue that vowel length is contrastive, but not independently of stress (94 & 95).

- (94) a. [kwí:.noʃ] ‘He called him.’ (95) a. [tsí:.sem.bó:] ‘smooth handle’
 b. [kwí.nó:ʃ] ‘He sharpened it.’ b. [tsi.sé:m.bo] ‘true coat’

However, there is at least one case of contrast between long and short vowels independently of stress, but only in very slow speech (96).

- | | | | | |
|------|----------|---|---------------|--------------------|
| | fast | ~ | slow | |
| (96) | a. [tiʃ] | ~ | [ti:ʃ] | ‘neck swelling’ |
| | b. [tiʃ] | ~ | [tiʃ]/*[ti:ʃ] | ‘pull out a piece’ |

There are a handful of other examples like (96a), all cases of identical vowels adjacent at morpheme boundaries in monosyllabic words containing a prefix, where there is marked

vowel length that appears to be independent of stress (see §2.6.2.1 for a detailed treatment of this phenomenon), but the pair in (96) is the only one I have found where there is even this marginal contrast in vowel length. Thus, vowel length is not treated as contrastive (at least independently of stress), and will generally not be marked in transcriptions except where vowel length is the topic of the discussion. Vowel length is recognized, however, as a phonetic correlate of stress (§2.7.1), and as an effect of a morphophonological process (§2.6.2.1).

Sometimes for emphasis, a vowel is lengthened, especially in monosyllabic words (97), but this is more an emphatic way of talking, than something to be assigned a grammatical meaning. Interjections especially are regularly pronounced with lengthened vowels (§9.6.2).

- (97) [u: u: nid.kíd bi.rí.ra.pá u: aʔ.té u.tsín]
u u nid-kid bidi-dapa u akté utsi-n
far far go-Hab jaguar-large **far** river other-Loc
 ‘Far! Far! Jaguars travel far, to another river.’

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2.2.2.3 *Diphthongs and glides*

In Matses, the phones [j] and [w] occur sometimes as approximant consonants and sometimes as glides (i.e., as the less prominent constituents of on- or off-glides; see §2.2.1.5 for definitions of “glide” and “approximant”). Word-initially and between vowels, [j] and [w] behave as consonants (§2.2.1.5), but when they form part of on- and off-glides, they behave more like vowels than consonants (§2.4). Vowel sequences involving /i/ and /u/ almost always form on- or off-glides, i.e., multi-vowel syllable

nuclei that have a single peak (as opposed to diphthongs that have two peaks), as in (98) and (99).⁸

- | | | | | | | | |
|------|-----------|--------|------------|------|-----------|--------|---------------|
| (98) | a. /piak/ | [pjaʔ] | ‘tortoise’ | (99) | a. /buan/ | [bwan] | ‘carry’ |
| | b. /pais/ | [pajs] | ‘antler’ | | b. /daun/ | [dawn] | ‘back stripe’ |

The exception to this is some interjections (100) and, during slow, careful speech, some monomorphemic words (101).

- | | | | | | |
|-------|------|-------|-------|---------------|------------------|
| (100) | [aí] | ‘yes’ | (101) | [naj] ~ [nai] | ‘two-toed sloth’ |
|-------|------|-------|-------|---------------|------------------|

The issue that will be dealt with in detail in section 2.4 is whether glides should be considered allophones of /j/ and /w/ or of /i/ and /u/. Here I briefly take up the issue in order to present the allophonic patterns. Essentially, chiefly for the sake of descriptive simplicity, I treat all glides as allophones of /i/ and /u/. The following rules explain the distribution of the allophones of /i/ and /u/:

- | | | | | |
|-------------------|-------|------------|----------|------------------|
| /i/ → [j] / __V | (102) | a. /kiud/ | [kjud] | ‘lip insert’ |
| → [i] / u__ | | b. /buid/ | [bwid] | ‘pitch’ |
| → [j] / V__ | | c. /aid/ | [ajd] | ‘that one’ |
| → [i] / elsewhere | | d. /tʃibi/ | [tʃi.bi] | ‘younger sister’ |
|
 | | | | |
| /u/ → [w] / __V | (103) | a. /kues/ | [kwes] | ‘hit’ |
| → [u] / i__ | | b. /piuʃ/ | [pjuʃ] | ‘tortoise’ |
| → [w] / V__ | | c. /auk/ | [awʔ] | ‘as many as’ |
| → [u] / elsewhere | | d. /kuʃú/ | [ku.ʃú] | ‘piping guan’ |

Morphophonological alternations support this analysis:

⁸ Monolingual speakers who use the Spanish term *pais* [pa.ís] ‘country’ tend to pronounce it as they do ‘antler’ (94b), i.e., as one syllable, with the [a] more prominent.

- (104) a. [ʃu.bí] b. [ʃu.bjósʃ] c. [ʃu.bí.tsjaʃ]
subí subí-o-ʃ subi-tsia-ʃ
‘cry’ cry-Past-3 cry-Npast:Cond-3
‘He cried.’ ‘He would cry.’
- (105) a. [ka.pú] b. [ka.pwósʃ] c. [ka.pú.tsjaʃ]
kapú kapú-o-ʃ kapú-tsia-ʃ
‘hunt’ hunt-Past-3 hunt-Npast:Cond-3
‘He hunted.’ ‘He would hunt.’

Morphophonological data show that there is a loss of contrast between /o/ and /u/ and between /e/ and /i/ in some vowel sequences. Specifically, the vowels /o/ and /e/ raise when they occur next to /a/ or to each other, subsequently forming on- or off-glides (see §2.6.2.3). Thus, pairs like those in (106) and (107)⁹ appear identical on the surface:

- (106) a. [ka.njóʃ] ‘It grew.’ b. [ka.njóʃ] ‘He threw it on the roof.’
kaní-o-ʃ ka-ne-o-ʃ
grow-Past-3 back-throw-Past-3
- (107) a. [kawʃ] ‘He said it to him.’ b. [kawʃ] ‘white-backed.’
ka-o-ʃ ka-uʃu
say-Past-3 back-white

However, /o/ and /e/ do exhibit contrast in vowel sequences involving other vowels (108 & 109).

- (108) a. /diun/ [diwn] ‘snot’ (109) a. /ʃuibúd/ [ʃwi.búd] ‘roast continually’
b. /dion/ [dion] ‘rostral’ b. /ʃuebúd/ [ʃwe.búd] ‘bend’

⁹ The color term uʃu ‘white, light-colored’ in (91b) reduces to uʃ when prefixed (§2.6.6.3).

2.2.3 Phonemic stress

Matses has an alternating stress system where either all odd or all even syllables (counting left to right) in a (phonological) word are stressed (for phonetic characterization of stress see §2.7.1). The even- vs. odd-stressed pattern is lexically determined on all roots (this lexical stress can be shifted by some morphophonological processes; §2.6.5). Words composed of identical segment sequences can contrast with respect to being odd-stressed (110-115, a examples) vs. even stressed (110-115, b examples); see also (94) and (95).¹⁰

- | | |
|--|--|
| (110) a. [kwí.rín] ‘reprimand’ | (111) a. [á.bi] ‘presently/still’ |
| b. [kwi.rín] ‘sing, yell’ | b. [a.bí] ‘4 Absolutive’ |
| (112) a. [tʃú.wa] ‘heat up’ | (113) a. [táʃ.kjoʃ] ‘poked its head out’ |
| b. [tʃu.wá] ‘miss’ | b. [taʃ.kjóʃ] ‘tasted it well’ |
| (114) a. [bí.ní] ‘surface wound fluid’ | (115) a. [í.ba] ‘the stingray first’ |
| b. [bi.ní] ‘male, husband’ | b. [i.bá] ‘moon’ |

I have found few minimal pairs, but there are contrasting monomorphemic minimal pairs (110 & 112), contrasting segmentable words (113, 92 & 93), and monomorphemic roots contrasting with multi-morpheme words (111, 114 & 115). Despite the few minimal pairs, analogous pairs like the monomorphemic ones in (116) and (117) are easy to find in large numbers, though even-stressed roots and words are roughly three or four times more common than odd-stressed words.

¹⁰ Using Hayes’ (1995) terminology, the (a) examples could be said to follow a *trochaic* stress pattern, and the (b) examples an *iambic* one; however, due to the theoretical implications associated with this terminology, particularly with respect to foot inventories, which do not fit the Matses data very well, for the time being, I prefer the less theoretically-loaded terms “even-stressed” and “odd-stressed.” The Matses data may in fact motivate an addition to the foot inventory of Hayes’ metrical stress theory (see §2.7.1).

- (116) a. [wá.ʃan] ‘tiger heron’ (117) a. [já.ma] ‘climbing rat’
 b. [ʃi.ʃún] ‘tree species’ b. [ka.ná] ‘macaw’

Part of the definition of a phonological word is that every other syllable is stressed (i.e., there are no cases of adjacent stressed syllables or adjacent unstressed syllables within a phonological word), and I have not found any exceptions to this pattern yet. Since even-stressed words are much more common than odd-stressed words, a practical writing system that seeks to capture this contrast would simply mark the first syllable in odd-stressed words, and leave all other syllables unmarked; even-stressed words would be the default (like Spanish penultimate-stressed words ending in vowels, *n* or *s*), and could remain unmarked. Section 2.2.2.2 discussed vowel length as part of the characterization of the phonemic stress contrast; section 2.6.5 discusses stress movement/reassignment as a morphophonological process; and section 2.7.1 discusses the word-level stress system in some detail.

2.3 Phonological domains

Three domains have phonological relevance in Matses: i) the syllable; ii) the (phonological) word; and iii) the utterance. These domains will be defined and their identifying characteristics will be presented in the following subsections.

2.3.1 *The syllable*

The syllable can be characterized as a group of segments that is pronounced together in one articulatory movement. Two criteria are useful for acoustically identifying syllables in Matses: i) pauses and ii) stress patterns.

2.3.1.1 Pauses: elicitation and “emphatic monotone”

When speakers are asked to pronounce words very slowly during elicitation, it is possible to hear pauses between syllables. This method of identifying syllable boundaries is of limited utility, however. It is useful for making some distinctions, such as whether (word-medial) affricates are really affricates or consonant sequences (118), whether adjacent consonants belong to one or to two syllables (119), and whether glides are part of the syllable nucleus or syllable-initial consonant sequences (120a & 121a). These distinctions are possible to make because speakers’ location of these pauses is consistent across various slow speeds. But this method is trickier for making judgments distinguishing tautosyllabic vowel sequences from vowels sequences distributed between two separate adjacent syllables (120b, 121b, 122 & 123), because when speakers speak extremely slowly, they tend put extra pauses between vowel sequences, splitting up syllables that they would never split up in normal speech. So the number of syllables in the word increases as the speaker slows down his speech for the benefit of the linguist.

- (118) a. /matsés/ ‘Matses’ [ma.tsés] vs. *[mat.sés]
 b. /mantsés/ ‘levee island’ [man.tsés] vs. *[mant.sés]
- (119) a. /maspán/ ‘ceramic plate’ [mas.pán] vs. *[ma.spán.] vs. *[masp.án]
 b. /poftó/ ‘woolly monkey’ [poʃ.tó] vs. *[po.ʃtó] vs. *[poʃt.ó]
- (120) /mapiú/ ‘red-headed’ a. [ma.pjú] vs. *[map.jú]
 b. [ma.pjú] vs. *[má.pi.ú]/*[ma.pí.u]
- (121) /tsipwísipa/ ‘spider’ a. [tsi.pwís.pa] vs. *[tsip.wís.pa]
 b. [tsi.pwís.pa] vs. *[tsí.pu.is.pa]/*[tsi.pú.is.pá]
- (122) /miinkantšúʃ/ ‘two-toed sloth’ [míjn.kan.tšúʃ] vs. *[mi.in.kan.tšúʃ]
- (123) /tai/ ‘foot’ [taí] vs. *[ta.i]

The principal behind eliciting slow speech pronunciation to find syllable boundaries is that if all speakers perform in the same way, then this reflects something real about their language. However, there are some linguists that might argue that all elicited data where speakers are asked to speak slowly is “unnaturally slow” and should be thrown out because the goal is to describe the language as speakers actually speak it. Conveniently for me, the Matses have a mode of speaking which I call “emphatic monotone” (§2.7.4). The Matses (especially older women) switch to this emphatic manner of speaking to relate an unexpected event or the observation of an extreme condition, allowing us to make distinctions like as those in (120b), (121b), (122) and (123) without relying solely on elicited data. When speaking in this mode, speakers slow down their speech considerably. In this natural form of slow speech, which occurs in (recorded) spontaneous conversation, stories, etc., and can be elicited from speakers (as sentences, not single words), pauses can be heard consistently located within words, allowing one to make all the distinctions in (118) - (123). The “emphatic monotone” mode of speaking identifies syllables that are consistent with those identified using word-level alternating stress (next section).

2.3.1.2 Alternating stress for identifying syllables

The Matses language has an alternating stress system where every other syllable is pronounced longer and with a higher pitch (and optionally louder, in elicited speech) than the intervening/preceding/following syllable(s). The pattern found in the vast majority of words is that the first syllable is unstressed and the second syllable stressed. While it is lexically determined whether the first vs. the second syllable will be stressed, it is predictable that if the second syllable is stressed, every even syllable (counting from

left to right) will be stressed (124a), and that if the first syllable is stressed, every odd syllable in the word will be stressed (124b).

- (124) a. [to.ró.fo.kó.ra.pá.wid.kjó] ‘only big toads’
 b. [wá.ʃan.rá.pa.wíd.kjo] ‘only big tiger herons’

The stress system is not sensitive to syllable weight, but a word’s stress pattern can shift (i.e., from odd-stressed to even-stressed syllables) predictably as a result of some morphophonological processes (§2.6.5). More details on the stress system will be presented in section 2.7.1; here I will only address the role of the stress system in the identification of syllables.

Because the stress system is not sensitive to syllable weight, the alternating stress system is not useful for making distinctions like those in (120), (121), (122a), (123a), (125a) and (126a). However, the alternating stress system is useful for determining the number of syllables that occur in a word. Thus, it makes possible distinctions like those in (120b), (121b), (122), (123), (125b) and (126b).

- (125) /mikuéste/ ‘agouti’ a. [mi.kwés.te] vs. *[mi.kwé.ste] vs. *[mik.wés.te]
 b. [mi.kwés.te] vs. *[mi.kú.es.té]

- (126) /tatʃoádanmís/ ‘planarian’ a. [ta.tʃoá.ran.mís] vs. *[ta.tʃoár.an.mís]
 b. [ta.tʃoá.ran.mís] vs. *[ta.tʃó.ar.án.mís]
 vs. *[tá.tʃo.ár.an.mís]

Recall from the preceding section that determining the number of syllables in a word (and consequently knowing when to split up vowel sequences) was the main weakness of using pauses for identifying syllables in Matses. Thus, these two methods, pauses and stress, complement each other for recognizing syllables. Syllable structure will be topic of section 2.4.

2.3.2 *The phonological word*

The phonological word is composed of a root plus any prefixes, suffixes, or enclitics that are attached to it. The two main criteria for defining and recognizing phonological words in Matses are i) alternating stress and ii) morphophonological alternation.

2.3.2.1 *Alternating stress for identifying words*

The domain of alternating stress, introduced above in sections 2.2.3 and 2.3.1.2, is the phonological word. To determine if two pieces of grammatical material are part of the same phonological word, one can see if the grammatical pieces follow the same stress pattern. Thus, if an enclitic like -wid ‘only’ in (127) was actually a phonologically independent particle, one would expect it to exhibit the same stress characteristics following any noun root. Similarly, it is evident that piu ‘red’ and tʃedó are independent words, rather than cliticized adjectives like -dapa ‘large’ (128), because the alternating stress system does not allow adjacent syllables in a single word to be either both stressed (129a)¹¹ or both unstressed (130b). Note the shifting stress on bi-syllabic enclitics (128) in contrast to the immutable stress patterns of bi-syllabic particles (130).

- | | | | |
|----------|-------------------------|----|-----------------------------|
| (127) a. | [ka.pá.wid.kjó] | b. | [ta.né.te.wíd.kjo] |
| | <u>kapá-wid-kio</u> | | <u>tanéte-wid-kio</u> |
| | squirrel-only-Aug | | electric.eel-only-Aug |
| | ‘nothing but squirrels’ | | ‘nothing but electric eels’ |

¹¹ The exception being the woman’s name /tʃidópiu/ [tʃi.ró.pju], which is pronounced as a single word. The name means literally ‘red woman,’ and although when initially coined may have been motivated by some red characteristic of the woman, it is now a lexicalized, traditional Matses name. In an *ad hoc* way, a woman that was really red (or yellow, blonde, etc.) could be called [tʃi.ró pjú], pronouncing it as two words.

- (128) a. [ka.pá.ra.pá] b. [ta.né.te.rá.pa]
 kapá-dapa tanéte-dapa
 squirrel-large electric.eel-large
 ‘big squirrel’ ‘big electric eel’
- (129) a. [ka.pá pjú] b. *[ka.pá.pju] c. [ta.né.te pjú]
 kapá piu tanéte piu
 squirrel red electric.eel red
 ‘red squirrel’ ‘red electric eel’
- (130) a. [ka.pá tʃe.ró] b. [ta.né.te tʃe.ró] c. *[ta.né.te.tʃé.ro]
 kapá tʃedó tanéte tʃedó
 squirrel etc/too electric.eel etc/too
 ‘squirrels, etc./too’ ‘electric eels etc./too’

2.3.2.2 Morphophonology for identifying phonological words

Most morphophonological rules apply consistently only within word boundaries. A few morphophonological rules (e.g., nasal assimilation; §2.6.1.3) occur across word boundaries even in relatively slow speech, but the general trend is that while some morphophonological rules can be observed across word boundaries in fast speech, during slow speech these same rules are not applied; by contrast, most morphophonological rules apply inside word boundaries, even in the slowest speech.

Morphophonological rules will be described in detail in the subsections of section 2.6; here I will briefly introduce only two to show how they are used to identify word boundaries. The rules are:

/e/ → [i] __/a, o/ (raising; §2.6.2.3)

/ʃ/ → [s] __/s/ (fricative place assimilation; §2.6.1.1)

It can easily be seen in (131) and (132) how rules like these can be useful for distinguishing single words from pairs of words.

- | | | | | |
|-------|----|-------------------------------|----|------------------------------|
| | | slow | | very fast |
| (131) | a. | [aʔ.tjá.tʃo] ~ *[aʔ.té.a.tʃó] | b. | [aʔ.té a.nán] ~ [aʔ.tjá.nán] |
| | | <u>akté-atʃo</u> | | <u>akté aná-n</u> |
| | | river-(?)land | | river length-Loc |
| | | 'floodplain forest' | | 'along a river' |
| | | | | |
| (132) | a. | [is.sún] ~ *[is.ʃún] | b. | [ma.bís sù] ~ *[ma.bíʃ.su] |
| | | <u>is-ʃun</u> | | <u>mabís su</u> |
| | | see-after: S/A>A | | tree.species unripe |
| | | 'after seeing' | | 'unripe <u>mabís</u> fruits' |

Not all morphophonological rules are useful for identifying phonological words: I have found the following to be useful: assimilation to fricatives (§2.6.1.1), voicing dissimilation of /d/ (§2.6.1.2), vowel reduction (§2.6.2.1), glide formation (§2.6.2.2), vowel raising (§2.6.2.3), diphthong formation (§2.6.2.4), approximant-vowel alteration (§2.6.3), and stress movement (§2.6.5). While not all morpheme boundaries contain adjacent segments that are testable with morphophonological rules, this method serves as a secondary means of confirming word identifications made using alternating stress patterns. For example, in (133), in addition to the pause after the [d] as opposed to before it, we should still be able to hear that the /d/ is not pronounced as a flap, at least in slow speech, which should never happen even in the slowest speech if this was a single word.

- (133) [ni.rájd i.kí.ruʔ]/*[ni.ráj.ri.kí.ruʔ] 'underground'
nidáid ikíduk
ground inside

2.3.3 The utterance

An utterance (i.e., a phonological sentence) can be identified by i) sentence-level stress, ii) intonational contours, and iii) pauses. Sentence-level stress will be discussed in

more detail in §2.7.2. Briefly, in typical sentences,¹² the final syllable in the final word of an utterance is stressed (more intensely than word-level stress) whether or not it would otherwise be expected to carry word-level stress. Thus, in (134a) we can see that the utterance ends with the word kuesónbi, as the final syllable would not be expected to take word-level stress because word-level stress never falls on adjacent syllables (§2.7.1). By the same token, we can see that the utterance in (134a) does not end with suínte, otherwise its final syllable would be stressed. Similarly, we can see that the three words in (134b) compose a single utterance—otherwise we would expect kuesónbi to have the same stress pattern as in (134a). Utterances where the final syllable takes word-level stress, as in (134c), are harder to identify using this method, but utterance-final stress nevertheless is usually stronger than regular word-level stress.

- (134) a. [ʃwín.te kwe.sóm.bí] ‘I killed a two-toed sloth (a short time ago).’
 suínte kues-o-nbi
 two.toed.sloth kill-Past-1Erg
- b. [ʃwín.te kwe.sóm.bi mi.kwés.te.bí.tá]
 suínte kues-o-nbi mikuéste-bita
 two.toed.sloth kill-Past-1Erg agouti.Com:O
 ‘I killed a two-toed sloth and an agouti (a short time ago).’
- c. [ʃwín.te kwe.són.dam.bí] ‘I killed a two-toed sloth (long ago).’
 suínte kues-onda-nbi
 two.toed.sloth kill-Dist.Past-1Erg

The utterance is the maximal domain of intonational contours, and so intonation patterns, such as interrogative intonation, described in section 2.7.3, can be used to

¹² The simple sentence is generally isomorphic with a phonological sentence, as are at least some complex sentences, but I still need to do more work to see if there are any “sentence-level” stress patterns associated with sub-sentence elements, such as complex phrases and subordinate clauses.

identify utterances. Also, the “emphatic monotone” introduced in section 2.3.1.1 has the utterance as its minimal domain.

Finally, one expects pauses to be natural between utterances in elicitation. And it is often possible to hear pauses clearly between utterances in natural discourse.

2.4 Syllable structure

Based on the criteria for identifying syllables outlined in section 2.3.1, several different syllable types can be identified. However, even when applying these criteria consistently, the number and nature of possible syllable *types* in Matses can vary considerably depending on how one analyzes on- and off-glides. The issue is the following: should the phones occurring as the less prominent (in pitch and duration), element of on- and off-glides ([j] and [w]; henceforth “glides”) be treated as allophones of the approximants /j/ and /w/ (i.e., as consonants), or as allophones of /i/ and /u/ (i.e., as vowels). The repercussions of this decision on the nature of the description of syllables is significant. For example, if glides are considered consonants, the number of syllable types in Matses will be greater, syllable-internal consonant clusters will exist in the language, three-consonant and four-consonant clusters will exist in the language, the number of possible vowel sequences will be reduced, etc.

The fact of the matter is that glides share distributional properties both with consonants and with vowels, and additionally do not share all their distributional properties either with consonants or with vowels. What I wish to do in this phonological description is to avoid making an a-priori decision about this matter. What I shall do is begin the sections on syllable types (2.4.1), vowel sequences (2.4.2), and distribution of consonants (2.4.3) by first ignoring on- and off-glides (i.e., excluding them from the data), and then presenting glides analyzed first as vowels and then as consonants. At the

end of each section I will compare the two analyses, justifying my eventual decision to classify glides (i.e., [j] and [w] as they occur in on- and off-glides) as *vowels*. Dorigo (2001), by contrast, treats these phones as consonants, and consequently her analysis of Matses syllable structure is radically different.¹³

2.4.1 Syllable types

Ignoring syllables with on- and off-glides, the syllable types listed in Table 2.3a can be identified.

Table 2.3. Syllable types in Matses

Syllable types	Examples with onsets	Onsetless examples
a) Syllable types, ignoring syllables with glides		
(C)V	/ka.pá/ ‘squirrel’	/a.bú/ ‘sky, cloud, soap’
(C)VC	/pin.tʃúk/ ‘thorn’	/ún.ka/ ‘paddle’
CVV	/mio/ ‘man’s name’	—
CVVC	/noen/ ‘earthworm’	—
CVVVC	/ʃaien/ ‘giant anteater (contrast)’	—
b) Syllable types containing on-and off-glides, treating glides as vowels.		
(C)VV	/piu/ ‘red, reddish’	/iú/ ‘ant species’
(C)VVC	/piak/ ‘nephew’	/aid/ ‘that one’
CVVVC	/piaid/ ‘eaten thing’	—
c) Syllable types containing on- and off-glides, treating glides as consonants.		
(C)VC	/maw/ ‘bat falcon’	/iʷ/ ‘ant species’
(C)VCC	/pajs/ ‘antler’	/ajd/ ‘that one’
CCV	/pju/ ‘red’	—
CCVC	/pjak/ ‘nephew’	—
CCVCC	/pjajd/ ‘eaten thing’	—
CVVCC	/biajd/ ‘brought thing’	—
CCVVC	/pjuak/ ‘it (evidently) reddened’	—

¹³ For Matis, Spanguero Ferreira (2000:68), settles on describing “this type of sequence as diphthongs” (original in Portuguese). While she does not distinguish between diphthongs and on-/off-glides, as I do, it is evident she means these to be vowel sequences, in concord with my Matses analysis.

If on- and off-glides are treated as vowel sequences (Table 2.3b), then essentially no additional syllable types are added to the inventory of Matses syllable types.¹⁴ In the analysis in Table 2.3b, we note that on- and off-glides do not form syllable types that do not also occur with glideless bivocalic sequences. And because syllables containing on- or off-glides are not treated differently from glideless tautosyllabic vowel sequences by the alternating stress system or any other phonological process, there is little incentive to consider these as two separate syllable types. In light of this, the major disadvantage of treating glides as consonants, as in Table 2.3c, is that 6 syllable types are unnecessarily added to the syllable inventory. An apparent advantage of the analysis in Table 2.3c is that it is more detailed, but if there is no phonological process that is sensitive to the distinctions that this detail captures, there is little incentive to adopt this more complicated analysis.

A phonological word can be described as any sequence of allowable syllables, with the one restriction being that onsetless (vowel-initial) syllables (V, VC, VV, VVC) only occur word-initially (including monosyllabic words). Note in Table 2.3 that no syllable types begin with on-glides. Thus, in this sense glides differ from both vowels and consonants in not occurring word-initially, but pattern with vowels in not being able to occur syllable-initially word-medially. See section 2.6.3 for alternation of glides with approximants at morpheme boundaries.

¹⁴ Note that the very few instances of onsetless bivocalic sequences (which only occur word-initially) happen to all be off-glides, so the analysis in Table 2b arguably adds the syllable types VV and VVC, unless one considers these sub-types of (C)VV and (C)VVC.

2.4.2 Vowel sequences: diphthongs and glides

There are 36 different logical two-vowel sequences, but many sequences are not attested in the data (Table 2.4). Some sequences never occur in the data: these can either be shown by the morphophonology to be disallowed (listed as: /VV/ → /VV/) or they are simply never encountered (listed as ?/VV/), with no morphophonological evidence available to show that they are disallowed; some vowel sequences are only instantiated at morphophonological boundaries (listed as /VV/_m). All of the observed vowel sequences in Matses are listed in Table 2.4 with the phonetic transcription of an example showing how the vowel sequence is pronounced.

Table 2.4. Bivocalic sequences found in Matses (on- and off-glides in **bold**).

*/ii/ → /i/		/ui/	[kwi.bú] ‘beard’
/iu/	[pjuʂ] ‘tortoise’	?/uu/	
/ie/	[pjen]~[pien] ‘diarrhea’	/ue/	[kwes.bán] ‘bat’
/io/	[mjo] ‘palm species’	/uo/ _m	[ka.pwós] ‘he walked’
/ii/	[tʃi.ʂid] ‘penis string’	/ui/	[ba.kwí] ‘offspring’
/ia/	[pja] ‘arrow’	/ua/	[bwan]~[buan] ‘carry’
?/ei/		/oi/ _m	[pój.sem.bó] ‘smooth-bellied’
?/eu/		/ou/ _m	[powʂ] ‘white-bellied’
*/ee/ → /e/		/oe/ _m ↔ /ue/	[tʂoe?]~[tʂwe?] ‘is coming’
*/eo/ → /io/		*/oo/ → /o/	
?/éi/		/oi/ _m	[poiʃ] ‘stomach tumor’
*/ea/ → /ia/		/oa/ ↔ /ua/	[tʂoa?]~[tʂwa?] ‘work’
/ii/	[tʂi.ʂíjd] ‘spider monkey’	/ai/	[da.pájs] ‘palm species’
/iu/	[iu]~[iw] ‘ant species’	/au/	[dawn]~[daun] ‘back-striped’
/ie/ _m	[biék] ‘carries’	*/ae/ → /ai/	
/io/	[tion] ‘Adam’s apple’	/ao/ _m ↔ /au/	[naoʂ]~[nawʂ] ‘did’
*/ii/ → /i/		/ai/	[ʂai] ‘giant anteater’
/ia/	[ʂia] ‘pygmy rice rat’	*/aa/ → /a/	

Vowel sequences in Matses can be presented by categorizing vowels into three categories: vowels that become glides (/i/ and /u/); vowels that raise to become glides in some environments (/e/ and /o/); and vowels that never raise or become glides (/i/ and /a/). Section 2.6.2 describes the morphophonological patterns alluded to in these tables.

Ignoring on- and off-glides is difficult here because many on- and off-glides are pronounced as diphthongs (i.e., with peaks at both vowels, and with both vowels clearly distinguishable) in interjections (135) and in slow speech, particularly in monomorphemic words (136). Similarly, there are some verb roots with vowel sequences that sound like diphthongs when uttered as an imperative command, while the same root sounds like it contains an on- or off-glide when inflected (137)¹⁵.

- (135) /ai/ [ai]/*[aj] ‘yes, okay’
- (136) a. [iu] ~ [iw] ‘small biting ant’
 b. [dawn] ~ [daun] ‘striped’
 c. [bwan] ~ [buan] ‘carry’
 d. [pjen] ~ [pien] ‘diarrhea’
- (137) a. [kain] ‘Wait!’ b. [kájn.tsjaʃ] ‘He would wait.’ c. [káj.noʃ] ‘He waited.’
kain-Ø kain-tsia-s kain-o-s
 wait-Imper wait-Npast.Cond-3 wait-Past-3

Thus, if we called the [j] and [w] in on- and off-glides consonants, we would have free variation between phonemes (i.e., /j/ ~ /i/; /w/ ~ /u/), as opposed to free variation between allophones of a single phoneme (/i/ or /u/). Also, if we considered glides to be consonants, to make a general statement about the possible vowel sequences, we would have to arbitrarily exclude interjections, commands and slow speech, in which case we could claim that only 8 of the 36 logically possible vowel sequences exist in the language (/oe/, /oi/, /oa/, /ie/, /io/, /ia/, /ao/, /ai/). If we do not exclude slow speech and

¹⁵ It may be tempting to split these as sequences of two syllables (especially with /ai/) because in unnaturally slow speed, one may perceive pauses between vowels. But note that no matter how slowly these are pronounced, word-level alternating stress patterns are not applied.

interjections, the inventory of possible two-vowel sequences would be harder to list because, while some on- and off-glides clearly sound like diphthongs in slow speech, other on- and off-glides sound only a bit like diphthongs in slow speech; therefore, deciding if these sound enough like diphthongs to list as possible vowel sequences would be a very subjective process. By contrast, if we consider glides to be vowels, we can make the general statement that 24 of the 36 logically-possible vowel sequences occur in the language, without having to worry about speed-dependent variation in pronunciation.

Other general statements about vowel sequences and on- and off-glides are simpler and more straightforward when treating glides as vowels. Table 2.5 summarizes the different patterns illustrated in Table 2.4.

Table 2.5. Distribution of vowels, vowel-glide, and glide-vowel sequences

*eV	oV	iV	aV	iV	uV	jV	wV
*eV _{glide}	oV _{glide}	iV _{glide}	aV _{glide}	*iV _{glide}	*uV _{glide}	*jV _{glide}	*wV _{glide}
Ve	Vo	Vi	Va	Vi	Vu	Vj	Vw
V _{glide} e	V _{glide} o	V _{glide} i	V _{glide} a	V _{glide} i	V _{glide} u	*V _{glide} j	*V _{glide} w

From Table 2.5, we can make the following general statements, phrased differently depending on how glides are categorized:

Vowel/glide distribution rules, categorizing glides as *vowels*:

- 1) vowel sequences do not begin with /e/
- 2) the bivocalic sequences /iu/ and /ui/ will be pronounced as on-glides

Vowel/glide distribution rules, categorizing glides as *consonants*:

- 1) vowel sequences and off-glides do not begin with /e/
- 2) at least one full vowel must occur in an on- or off-glide
- 3) off glides do not begin with /i/ or /u/

Furthermore, there are no vowels that occur with /i/ or /u/ that do not also occur with the other four vowels, discouraging the classification of glides as different from vowels.

We similarly find that trivocalic sequences occur with many different combinations of vowels in any of the three positions; i.e., there is no position in trivocalic sequences that is exclusively filled by glides (Table 2.6). One positional difference between is that glides do not occur in medial position in trivocalic sequences.

Table 2.6. Example of different trivocalic sequences (all from morpheme boundaries).

$CV_{\text{glide}}VV_{\text{glide}}C$	/piaid/	[pjajd]	'eaten thing'
$CV_{\text{glide}}VV_{\text{glide}}C$	/dajúnuaik/	[da.jú.nwajʔ]	'He is taking care of it/him'
$CV_{\text{glide}}VVC$	/piuaş/	[pjuaş]	'It (presumably) reddened'
$CVVV_{\text{glide}}C$	/biaid/	[biajd]	'brought thing'
$CVVVC$	/naien/	[naien]	'two-toed sloth (contrasted)
$CVVVC$	/şaien/	[şaien]	'giant anteater (contrasted)

2.4.3 Limited distribution of consonants syllable-finally

It is notable that most of the consonants (11 of 15) never occur syllable-finally, as shown on Table 2.7. We note in particular that no labial consonants, no affricates, and no approximants occur in syllable-final position. The six consonants that occur syllable-finally include all the fricatives, one of the two nasals, and two of the five stops. In other words, there is no single articulatory characteristic that distinguishes these six consonants from the ones that never occur syllable-finally. Thus, it is difficult to explain why this seemingly random selection of consonants occurs word-finally, while the others do not.¹⁶

¹⁶ In addition to the absence of many consonants in syllable-finally positions, I draw attention to the fact that that syllable-final /k/ is a glottal spot, syllable-final /d/ is unreleased, and there is loss of contrast with nasals syllable-finally. These can all be considered weakening patterns. This gives one the impression that the Matses language is, metaphorically speaking, conspiring to rid itself of closed syllables, and has started to clean house with the stops. The fricatives remain the only class of consonants that occur strongly in syllable-final position.

Table 2.7. Distribution of phones within Matses syllables.

#_	Syllable-initial		Syllable-final		Syllable-internal			
	C_ _V	V_ _V	_#	V_ .C	.C_ V	V_ .C.	.C_ .C.	.CV_ VC.
p	p	p						
t	t	t						
k	k	k	[ʔ]	[ʔ]				
b	b	b						
d	d	[ɾ]	[dʰ]	[dʰ]				
s	s	s	s	s				
ʃ	ʃ	ʃ	ʃ	ʃ				
ts	ts	ts						
tʃ	tʃ	tʃ						
tʃ	tʃ	tʃ						
m	m	m						
n	n	n	n	n/[m]/[ŋ]				
j		j						
w		w						
			[j]	[j]	[j]	[j]		
			[w]	[w]	[w]	[w]		
V			V	V	V	V	V	V

Non-basic allophones are enclosed in brackets; basic allophones are unenclosed; [j] and [w], where they appear in **bold** font, indicate that these phones are part of an on-glide or off-glide; C = any consonant; V = any full (non-glide) vowel; # = word boundary.

If we consider glides to be allophones of approximants, we would then be able to add /w/ and /j/ to the list of consonants that occur syllable-finally. However, because vowels can also occur syllable-finally, and most consonants do not, this is not a compelling reason for categorizing glides as consonants. Looking at Table 2.7 we note that regardless of how one categorizes glides, the distribution of approximants is nevertheless defective (compared to the other consonants) in that they do not occur as onsets following consonants. If we categorized glides as approximants, it would make

the distribution of approximants even more anomalous in that approximants would then become the only consonants that occur syllable-internally (see Table 2.7). By contrast, as can also be seen in Table 2.7, classifying glides as vowels would not add to the different positions that full vowels already occur in.

2.5 Consonant clusters

Now that we have classified all glides as phonological vowels, it is possible to make some general statements about consonant clusters:

- i) Consonant clusters are composed of no more than two consonants.
- ii) There are no word/syllable-initial or word/syllable-final consonant clusters; i.e., all consonant clusters are heterosyllabic.
- iii) (Consistent with the limited inventory of coda consonants mentioned above,) consonant clusters begin only with one of six consonants: /k/, /d/, /n/, /s/, /ʃ/, or /f/: this excludes all labial consonants, affricates, and approximants, and /t/.

Table 2.8 lists all the observed consonant clusters in the language.

Table 2.8. Phonetic representation of consonant clusters, showing clusters produced by morphophonological processes (in **bold**).

First cons.	Second consonant														
	/p/	/t/	/k/	/b/	/d/	/n/	/m/	/s/	/ʃ/	/f/	/ts/	/tʃ/	/w/	/j/	
/k/	?p	?t	?k	?b	?t	?n	?m	?s	?ʃ	?f	?ts	?tʃ	?tʃ	.kw	.kj
/d/	d.p	d.t	d.k	d.b	d.t	d.n	d.m	s.s	ʃ.ʃ	f.f	d.ts	d.tʃ	d.tʃ	.dw	.rj
/n/	m.p	n.t	ŋ.k	m.b	n.d	n.n	n.m	n.s	n.ʃ	n.f	n.ts	n.tʃ	n.tʃ	.nw	.nj
/s/	s.p	s.t	s.k	s.b	s.t	s.n	s.m	s.s	s.s	?	s.ts	s.tʃ	s.tʃ	.sw	.sj
/ʃ/	ʃ.p	ʃ.t	ʃ.k	ʃ.b	ʃ.t	ʃ.n	ʃ.m	s.s	ʃ.ʃ	f.f	ʃ.ts	ʃ.tʃ	ʃ.tʃ	.ʃw	.ʃj
/f/	f.p	f.t	f.k	f.b	f.t	f.n	f.m	s.s	f.f	f.f	f.ts	f.tʃ	f.tʃ	.fw	.fj

The first thing that we note in is that some expected consonant clusters do not occur. One of these, /sʃ/, is simply unattested in the language (symbolized by question marks in Table 2.8): it neither occur morpheme internally nor is there an opportunity to see what happen at a /s/-/ʃ/ morpheme boundary. The phonetic sequences, [ʔd], [dd], [ds], [dʒ], [dʃ], [np], [nk], [nb], [sd], [sʃ], [ʃd], [ʃʃ], [ʃs], and [ʃʒ], do not occur morpheme-internally, but can be shown to be disfavored by morphophonological processes that alter the place, voice and/or manner of one of the consonants (but note that there is speed-related, frequency-related and sociolinguistic variation whereby the expected phonetic sequences are sometimes observed at morpheme boundaries). These morphophonological process, including assimilation of fricatives and of /d/ to adjacent fricatives (§2.6.1.1) and voice assimilation and dissimilation of /d/ (§2.6.1.2) are described in detail below. Also, place assimilation accounts for the different phonetic qualities of /n/ preceding stops (§2.6.1.3). The geminate sequences [ss], [ʃʃ] and [ʒʒ] simply do not occur morpheme-internally, despite being allowed at morpheme boundaries. Note as well that while geminate fricatives occur at morpheme boundaries, but not morpheme-internally, /nn/ and /kk/ occur both morpheme-internally and at morpheme boundaries. Most consonants do not occur in series anywhere in the language, consistent with the pattern that most consonants are not allowed to close syllables (Table 2.7). Finally, it should be noted that the last two columns of Table 2.8, those involving the approximants /w/ and /j/, should not be considered consonant clusters, since, as discussed above, we will only treat /w/ and /j/ as consonants syllable-initially, and unlike all the rest of the consonant clusters in Table 2.8, these are tautosyllabic.

The fact that /ts/, /tʃ/, and /tʃ/ occur in consonant clusters (Table 2.8; 136) presents further motivation for calling these forms affricates rather than consonant

sequences, because otherwise these would create the only three-consonant clusters in the language, as well as the only tautosyllabic consonant clusters in the language.

- (138) a. [wis.tsáʔ]
 /wistsák/
 ‘canopy passerine bird’
- b. [ud.tsjáʃ] ‘It would root.’
 ud-tsia-ʃ
 root-Npast.Cond-3

2.6 Morphophonology

In this section I deal with phonological rules¹⁷ that apply across morpheme boundaries. These rules all result in some significant alteration of one or both of the morphemes involved: there is alteration, loss or addition of a phoneme, change in syllable structure, or movement/reassignment of stress. Some of these alterations provide explanation as to why some segment sequences are absent morpheme-internally. For example, the reduction of identical vowels at morpheme boundaries (§2.6.2.1) suggests that this process applies morpheme-internally as well, contributing to our understanding of the lack of sequences of identical vowels or phonemic vowel length in the language. Other morphophonological phenomena, by contrast, create segment sequences that are absent morpheme-internally. For example, geminate fricatives only occur at morpheme boundaries. What we do not find, however, are segment sequences that are present morpheme-internally, but disallowed at morpheme boundaries.

One difficult aspect of elucidating morphophonological rules is that there is often much variation in the data. This variation includes intra-speaker speed-dependent variation, inter-speaker sociolinguistic variation, and variation associated with the relative frequency of certain forms in the language. In the discussions that follow, I will

¹⁷ I use the word “rule” to refer to a generalization (sometimes with exceptions, sometime without) that accounts for the observed patterns in the data. In other words, my rules are descriptive, not prescriptive; i.e., I make no claim that Matses talk the way they do because their speech is somehow governed by rules (e.g., in the way players follow rules in a sport or game).

point out the more significant patterns of variation. The morphophonological processes that I describe in the first five subsections of the present section (§§2.6.1-2.6.5) are rules that are applicable generally across all morpheme boundaries (and thus also relevant to understanding morpheme-internal phonological patterns). Sporadic morphophonological processes and irregular verbs and allomorphy are described in the last three subsections (§§2.6.6-2.6.8).

2.6.1 Consonant alteration

When two consonants come into contact, the usual result is that they form a heterosyllabic consonant cluster without alteration of either consonant or any other segment, and without stress shift. Some consonant alterations can be predicted from morpheme-internal allophonic patterns, specifically, /k/ → [ʔ] syllable-finally, /d/ → [r] intervocally (§2.2.1.1.) and homorganic nasal assimilation, /n/ → [m,ŋ] / __ {p, b, k} (§2.2.1.2). The subsections of the present section treat those phonological patterns that are unique to morpheme boundaries, and consonant alternations that cannot be observed morpheme-internally. These processes are: i) place assimilation of fricatives and /d/ (§2.6.1.1); ii) voice assimilation and dissimilation of /d/ following non-nasal consonants (§2.6.1.2); and iii) optional homorganic nasal assimilation at morpheme and word boundaries (§2.6.1.3). Other morphophonological consonant alteration processes, the duplication of /k/ before /o/ in suffixation/encliticization and reduction of /k/ in prefixes prefixed to roots beginning with any vowel, occur only sporadically and will be described in section 2.6.6.1.

2.6.1.1 Place assimilation of fricatives and /d/

When different fricatives come together at morpheme boundaries, one of the two fricatives assimilates to the other. There is speed-dependent, frequency-related and inter-speaker variation in fricative assimilation that makes fricative assimilation morphophonological rules more general tendencies than strict rules, but at the same time this variation allows us to draw some inferences about fricative place assimilation in Matses that would not be possible in the absence of variation. Note that although geminate fricatives (which sound more like a single drawn out consonant than repetition of the consonant) are contrastive in Matses (§2.2.1.3), there are no morpheme-internal fricative sequences, heterosyllabic or otherwise.

There are nine possible two-fricative sequences involving the three fricative phonemes in the language, /s/, /ʃ/ and /ʒ/. The following are the rules governing all of these combinations (at least in fast speech):

/s/ + /s/ → /ss/	/ʃ/ + /s/ → /ss/	/ʒ/ + /s/ → /ss/
/s/ + /ʃ/ → /ss/	/ʃ/ + /ʃ/ → /ʃʃ/	/ʒ/ + /ʃ/ → /ʃʃ/
/s/ + /ʒ/ → ?	/ʃ/ + /ʒ/ → /ʃʒ/	/ʒ/ + /ʒ/ → ?

The following generalizations can be made:

- i) whenever an /s/ is involved, the other fricative assimilates to it; and
- ii) whenever a /ʃ/ is involved, it assimilates to the other fricative.

There are actually very few morphemes that allow us to test these rules. In fact, we cannot test two of the possible combinations (/sʒ/ and /ʃʒ/) unless some new affix or clitic is discovered. Compounding of roots does not occur in Matses, and fricative assimilation rules apply anomalously in reduplicated forms, which usually produce two

phonologically separate constituents (§2.8). Thus, affixation and cliticization are the only processes where these morphophonological rules can be observed. Only five morphemes¹⁸ allow us to see these morphophonological rules in action. They are the clause-chaining suffix/verbal applicative suffix/transitivity agreement enclitic, -sun (§§5.5.1, 7.6.1.2, 8.6.1.2, 11.5.3, 12.4.2.2, the clause chaining suffix, -so (§12.4.2.3) the mirative nominal suffix, -senda (§4.6.10.2) the verb-nominalizing suffix/noun-modifying suffix, -sio (§§4.6.1.3, 4.7.4.2) and the de-intensifying prefix, bi- (§§4.5.2, 5.4.2, 6.5.2). These morphemes occur at different levels of frequency in the language, and fricative place assimilation during slow speech is positively correlated with frequency. The pattern is similar to Bybee's (1994, 2000) description of frequency effects on the diffusion of sound change. Thus, I will discuss assimilation associated with each of these affixes in turn, with the more frequently occurring ones first.

The suffixes -sun and -so can be discussed together, as they behave essentially the same in all the environments that they occur in. Also, of the five affixes/enclitics involved in fricative assimilation, these are the two most frequently encountered in the language, and they occur commonly in positions directly following roots ending in fricatives. Perhaps due to this high frequency of occurrence, the pronunciations in (139-140) obtain even in very slow pronunciation, to the point that [ʃ.ʃ] and [s.ʃ] sequences in these words are not accepted at all by speakers.

¹⁸ Just before leaving the field, I learned of a two more: the very rare prefix pa- 'nearly' that only occurs on some kinship terms (§4.5.2), and the also uncommon body-part prefix kuis- 'thigh'. I did not get chance to do systematic elicitation with these, but casual tests revealed that they mostly showed no assimilation (presumably due their low frequency in the language), and when there was assimilation, they followed the same patterns described in this section.

- (139) a. [pe.ʃún]
pe-ʃun
 eat-after:S/A>A
 ‘after eating’
- b. [uʃ.ʃó]
uʃ-ʃo
 sleep-when:S/A/O>O
 ‘while sleeping’
- (140) a. [miʃ.ʃún] ~ *[miʃ.ʃún]
miʃ-ʃun
 touch-after:S/A>A
 ‘after touching it’
- b. [niʃ.ʃó] ~ *[niʃ.ʃó]
niʃ-ʃo
 be.angry-when:S/A/O>O
 ‘while being angry’
- (141) a. [is.sún] ~ *[is.ʃún]
is-ʃun
 see-after:S/A>A
 ‘after seeing it’
- b. [kwes.só] ~ *[kwes.ʃó]
kues-ʃo
 hit-when:S/A/O>O
 ‘while hitting it’

By contrast, the third morpheme that creates this same set of morpheme-boundary environments, -ʃenda ‘Mirative,’ is infrequently used,¹⁹ and perhaps because of this there is disparity between fast and slow pronunciation involving -ʃenda following roots ending in /s/. What we hear is place assimilation in fast speech and often no assimilation at all in slow speech; and while some speakers only accept the assimilated forms, many speakers accept words with either assimilated or non-assimilated fricative sequences like those in (142) as correct.

- (142) a. [bús.sen.dá] ~ [bús.ʃen.dá] ~ *[búʃ.ʃen.dá] ‘owl (Mirative)’
bus-ʃenda
 owl.species-Mirat
- b. [da.wís.sen.dá] ~ [da.wís.ʃen.dá] ~ *[da.wíʃ.ʃen.dá]
dawís-ʃenda
 brother.in.law-Mirat
 ‘bother-in-law (Mirative)’

¹⁹ A note should be made about my remarks about frequency. They are based on their frequency in the texts I have collected and how commonly I overhear them in conversation. I have not yet performed a quantitative study of morpheme frequency.

As one would expect, there is no variation with words ending in /ʒ/ (143), but words ending in /ʃ/ differ from those ending in /s/ in that there is always place assimilation, even in slow speech (144). This is likely as much due to physiological constraints of the tongue than anything else (on a personal note, I find [sʃ] much less awkward to pronounce than [ʃʃ]).

(143) [pjúʒ.ʒen.dá]
piuʒ-ʒenda
 tortoise-Mirat
 ‘tortoise (Mirative)’

(144) [toéf.ʃen.dá] ~ *[tóef.ʒen.dá]
toef-ʒenda
 parakeet-Mirat
 ‘parakeet (Mirative)’

The suffix -sio is used regularly with a much smaller number of verb and noun roots.

When attached to verbs, it changes the verb to a noun meaning something like ‘someone that performs X more than normal’ (145), and when attached to most nouns it means that the person is characterized by having a lot/too much of that noun (e.g., someone having many warts or scars). With kinship terms, it is used optionally to address a relative as a term of affection (146). The number of nouns that make sense with -sio is small, -sio is used regularly with only a small number of noun roots, and there is disagreement among speakers about the meaning of nonce nominalizations accomplished with -sio (145). All this contributes to or stems from a very low infrequency of -sio in the language.

(145) [i.sún.sjo]
isún-sio
 urinate-Char.Nzr
 ‘someone who urinates all the time’
 or ‘someone who always says, “(go) pee!”’

(146) [da.wís.sjo]
dawís-sio
 older.brother.in.law-dear
 ‘dear older brother-in-law (male ego)’

As expected, there is gemination at /s/ + /sio/ morpheme boundaries, as in (146). With stems ending in /f/, there is no variation in the more commonly used forms (147), but with many words, particularly novel forms, we find inter-speaker and speed-dependent variation in the amount of assimilation associated with suffixation with -sio (148). What we find is that with common usages of -sio, assimilation is constant, and with other words it occurs only in fast speech or not at all for some speakers. This seems to suggest, as has been pointed out by Bybee (1994, 2000), that it is not just the frequency of a morpheme in the language, but the frequency of the co-occurrence of certain forms that causes disparity in rates of sound change within the lexicon.

- | | |
|---|---|
| <p>(147) [bi.tʃis.sjo] ~ *[bi.tʃif.sjo]
 <u>bitʃif-sio</u>
 dirt-Char
 ‘someone who always dirty’</p> | <p>(148) [nijs.sjo] ~ [nijf.sjo] ~ *[nijf.fjo]
 <u>nijf-sio</u>
 be.mad-Char.Nzr
 ‘someone who always gets mad’</p> |
|---|---|

With stems ending in /ʃ/ there is always inter-speaker and speed-dependent variation in assimilation when suffixed with -sio (149).

- (149) [tʃis.sjo] ~ [tʃiʃ.sjo] ~ *[tʃiʃ.ʃjo] ‘someone who has many birth marks’
tʃiʃ-sio
birth.mark-Char

The patterns illustrated thus far allow us to make several important observations. First, it is not relevant which fricative comes first in a fricative sequence—what matters is which fricative is “dominant” (in analogy to genetics). At this point we can postulate the dominance hierarchy that predicts which fricative will assimilate to which:

$$s > ʃ > ʃ$$

Note that this hierarchy produces all the rules (or, summarizes the generalizations) listed in the beginning of this section. A second observation that can be made is that it is not relevant which fricative is part of the root and which fricative is part of the suffix. This can be seen clearly by contrasting (141) and (149). The third point that should be made is that while there is variation in fricative assimilation, the variation is due to whether the dominant phone triggers the “recessive” one to assimilate or not; i.e., there is never variation with one phone being dominant in some cases and the other phone in other cases. Thus, assimilation is unidirectional with respect to the dominance hierarchy (but not generally with respect to possible left-right directionality of assimilation); for example, as illustrated in (141) and (148), we see variation as /ss/ ~ /sʃ/ or /ss/ ~ /ʃs/, but never as /ss/ ~ /sʃ/ ~ /ʃs/. As mentioned above, some of the observed variation in fricative assimilation is speed-dependent, and one would expect some level of assimilation during fast speech in any language. But the point I’m trying to make here is that when speakers *do* assimilate fricatives, it is not done willy-nilly, but predictably, following regular rules.

The above three observations are borne out by the patterns involving the last morpheme that can create fricative sequences at morpheme boundaries: the de-intensifying prefix biʃ-. The prefix biʃ can be attached to most verb stems meaning ‘softly’ or ‘not all the way,’ to some color adjectives meaning ‘light,’ and, in what seems to be a very novel innovation, to nouns meaning ‘false.’ This prefix is not encountered commonly in the language other than with the word biʃpiu (Deintensifier-red) ‘yellow.’ My impressionistic assessment is that biʃ- occurs less frequently than siu-, but is used naturally with a larger number of stems. This low frequency of usage perhaps accounts

for some of the variation in fricative assimilation that we find with prefixation with biɣ- of most (150), but not all (151) roots beginning with /s/.

- | | |
|--|---------------------------------------|
| (150) [bis.sín] ~ [biɣ.sín] ~ *[biɣ.ɣín] | (151) [bis.sé] ~ *[biɣ.sé] |
| <u>biɣ-sin</u> | <u>biɣ-se</u> |
| Deintens-saw | Deintens-pierce |
| ‘saw it halfway’ | ‘shoot it softly, pierce it part way’ |

There is a paucity of roots beginning with /ʃ/, and only one of these was accepted as prefixable with biɣ- (152), which provides our only opportunity to test the union of /ɣ/ + /ʃ/. Interestingly, despite being a nonce formation and representing a rare fricative intersection, it showed no speed-dependent or inter-speaker variation in assimilation.

- | | |
|---|----------------------------|
| (152) [biɣ.ʃwéf.ka] ~ *[biɣ.ʃwéf.ka] ~ *[biɣ.ɣwéf.ka] | ‘comb it softly/ a little’ |
| <u>biɣ-ʃuéfka</u> | |
| Deintens-comb | |

At this point, we can make a final observation with respect to the variation in fricative assimilation. While it seems evident that the amount of variation is negatively correlated with frequency of usage of particular morpheme combinations, there is yet another factor that appears to be involved. Variation most often occurs with the fricatives that are furthest apart in place of articulation, namely, /s/ and /ɣ/; i.e., there is a positive correlation between articulatory distance and amount of variation in assimilation. This can be seen by looking at Table 2.9, which summarizes the above descriptions of fricative assimilation as well as voice and manner assimilation of /d/ to fricatives, as described subsequently.

Table 2.9. Summary of fricative assimilation including assimilation of /d/ to fricatives.

affix/clitic	/s/	/ʃ/	/ʒ/	/d/
- <u>sun</u> / <u>so</u>	/ss/	/ʃʃ/		/ʒʒ/ ~ /dʒ/
- <u>senda</u>	/ss/ ~ /sʒ/	/ʃʃ/ ~ /ʃʒ/		/ʒʒ/ ~ /dʒ/
- <u>sio</u>		/ss/	/ss/ ~ /ʒs/	/ss/ ~ /ds/
<u>bi</u> s-	/ss/ ~ /ʒs/	/ʃʃ/		/ʒd/

Note: cases of simple gemination at the junction of identical fricatives are left blank.

Thus, we can identify three interacting factors affecting the amount of variation in fricative assimilation in any particular word formation—amount of variation in assimilation is: i) negatively correlated with speed of speech; ii) positively correlated with articulatory distance between the fricatives; and iii) negatively correlated with frequency (both general morpheme frequency, and frequency of co-occurrence of a morpheme with particular roots).

The phoneme /d/ is subject to much alteration at morpheme boundaries. It devoices following roots ending in voiceless consonants and /d/ (this is the topic of the next section), and preceding fricatives it assimilates to voice, place and, manner of the fricative. We can look at how /d/ assimilates to fricatives using the same affixes/enclitics introduced earlier in this section. We find that while roots ending in /d/ show some alternation between assimilation and lack of assimilation with -sun and -so (153), there is considerably less variation with -sun and -so than with the less frequently used suffix -senda (154).

- | | |
|--|---|
| fast/slow very slow
(153) [niʃ.ʂó] ~ [nid.ʂó]
<u>nid-ʂo</u>
go-when:S/A/O>A
‘while going’ | fast slow
(154) [da.wiʃ.ʂen.dá] ~ [da.wíd.ʂen.dá]
<u>dawíd-ʂenda</u>
cowife-Mirat
‘co-wife (Mirative)’ |
|--|---|

Forms like [nid.ʂó] are pronounced only in very slow speech by only a small number of speakers, and even then the [d] sound is not pronounced very strongly; forms like [da.wíd.ʂen.dá], on the other hand, were pronounced by more speakers, at faster speeds, and the [d] could be heard quite clearly in very slow speech. In fast speech, however, assimilation is complete, especially with -sun and -ʂo, which is supported by the fact that speakers cannot distinguish the forms in (155) in regular speech, despite the potential negative consequence of confusing these forms (they can only be distinguished in slow, careful speech). Similarly, the forms in (156a) and (156b) are not distinguishable in regular speech, but they are distinguishable in regular speech from (156c)²⁰:

- | | |
|--|---|
| (155) a. [tʂuʂ.ʂún] ‘after having sex with’
<u>tʂud-sun</u>
copulate-after:S/A>A | b. [tʂuʂ.ʂún] ‘after singing the hair’
<u>tʂuʂ-sun</u>
singe-after:S/A> |
| (156) a. [kwiʃ.ʂó] ‘while calling’
<u>kwid-ʂo</u>
call-when:S/A/O>O | b. [kwiʃ.ʂó] ‘while splitting (wood)’
<u>kwiʃ-ʂó</u>
split-when:S/A/O>O |

²⁰ As described in the introduction, literate Matses speakers were asked to transcribe these forms. The effects were very different for fricative assimilation and assimilation of /d/. While SIL orthography simply elided one of the fricatives or the /d/, speakers readily learned to transcribe geminate fricatives in examples like (155b) and (156b), and even readily did so with forms that involved assimilation, such as (140) and (141). By contrast, these same speakers always wanted to write forms like (155a) and (156a) with a /d/ instead of the geminated fricative and always insisted that they were pronouncing the /d/, even when they could not *hear* the differences in pairs like (155) and (156). (In Romanoff *et al.* [to appear], the Matses authors elected to write these using d). Thus, despite clearly being best described as acoustically geminate fricatives, there may be some articulatory (or psychological) difference between assimilation of /d/ and assimilation of fricatives (cf. Sapir 1949).

- c. [kwi.ʃó] ‘while warming (oneself) up’
kwi-so
 warm.up-when:S/A/O>O

As with fricative assimilation, assimilation of /d/ to the suffix -sio shows much variation in response to which roots are suffixed. With some roots, most speakers reject the unassimilated form (157a), and with other roots, speakers accept both forms, but prefer the unassimilated form (157b). Note the formal similarity in the pair of roots in (157) where both the phonetic environment and the frequency of the enclitic are neutralized. Once again, this seems to suggest that it is not just the frequency of a morpheme in the language, but the frequency of the co-occurrence of certain forms that causes disparity in rates of sound change within the lexicon.

- | | |
|--------------------------------------|--------------------------------------|
| (157) a. [as.kás.sjo] ~*[as.kád.sjo] | b. [aŋ.kád.sjo] ~ [aŋ.kás.sjo] |
| <u>askád-sio</u> | <u>ankád-sio</u> |
| choke.on.liquid-Char.Nzr | open.mouth-Char.Nzr |
| ‘someone who always chokes’ | ‘someone who always yawns’ |
| (because he drinks too fast) | ‘someone who always opens his mouth’ |

One of the patterns that we see is that while /d/ assimilates to fricatives, no fricatives assimilate to /d/. Thus, we could incorporate /d/ into the dominance hierarchy, but keeping in mind that /d/ differs from the fricatives in that this hierarchy does not affect /d/ when it *follows* fricatives:

s > ʃ > ʂ > d

We can also include /d/ in our discussion of variation, noting that /d/ differs in manner and voice from all the fricatives and in place from /ʃ/ and /ʂ/, and noting that assimilation

of /d/ to fricatives involves the most variation (Table 3.6); thus, here, rather than just articulatory distance, difference in manner and voice seem to be positively correlated with speed-dependent and inter-speaker variation in assimilation; i.e., the more different the phone, the more variation we see.²¹

With the prefix biş-, roots beginning with /d/ do not assimilate to the manner, place or voice of the fricative (158)—as mentioned above, /d/ only assimilates to fricatives when it precedes them. Unfortunately, there are no prefixes ending in /d/ to test if prefixation behaves differently than suffixation in /d/ assimilation.

- (158) [biş.díd] ~*[biş.şíd] ‘chop it halfway through/chop it softly’
biş-díd
 Deintens-cut.with.ax

Prefixation with biş- also proves to be the only exception to the voice assimilation rules for /d/, which will be the topic of the next section. I refer the reader to section 2.8.1 for an interesting case of variation of fricative place assimilation across (phonological) word boundaries in reduplicated forms.

²¹ One additional case of manner assimilation exists, but it is much more restricted and irregular and better considered a sporadic process. It can be observed at a few morpheme boundaries where /n/ is followed by /d/, and with some borrowed words. In these cases /d/ *optionally* assimilates to [n]; i.e., /d/ + /n/ → /nn/ (i-iii).

- | | |
|---|---|
| (i) [i.séd.ben.njóş] ~ [i.séd.bed.njóş]
<u>ised-bed-ne-o-ş</u>
visit-Iter-Distr-Past-3
‘He repeatedly visited at multiple houses.’ | (ii) [án.nu.bí?] ~ [ád.nu.bí?]
<u>ad-nuk-bi-k</u>
do.like.that.while:Diff.Ref-Emph-Separ
‘meanwhile’ |
|---|---|

- (ii) Spanish: *Fernando* --> Matses: [wed.nán.do] ~ [wen.nán.do]

2.6.1.2 Voice assimilation and dissimilation of /d/

Another pattern that we find with /d/ is that in suffixes and enclitics that begin with /d/, /d/ becomes [t] after voiceless consonants and after /d/. The following specific rules illustrate what happens at all these morpheme boundaries (recall that roots/syllables only end in vowels or one of these six consonants):

voice concord with voiced forms	voice assimilation to voiceless forms	voice dissimilation instead of gemination
V + /d/ → [Vr]	/k/ + /d/ → [kt]	/d/ + /d/ → [dt]
/n/ + /d/ → [nd]	/s/ + /d/ → [st]	
	/ʃ/ + /d/ → [ʃt]	
	/ʒ/ + /d/ → [ʒt]	

What we find is that, as expected, vowels (all of which are voiced) and the nasal occur with the voiced alternant, /d/ (159; recall that [r] is a conditioned allophone of /d/), while the voiceless consonants occur with the voiceless form, /t/ (160a). This could be described as voice assimilation. Interestingly however, with /d/, the other voiced consonant that occurs at the ends of syllables, voice *dissimilation* occurs instead of the expected gemination (160b).

- (159) a. [dí.ra.pá] ‘big hammock’
 di-dapa
 hammock-large
- b. [tʃján.da] ‘lake (Uncertainty)’
 tʃjan-da
 lake-Uncert
- (160) a. [pjúʃ.ta.pá] ‘big tortoise’
 piuʃ-dapa
 tortoise-large
- b. [tsi.púd.ta] ‘pygmy anteater (Uncertainty)’
 tispúd-da
 pygmy.anteater-Uncert

Before describing the details of this morphophonological process, it might be good to justify at this point why I have selected /d/ instead of /t/ as basic form in these

suffixes/enclitics. The decision is not as clear as one would wish. There are three sets of suffixes/enclitics that begin with alveolar stops Table 2.10.

Table 2.10. Allomorphic patterns of suffixes/enclitics beginning with /d/ or /t/.

Suffix/enclitic	Morpheme type	/V, d/ __	/k, s, ʃ, d/ __
<u>-da</u>	'Uncertainty'	general enclitic	<u>-da</u>
<u>-dapa</u>	'large'	nominal enclitic	<u>-dapa</u>
<u>-do</u>	'Inchoative'	verbal suffix	<u>-do/-to</u>
<u>-ded</u>	'Iterative'	verbal suffix	<u>-ded/-ted</u>
<u>-denne</u>	'Remote Past'	verbal suffix	<u>-denne/-tenne</u>
<u>-ta</u>	'Imperative'	verbal suffix	<u>-ta</u>
<u>-tan</u>	'go'	verbal suffix	<u>-tan</u>

Note: where two forms are listed together, the first represents the preferred form.

One thing we note in Table 2.10 is that only the two enclitics, -da and -dapa, follow the allomorphic patterns listed in the beginning of the section, while the suffixes -do, -ded and -denne (and the related suffix -denned 'Remote Past Nominalizer') only follow this pattern with respect to preferred forms (more on this free variation below). What motivates listing the basic forms of all these as beginning with /d/ is contrast with the last two forms in Table 2.10, which only occur with /t/ (161). Thus, rather than suggest that all of the suffixes that begin with an alveolar stop have /t/ as the underlying form, with some suffixes idiosyncratically showing alternation with /d/ and others not, I prefer to consider those that do alternate as having /d/ as the underlying form.

- (161) a. [pe.tán] ~ *[pe.rán] 'go eat' b. [uʃ.tan.ta] ~ *[uʃ.tan.da] 'Go sleep!'
- pe-tan uʃ-tan-ta
- eat-go sleep-go-Imper

Furthermore, we find that the voice assimilation and dissimilation rules for /d/ also apply at morpheme-internal syllable boundaries/consonant sequences; i.e., */dd/ and */C_{voiceless}d/. Meanwhile, there are plenty of /nt/ and /Vt/ sequences in the language, both at morpheme boundaries (161a) and morpheme-internally (162); thus if we posited /t/ as the basic form in these suffixes, and suggested that there was voice assimilation to preceding voiced phones (except /d/), we could not extend these rules to morpheme-internal patterns.

(162) a. [pu.tú] ‘dust’

b. [in.tá?] ‘blood’

Voice assimilation of /d/ is a much more limited process than fricative assimilation. First, it only occurs from left to right: when /d/ precedes non-fricative voiceless consonants, there is no assimilation (163a), and, as described at the end of the preceding section, only when followed by a fricative is there manner-place-voice assimilation, (163b). (Recall that with fricative assimilation, assimilation occurs in either direction, depending on whether the “dominant” fricative comes first or second.)

(163) a. [tsad.kwé.noʃ] ‘He can sit now.’
 tsad-kuen-o-ʃ
 sit-Incho-Past-3

b. [tsaʃ.ʃún] ‘after sitting’
 tsad-sun
 sit-after:S/A>A

The other limitation of /d/ voice assimilation is that it applies only to suffixation/encliticization, and not to prefixation. The two prefixes with which this phenomenon can be tested are biʃ- ‘De-intensifier’ and kuis- ‘thigh,’ which were introduced in the preceding section. Note in (164) that with prefixation, there is neither assimilation to the manner/place of the frication, nor voice assimilation as would be expected following a voiceless consonant.

(164a) [biʃ.díd] ~ *[biʃ.ʃíd] ~ *[biʃ.tíd] ‘chop it halfway through/chop it softly’
biʃ-díd
 Deintens-cut.with.ax

(164b) [kwis.díd] ~ *[kwis.síd] ~ *[kwis.tíd] ‘cut thigh with ax’
kwis-díd
 thigh-cut.with.ax

Free variation between voiced and unvoiced forms was found to varying degrees for the different suffixes that exhibit variation (Table 2.10). In (165) - (166), preferred forms are to the left of the “~” (recall that [r] is a conditioned allophone of /d/).

(165) a. [pe.réd pe.ré.rɛʔ] ~ [pe.téd pe.té.rɛʔ] ‘He keeps on eating repeatedly.’
redup pe-ded-e-c
 Distr eat-Iter-Npast-Indic

b. [aʔ.téd aʔ.té.rɛʔ] ~ [aʔ.déd aʔ.dé.rɛʔ] ‘He keeps on drinking repeatedly.’
redup ak-ded-e-c
 Distr drink-Iter-Npast-Indic

(166) a. [pe.róʃ] ~ [pe.tóʃ]
pe-do-o-ʃ
 eat-Incep-Past-3
 ‘He started to eat.’

b. [uʃ.toʃ] ~ [uʃ.doʃ]
uʃ-do-o-ʃ
 sleep-Incep-Past-3
 ‘He started to sleep.’

(167) a. [bun.dén.ne.bí] ~ [bun.tén.ne.bí]
bun-denne-bí
 want-Very.Dist.Past-1S
 ‘I wanted her (a long time ago).’

b. [bɛd.tén.nem.bí] ~ [bɛd.dén.nem.bí]
bed-denne-nbí
 grab-Very.Dist.Past-1A
 ‘I took her (a long time ago).’

The suffix -do showed the least variation in that many speakers rejected all the disfavored variants altogether and no speakers accepted all elicited disfavored variants. Note that while -do is not necessarily more frequent than the other suffixes, it occurs in many lexicalized verbs, all of which follow the assimilation/dissimilation pattern without

variation, such as tsadto ‘sit down’ (tsad ‘be sitting’) and dedo ‘lift’ (de ‘carry’).²² By contrast, -denne ‘Remote Past’ (which specifies direct experience about 50 years ago, so naturally it is not used frequently; §5.6.1.1) showed the most variation in that all speakers accepted at least some of the disfavored variants as acceptable, and other speakers actually accepted variants for all elicited words. The most variable consonant sequence was /nd/ ~ /nt/. Note that the variation is not just between forms that do and forms that do not follow the assimilation/dissimilation rules (i.e., devoicing of /d/ after voiceless consonants and /d/), as in (165b), (166b) and (167b), but, unexpectedly, there is also devoicing after vowels (165a & 166a) and the nasal (167a). This means the (disfavored, but acceptable) variant is not merely a form that fails to follow the assimilation/dissimilation rules, but a form that exhibits unconditioned dissimilation. As a final note on variation in /d/ voice assimilation, it is interesting to point out that many of

²² It is common cross-linguistically that as words become lexicalized consonant clusters tend to be reduced. In Matses, the /dt/ cluster is one that is very commonly lost in the early stages of lexicalization, apparently before other consonant clusters are reduced. This results in minimal pairs representing lexicalized terms contrasting with unlexicalized counterparts (i & ii), and suggests many internal reconstructions, such as (iii), where -ta ‘Transitive’ is an internally reconstructed form:

- | | | | | | | |
|-------|----|-------------------|------------------------------------|------------|-----------------------|------------|
| (i) | a. | [nid.tó] | ‘start going’ | b. | [ni.tó] | ‘stand up’ |
| | | <u>nid-do</u> | | | | |
| | | go/stand-Incho | | | | |
| (ii) | a. | [nid.té] | ‘thing for going/standing’ | b. | [ni.té] | ‘leg’ |
| | | <u>nid-te</u> | (e.g., a crutches or travel money) | | | |
| | | go/stand-Inst.Nzr | | | | |
| (iii) | a. | <u>-bid</u> | ‘Comitative: S’ | (-bid-Ø-Ø | ‘Com-Intrans-Abs’) | |
| | b. | <u>-bita</u> | ‘Comitative: O’ | (-bid-ta-Ø | ‘Com-Trans-Abs’) | |
| | c. | <u>-bitan</u> | ‘Comitative: A/Instrument’ | (-bid-ta-n | ‘Com-Trans-Erg/Inst’) | |

Taking into account in addition to this that /d/: assimilates to manner of fricatives; sometimes assimilates to /n/; assimilates/dissimilates to voice of other consonants; is realized as a flap intervocalically; and is not released word finally, one gets the impression that /d/ is a “weak” segment, particularly syllable-finally.

the consonant sequences in these disfavored variants are not otherwise found in the data.

These sequences are: /kd/, /sd/, /ʂd/, /ʃd/ (i.e., /C_{voiceless}d/), and /dd/.

It should be noted that voice assimilation/dissimilation is not a general rule that applies to all stops, as suffixes/enclitics that begin with /b/ do not assimilate to voiceless consonants (dissimilation of /b/ following /b/ cannot be tested because syllables never end in /b/). This can be exemplified with the plural derivational verbal suffix, -beded (168); we note in (168b) that /b/ does not to assimilate to the (voiceless) /k/ (glottal stop).

- | | |
|-------------------------|-------------------------------------|
| (168) a. [pe.bé.re.róʂ] | b. [aʔ.bé.re.róʂ] ~ *[aʔ.pé.re.róʂ] |
| <u>pe-beded-o-ʂ</u> | <u>ak-beded-o-sh</u> |
| eat-Pl.A-Npast-3 | drink-Pl.A-Npast-3 |
| ‘They ate.’ | ‘They drank.’ |

Similarly, /p/ does not assimilate in voice to vowels or nasals in suffixes or elsewhere. In fact, there is a pair of suffixes/enclitics that are differentiated only in the voicing of the morpheme-initial labial stop: the suffix -pa ‘Comment’ and the enclitic -ba ‘first.’

2.6.1.3 Nasal assimilation

Nasal assimilation at morpheme boundaries follows essentially the same rules as those that govern morpheme-internal nasal assimilation, as presented in section 2.2.1.2:

- | | |
|-------------------------|---|
| /n/ → [m] / __ [p], [b] | (169) a. <u>san-ban</u> [sam.bán] ‘put many’ |
| → [ŋ] / __ [k] | b. <u>san-kuen</u> [saŋ.kwén] ‘put while passing’ |
| → [n] / __ elsewhere | c. <u>san-me</u> [san.mé] ‘let/make him put it’ |

The difference is that assimilation at morpheme boundaries is optional, particularly during slow speech (170).

- (170) a. [nun.tám.bi] ~ [nun.tán.bi] b. [taŋ.kwés] ~ [tan.kwés]
 nuntan-bi tan-kues
 inside-Emph jaw-hit
 ‘right indoors’ ‘hit on the jaw’

Word-final /n/ also assimilates to the place of articulation of the initial stop of following words during fast speech. Nasal assimilation across word boundaries is most notable to me with genitive pronouns preceding abbreviated kinship terms:

- (171) a. [mim pa] ~ [min pa] b. [a.tóŋ ku] ~ [a.tón ku]
 min papá atón kukú
 2Gen father 3Gen cross.uncle/father.in.law
 ‘your father’ ‘his cross uncle/father-in-law’

In fact, with the first-person genitive pronoun, these exhibit phonological union into a single word:

- (172) a. [kúm.pa] ‘my father’ b. [kun.tá] ‘my mother’
 kun papá kun titá
 1Gen father 1Gen mother

More on the stress patterns of these one-word forms can be found in section 2.6.5. Note in the above examples that, as in morpheme-internal nasal place assimilation (§2.2.1.2.), there is not bi-directional assimilation (fusion) in consonant clusters involving nasals at morpheme or word boundaries.

2.6.2 Vowel-vowel encounters

When two vowels come into contact at morpheme boundaries, they always cause the adjacent syllables to combine into a single syllable. With prefixation, this composite syllable always draws stress, predictably producing odd-stressed words (§§2.6.5). One of

four effects result: i) identical vowel sequences are reduced to a single vowel, sometimes producing extra vowel length (§2.6.2.1); ii) when one of the two vowels is /i/ or /u/, an on- or off-glide is produced (§2.6.2.2); iii) /e/ is raised in combination with some non-glide-forming vowels, and /o/ is optionally raised in these same environments, (§2.6.2.3); or iv) diphthongs result, most frequently involving /i/ (§2.6.2.4).²³ Some trivocalic sequences are optionally reduced (§2.6.2.5). Most of these morphophonological processes are consistent with morpheme-internal vowel distribution patterns, with the additional effect that some vowel sequences are created at morpheme boundaries which do not occur morpheme-internally (see Table 2.4).

2.6.2.1 Reduction of sequences of identical vowels

When two identical vowels come into contact at a morpheme boundary, rather than producing a heterosyllabic vowel sequence or a phonemically long vowel, the two vowels are reduced to a single vowel (173). In suffixation/encliticization, the vowels are completely reduced to a single vowel, to where vowel length in these composite stressed syllables (173b) is not any longer than in a simple stressed syllable; and in unstressed syllables (173c) there is no vowel lengthening at all (and the syllable does not draw stress).

(173) a. [tʃoʃ]	b. [am.pás.kaʔ]	c. [bi.ká.ɾon.dás]
<u>tʃo-o-s</u>	<u>anpáska-ak</u>	<u>bikádo-onda-s</u>
come-Past-3	drip-Infer	open-Dist.Past-3
'He came.'	'It dripped.'	'He opened it.'

²³ It might be helpful to review some of the descriptive conventions I have introduced above before continuing. **On-glides** and **off-glides** are complex syllable nuclei that have a single peak (specifically involving [j] and [w], as the first element in on-glides, and the second element in off-glides), and are opposed to **diphthongs** that have (two-vowel) nuclei with two peaks. **Glides** (*not* a cover term for on- and off-glides) are the less prominent phones in on- and off-glides (i.e., [j] or [w]), while **approximants** occur at syllable margins (only as onsets) and function as consonants.

This morphophonological pattern can be summarized with the following rule:

$$V_i + V_i \rightarrow V_i$$

When this vowel reduction takes place in suffixation/encliticization, the last (or only) syllable of the root or preceding suffix/enclitic and the first (or only) syllable of the suffix/enclitic are combined into a single syllable (173). This contrasts with suffixation/encliticization of these same vowel-initial suffixes to consonant-final roots (or preceding consonant-final suffixes/enclitics), where the two syllables are not combined and the number of syllables in the word is not reduced (174). Note as well that (in contrast to prefixation), vowel reduction resulting from suffixation/encliticization is not always associated with stress (173c).

- (174) a. [u.ʒóʒ] ‘He slept.’
 uʒ-o-ʒ
 sleep-Past-3
- b. [bi.ʒú.ku.ráʔ] ‘It peeled.’
 biʒúkud-ak
 peel-Infer

Prefixation, where the junction of two identical vowels is considerably less common than in suffixation, differs from suffixation/encliticization in that the lengthening of the vowel is considerably longer than in regular stressed syllables (where there is always some lengthening associated with the stress). In faster speech, the vowel length is not striking, but syllables containing these vowels are always stressed (175). Note, however, that even in the slowest speech, an extra syllable does not result (176).

- (175) a. [di:] ~ [di:]
 di-is
 nose-round.swelling
 ‘nose pimple/clown nose’
- b. [pí.ni] ~ [pí.ni]
 pi-ini
 arm-liquid
 ‘liquid from an arm wound’

- (176) a. [pó.ta.róʃ] ~ [pó:.ta.róʃ] ~ *[po.ó.ta.róʃ] ‘get stuck across the middle’
po-otád-o-s
 belly-get.stuck-Past-3
- b. [kwí.sem.bó] ~ [kwí:.sem.bó] ~ *[kwi.í.sem.bó] ‘smooth edged/jawed’
kui-isé-nbo
 edge/jaw-smooth-Aug

Prefixes (all of which are monosyllabic) never carry stress (177 & 178), unless they are fused with the first syllable of the root (179) in which case the fused syllable is always stressed. Prefixation can affect the stress pattern of a word, as described in detail in section 2.6.5.

- | | | | | | | | |
|----------|-------------|----|-----------------|----------|------------|----|--------------------------|
| (177) a. | [bi.rí] | b. | [bi.bí.ri] | (178) a. | [i.ní] | b. | [i.ní.ni] |
| | <u>bidí</u> | | <u>bi-bidí</u> | | <u>iní</u> | | <u>in-iní</u> |
| | ‘spot’ | | face-spot | | ‘liquid’ | | tail-liquid |
| | | | ‘spotted-faced’ | | | | ‘liquid from tail wound’ |
-
- | | | | |
|----------|--|----|-----------------|
| (179) a. | [bí.ní] ~ [bí:.ní] | b. | [bi.ní:] |
| | <u>bi-iní</u> | | <u>biní</u> |
| | face-liquid | | ‘husband, male’ |
| | ‘liquid from a forehead/surface wound’ | | |

2.6.2.2 *Glide formation with /i/ and /u/.*

The pattern that we see when /i/ and /u/ come together at a morpheme boundary is the same as was observed morpheme-internally (§2.4.2): whenever there is a vowel combination involving /i/ or /u/ and one of the other vowels, an on- or off-glide results with the /i/ or /u/ becoming the less prominent constituent of the vowel sequence (180 & 181).

- | | | |
|----------------------|-----------------------|------------------------|
| (184) a. [kajʔ] | b. [bi.bé.se.kájn.da] | c. [tsúʃ.kajn.dá] |
| <u>ka-e-k</u> | <u>bibéseká-enda</u> | <u>tsúʃka-enda</u> |
| say-Npast-Indic | bother-Neg.Imper | reprimand-Neg.Imper |
| 'he says/will say X' | 'Don't bother him!' | 'Don't reprimand him!' |

As described in the preceding section, these are all positions where /i/ is expected to form an on- or off-glide with the adjacent vowel. Note in (184) that stress (i.e., whether the affected syllable carries stress or not) does not seem to affect the raising of the /e/—it is always raised adjacent to these vowels.

Because there are no morpheme boundaries in the language where /e/ precedes /i/, /i/ or /u/, we cannot know whether /e/ would be raised in these environments as well, so we cannot test the more generalized hypothesis that /e/ raises preceding all vowels. This hypothesis is encouraged, however, by the observation that there are no word-internal /eV/ sequences at all in the language, morpheme-internally or otherwise (§2.4.2, Table 2.4). By contrast, we do find /ie/, /ue/, /oe/ and /ie/ vowel sequences, both morpheme-internally (except /ie/) and at morpheme boundaries (185-188). The /e/ is not raised in any of these environments, and so we cannot posit the general rule that /e/ is raised when adjacent to all non-glide-forming vowels—it only raises *preceding* these vowels.

- | | | | |
|-----------------|-----------------|-----------------|------------------|
| (185) a. [pjɛn] | b. [ʃu.bjéʔ] | (186) a. [kwɛs] | b. [ka.pwéʔ] |
| <u>piɛn</u> | <u>subi-e-k</u> | <u>kues</u> | <u>kapú-e-k</u> |
| 'diarrhea' | cry-Npast-Indic | 'hit' | walk-Npast-Indic |
| | 'He is crying.' | | 'He is walking' |
-
- | | | |
|---------------------|----------------------|---------------------|
| (187) a. [tʃo.noád] | b. [ta.boéʔ] | (188) [biɛʔ] |
| <u>tʃonoád</u> | <u>tabó-e-k</u> | <u>bi-e-k</u> |
| 'work' | light-Npast-Indic | carry-Npast-Indic |
| | 'He is lighting it.' | 'He is carrying it' |

One might guess that when two /e/'s come together at a morpheme boundary, the preceding /e/ might be raised, subsequently forming an on-glide with the following /e/. Although /ie/ is an observed vowel sequence in Matses, morpheme-internally and at morpheme boundaries (185), we can see in examples like (189) that the vowel reduction rule (§2.6.2.1) applies instead.

- (189) [tʃód.kɛʔ]/* [tʃód.kjɛʔ] 'It is rotting/will rot.'
tʃódke-e-k
 rot-Npast-Indic

We find a parallel pattern with the vowel /o/:

- (190) a. [tʃwɛʔ] ~ [tʃoɛʔ] b. [tʃwaʔ] ~ [tʃoaʔ] c. [kawɤ] ~ [kaos]
- | | | |
|---------------------------|-----------------------|---------------|
| <u>tʃo-e-k</u> | <u>tʃo-ak</u> | <u>ka-o-ɤ</u> |
| come-Npast-Indic | come-Infer | say-Past-3 |
| 'He will come/is coming.' | 'He (evidently) came' | 'He said.' |

The main difference is that /o/ is raised *optionally* preceding /e/ and /a/, while /e/ is obligatorily raised preceding /o/ and /a/. What I mean here by "optionally" is that although at fast speeds the /o/ is always raised, at slow speeds speakers pronounce the raised and the non-raised forms interchangeably, and many speakers accept both forms as correct in slow speech. Whether the word is monosyllabic vs. polysyllabic or whether the syllable containing the vowel sequence is stressed or not stressed seems to have some impact on individual speakers' preference of one form over another, but overall there was no consistent patterning of responses, except for the mild tendency for speakers to accept both raised and non-raised /o/ in monosyllabic words as opposed to only one or the other of the two forms in polysyllabic words. By contrast, speakers always raise the /e/ in the

above-mentioned positions, and they reject all pronunciations where the /e/ is not raised in these positions, even in the slowest speech.

The observed vowel raising patterns can be summarized as follows (note that combination of /e/ and /o/ with /i/ or /u/ always results in on- and off-glides, as described in the preceding section):

raising	optional raising	no raising (diphthongs)	not known
/e/ + /o/ → [jo]	/o/ + /e/ → [we]~[oe]	/o/ + /i/ → [oi]	/e/ + /i/ → ?
/e/ + /a/ → [ja]	/o/ + /a/ → [wa]~[oa]	/i/ + /e/ → [ie]	
/a/ + /e/ → [aj]	/a/ + /o/ → [aw]~[ao]	/i/ + /o/ → [io]	

Two interesting observations can be made from the above patterns. The first is that, unlike the vowel sequence /ei/, /oi/ is observed in the language (see next section), so it is not possible to posit the generalized rule that /o/ raises before all vowels. While this same generalization is not disprovable for /e/ (i.e., that /e/ raises before all vowels), the fact that /o/ does not raise before all vowels discourages this hypothesis. The second observation is that while neither /a/ nor /i/ ever raises, they differ in that the combination of /e/ or /o/ with /a/ always results in raising (at least optionally), while /i/ never triggers vowel raising. The following section will describe vowel combinations involving /i/ and diphthongs in general.

2.6.2.4 Diphthong formation

All the existing vowel combinations that have not been described in the preceding three subsections all form *diphthongs*; i.e., both vowels are prominent, but occur within a single syllable. Specifically, the vowel combinations that form diphthongs are the following:

diphthong formation

/i/ + /a/ → [ia]	/a/ + /i/ → [ai]
/i/ + /e/ → [ie]	/e/ + /i/ → ?
/i/ + /o/ → [io]	/o/ + /i/ → [oi]

optional raising/diphthong formation

/o/ + /a/ → [oa] ~ [wa]
/o/ + /e/ → [oe] ~ [we]
/a/ + /o/ → [ao] ~ [aw]

In all diphthongs, the second vowel in the sequence is always more prominent (longer and with higher pitch) than the preceding vowel, regardless of what the two vowels are. This pattern is consistent across morpheme boundaries and morpheme-internally (191 & 192; the more prominently pronounced vowel is represented in **bold font** in this section).

- (191) a. [ʃai] ‘giant anteater’
 b. [ʃaiʃ] ‘pelvic lymph node’
 sa-iʃ
 crotch-round.swelling
- (192) a. [ʃia] ‘pygmy rice rat’
 b. [biaʃ] ‘He (presumably) brought it.’
 bi-aʃ
 bring-Conjec

Note that stress does not seem to have an impact on the relative prominence of the two vowels (193), nor does prefixation (194a) vs. suffixation/encliticization (194b).

- (193) a. [tʃi.ʃiáʔ]
 tʃiʃi-ak
 black-Infer
 ‘It (evidently) blackened.’
- b. [ma.tʃi.ʃiaʔ]
 ma-tʃiʃi-ak
 head-black-Infer
 ‘Its head (evidently) turned black.’
- (194) a. [pió.ta.róʃ]
 pi-otád-o-ʃ
 feather-get.stuck.Past-3
 ‘It got stuck by its fletching.’
- b. [biéʔ]
 bi-e-k
 bring-Npast-Indic
 ‘He is bringing it.’

This pattern is different from the pattern found in glide formation (§2.6.2.2), where any non-glide-forming vowel is more prominent than an adjacent /i/ or /u/, regardless of

position. Note, however, that when /i/ and /u/ occur together in a two-vowel sequence (morpheme-internally or at morpheme boundaries) it is the second of the two vowels that is more prominent (resulting in an on-glide; 242). So it is not just in diphthongs that there is a tendency for the second vowel in a two-vowel sequence to be stressed.

The diphthongs [oa], [oe], and [ao] were introduced in the preceding section as optional alternant forms to their raised (and glided) counterparts, [wa], [we], and [aw]. Here I note that there can be loss of contrast in faster speeds between the diphthongs containing /o/ and glides containing /u/, to the point that during elicitation with multiple informants, speakers are often genuinely not sure which of the two words in (195) - (197) the other speaker is pronouncing, particularly in faster speech, or even during slower speech with some speakers.

- | | |
|---|--|
| (195) a. [tʃoɛʔ] ~ [tʃwɛʔ]
tʃ <u>o</u> -e-k
come-Npast-Indic
'He will come/is coming.' | b. [tʃwɛʔ]/*[tʃoɛʔ]
tʃ <u>u</u> -e-k
warm.up-Npast-Indic
'It will warm up/is warming up.' |
| (196) a. [tʃoaʔ] ~ [tʃwaʔ]
tʃ <u>o</u> -ak
come-Infer
'He will come/is coming.' | b. [tʃwaʔ]/*[tʃoaʔ]
tʃ <u>u</u> -ak
warm.up-Infer
'It will warm up/is warming up.' |
| (197) a. [kaosʃ] ~ [kawʃ]
<u>ka</u> -o-ʃ
say-Past-3
'He said.' | b. [kawʃ]/*[kaosʃ]
<u>ka</u> -uʃu
back-white
'white-backed' |

Note in (197a) that being in the less prominent (first) position in the vowel sequence does not seem to be what triggers the optional raising of the /o/, instead adjacency to /a/ seems to be the trigger in cases like (196a) and (197a).

We can make the following generalization about which vowels form diphthongs:

- i) all the non-optional diphthong-forming vowel sequences contain /i/ (in any position);
- ii) all the optional diphthong-forming vowel sequences contain the vowel /o/; iii) the vowels /i/ and /u/ are not found in diphthongs (except for the marginal, slow speech exceptions pointed out in §2.4.2); and iv) no diphthongs are made up of identical vowels (e.g., */aa/).

2.6.2.5 Trivocalic sequences

Most trivocalic sequences, which only occur at morpheme boundaries (and only occur in closed syllables), are infrequently encountered in texts and overheard language. However, the linguist can create many different trivocalic sequences (and even a few tetravocalic sequences) by combining the right morphemes. This allows us to see many interesting effects, but it should be kept in mind that unlike the common processes described in the preceding sections, some of the vowel sequences in this section are not attested in any texts.

Speakers generally have some difficulty pronouncing most words containing trivocalic sequences during elicitation, and there is much speed-dependent variation. From a personal point of view, I also find trivocalic sequences to be a bit of a mouthful. Some of the more frequently occurring trivocalic sequences are usually reduced to two-vowel sequences through regular vowel reduction rules. Other trivocalic sequences are avoided through vowel reduction patterns associated with certain irregular verb forms (§2.6.7). Meanwhile, speakers generally try to pronounce the less common trivocalic sequences within a single syllable. The following paragraphs will describe the patterns that we find in the pronunciation of trivocalic sequences and the reduction processes that operate on some of them.

As another instance of the absence of word-internal onsetless syllable (§2.4.1), we find that trivocalic clusters are not split into two syllable nuclei (the second perforce beginning without an onset). One might expect that due to the similarity between approximants and the vowels /u/ and /i/ that these might turn into approximant consonants that would split up the difficult-to-pronounce trivocalic sequence into two easily-managed syllables. However, what we find instead is that the vowels /u/ and /i/ never become consonants (198),²⁴ as described in detail in section 2.6.3.

- | | |
|---|---|
| (198) a. [mau en]/*[ma.wén]/*[maw.én] | b. [ʃwi en]/*[ʃu.jén]/*[ʃwi.én] |
| <u>mau-en</u> | <u>sui-en</u> |
| bat.falcon-Contrast | penis-Contrast |
| ‘bat falcon (contrasted)’ | ‘penis (contrasted)’ |

Thus, we can make the general statement that trivocalic sequences are always pronounced as a single syllable.

The next general pattern is that the third syllable in the trivocalic sequence is usually the most prominent in terms of pitch and length (198 & 199; most prominent vowel represented in **bold** font in this section)

- | | |
|---|--|
| (199) a. [ʃai en] ‘giant anteater (contrasted)’ | b. [mio en] ‘Mio (contrasted)’ |
| <u>ʃai-en</u> | <u>mio-en</u> |
| giant.anteater-Contrast | man’s.name-Contrast |

²⁴ The statuses of (198a) and (198b) in speakers’ responses are a bit different. While both forms in (198) represent how speakers tended to produce these forms, when I produced either incorrect form of (198a), some speakers were not too opposed to them, since neither sounds extremely different from the correct version (or from each other). But *[ʃu.jén] for (198b) was completely rejected in every instance, as this version, unlike the less objectionable [ʃwi.én], involves pronouncing the glide as a full vowel and therefore sounds quite different from the correct form.

The exception to this pattern is that vowel-raising rules (§2.6.2.3) may apply to the third vowel. Specifically, if the third vowel is an /e/ or /o/ following an /a/, the /e/ or /o/ will raise to an /i/ or /u/ subsequently forming an off-glide, leaving the middle vowel as the most prominent (200). Recall in bivocalic sequences that raising of /e/ is always obligatory and raising of /o/ is optional; with trivocalic sequences, we find that raising of /o/ is similarly always optional (200c), but the raising of /e/ is optional in some words (200b), but not others (200a).

- | | |
|--|---|
| (200) a. [da.jú.nwajʔ]
<u>dajúnua-e-k</u>
take.care.of-Npast-Indic
'He is taking care of it/him.' | b. [ʃiajn] ~ [ʃiaen]
<u>sia-en</u>
pygmy.rice.rat-Contrast
'pygmy rice rat (contrasted)' |
| c. [da.jú.nwawʃ] ~ [da.jú.nwaoʃ]
<u>dajúnua-o-ʃ</u>
take.care.of-Past-3
'He took care of it/him.' | d. [pjajd]
<u>pe-aid</u>
eat-Pat.Nzr
'eaten thing' |

We would similarly expect that if the third vowel is an /i/ or /u/ that these will form an off-glide and the middle vowel will be the most prominent, but there seem to be no morpheme boundaries where we could confirm this prediction. We do, however, find /i/ and /u/ as third vowels morpheme-internally where they only occur as glides and never as full vowels (200d). There are similarly morpheme boundaries with /i/ or /u/ occurring as the first or second vowel in trivocalic sequences. The interesting pattern that we find in these cases is that if /i/ or /u/ occurs as the first vowel, they raise as expected (201), but when they occur as the middle vowel, they are never pronounced as a glides, but as a full vowels, regardless of whether they were glides in the original roots (202). We similarly find that /o/ (and /e/?) do not raise in middle positions (199b).

- (201) a. [ʃu.bjájd] ‘tear tracks on face’ b. [ka.pwájd] ‘hunter’s tracks’
 subí-aid kapú-aid
 cry-Pat.Nzr hunt-Pat.Nzr
- (202) a. [naien] ‘two-toed sloth (contrasted)’ b. [pjuaş] ‘It presumably reddened.’
 nai-en piu-aş
 two-toed sloth-Contrast red-Conjec

If the central vowel is flanked by two glides, the sequence is pronounced simultaneously as an on- and off-glide (200a, 201), but there is never a case where two on-glides or two off-glides piggyback.

One might expect that such complex syllables would draw stress, but they do not. It should be noted, however, that due to the inherent length associated with such syllables, they may sound like stressed syllables (with respect to length, not pitch) even when they are not. However, pitch remains true, and if there is an adjacent stressed syllable (especially an open one with only one vowel), it can be clearly heard to have a long vowel.

So far I have found the following reduction patterns for reduction of trivocalic sequences:

/iai/ → [jaj] ~ [je] /aie/ → [aie] ~ [aj]
 /uai/ → [waj] ~ [we] /ioe/ → [joe] ~ [je]

The first two rules are associated with the suffix -aid ‘Patient Nominalizer’, which is commonly encountered in the language (203). The third rule was encountered unexpectedly with a rarely instantiated trivocalic sequence (204).

- (203) a. [pjaɪd] ~ [pjɛd]/*[pjɛd] b. [ka.pwáɪd] ~ [ka.pwéd]
 pe-aid kapu-aid
 eat-Pat.Nzr hunt-Pat.Nzr
 ‘eaten thing’ ‘one who hunted’
- (204) [ʃaiɛn] ~ [ʃajɪn] ‘giant anteater (contrasted)’
 ʃai-en
 giant.anteater-Contrast

With the enclitic -kio followed by -en ‘Manner/Adverbializer: Transitive Agreement’ or -ec ‘Manner/Adverbializer: Intransitive Agreement,’ reduction of the trivocalic sequence /ioe/ seems to always occur, even in the slowest of speech (205a), but when this same vowel sequence occurs with other morphemes, it is never reduced (205b).

- (205) a. [ba.red ba.red.kjeʔ] b. [mjoen]/*[mjɛn]
 redup baded-kio-ek mio-en
 Distr quickly-Aug-Manr:Intr palm.species-Contrast
 ‘in rapid succession’ ‘mio palm (contrasted)’

There are two points worth noting about these reduction processes. First, while they are almost always heard in regular and fast speech, they are not obligatory (except perhaps with -kio-en). Second, the first two rules (but not the fourth) produce a phonological pattern that is unique in the language: the segment sequence /ed/ as pronounced in these forms is unusual in that the allophone [ɛ] is expected instead of [e] in a closed syllable ending with /d/ (§2.2.2.1).

2.6.2.6 *Tetravocalic sequences*

I’ve only been able to find two words that could contain a tetravocalic sequence, both involving the nominalizing suffix -aid (206). They follow all the rules described above for trivocalic sequences, with the two middle vowels following the same pattern as

the middle vowel in trivocalic sequences. These are, however, isolated cases, one being regularly reduced, being pronounced as a trivocalic sequence only upon elicitation (206b, cf. 203), and the other is one that I constructed in elicitation, so I have not considered these in the syllable inventory.

- | | |
|---|--|
| (206) a. [pjuajd]/*[pi.wajd]/*[pju.ajd] | b. [paiajd]/[paed] |
| <u>piu-aid</u> | <u>pai-aid</u> |
| red-Pat.Nzr | strong-Pat.Nzr |
| ‘a thing that has reddened’ | ‘a thing that became strong
(e.g., a fermented beverage)’ |

2.6.2.7 Summary of vowel transformation rules

Despite the multiple possible results of vowel-vowel combinations at morpheme boundaries (vowel reduction, on- or off-glide formation, or diphthong formation), all of these processes result in the combination of the two syllables into a single syllable. In light of the multiple process at work, in order to accurately predict the outcome, we can describe the patterns in terms of ordered rules. The order in which these rules would apply is as follows:

- 1) reduction of series of identical vowels
- 2) raising of /e/ and /o/
- 3) glide formation
- 4) the second non-glide vowel will be more prominent²⁵

So, for example, /e/ will not raise when in contact with another /e/ because first one of the vowels will be eliminated by the vowel reduction rule. And any time an /e/ or /o/ is

²⁵ Note that in glide formation, this rule also helps predict which vowel will become the glide at the intersection of /i/ and /u/ (i.e., /iu/ → [ju] and /ui/ → [wi])

raised, an on- or off-glide rather than diphthong will result because raising applies before formation of on- or off-glides.

From the behavior of vowels at morpheme boundaries, we could rank the six Mates vowel phonemes in order of strength as follow:

(207) $a > i > o > e > i, u$

This vowel hierarchy is derived from the two following observed patterns: glide formation, which involves all the vowels, allows us to order the vowels as follows:

(208) $a, i, o, e > i, u$

In other words, we can conclude that the vowels /a/, /i/, /o/, and /e/ are stronger because they are always more prominent than /u/ or /i/ when they occur with one of these two vowels in a syllable. The other observed pattern is that /a/ is stronger than /e/ and /o/ because it makes /e/ and (optionally) /o/ raise to /i/ and /u/, subsequently making these vowels raise and become less prominent in the syllable:

(209) $a > o, e$

Because /i/ does not trigger raising and high vowels are not involved in raising, /i/, /i/, and /u/ are excluded from the hierarchy in (209). While the hierarchy in (207) serves only for abstract descriptive purposes, the hierarchies in (208) and (209) are relevant for predicting which vowel in a vowel sequence will be more prominent in the syllable.

Thus, after considering the hierarchies in (208) and (209), rather than consulting the hierarchy in (207), the most prominent vowel in the syllable is determined by the vowels' relative positions: the second vowel (or the third, in trivocalic sequences) will be more

prominent. The following two examples illustrate the combination of vowel hierarchies and relative position for determining relative vowel strength in a syllable created at a morpheme boundary with a vowel-vowel encounter:

- | | | | |
|-------|---|-------|---------------------------------------|
| (210) | a. pe + ak → peak
b. peak → piak
c. piak → [pjaʔ] | (211) | a. bi + aʃ → biaʃ
b. biaʃ → [biaʃ] |
|-------|---|-------|---------------------------------------|

After the two morphemes are combined into one syllable (210a), the hierarchy in (209) predicts that the stronger /a/ will cause the weaker /e/ to raise to an /i/ (210b), and then the hierarchy in (193) predicts that the stronger /a/ will be more prominent than the weaker /i/, which raises to [j]. In (211), neither of the hierarchies in (208) and (209) is relevant for predicting which of the two vowels will be more prominent, and thus the relative position rule predicts that the second vowel, the /a/, will be more prominent (211b).

2.6.3 Approximant-vowel alternation

As discussed earlier (§2.4), the phones [w] and [j] where they occur as glides share characteristics both with the approximants /w/ and /j/ and with the vowels /u/ and /i/.²⁶ In this section we explore morphophonemic alternations associated with these phonemes. What we find is that full vowels ([u] and [i]) never alternate with the approximant consonants (/w/ and /j/). However we do find that glides (the less prominent vowels in on- and off-glides, [w] and [j]) alternate both with vowels and with approximants at certain morpheme boundaries.

²⁶ Recall that neither the vowel /u/ (more accurately [u]) nor the consonant /w/ are rounded.

The first pattern that can be observed is that morpheme-initial approximants become glides following morphemes that end in a consonant (212a & 213a) (but not when they follow a morpheme that ends in a vowel [212b & 213b])

- (212) a. [be.rwi.rom.bi]/*[bed.wi.rom.bi]
bed-wid-o-nbi
 grab-Incompl-Past-1A
 ‘I started to take it, but put it back.’
- b. [tʃo.wi.ro.bi]
tʃo-wid-o-bi
 come-Incompl-Past-1S
 ‘I started to come but didn’t.’
- (213) a. [tʃúʃ.ka.ki.rjoʔ]
tʃúʃka-kid-jok
 reprimand-Hab-Counter
 ‘He’s always reprimanding him.’
- b. [ni.ré.joʔ]
nid-e-jok
 go-Npast-Counter
 ‘But he *is* going.’

The shift of [w] and [j] from syllable-initial position to syllable-internal position in (212a) and (213a) (and therefore, the as analyzed here, a transformation from /w/ to /u/ and /j/ to /i/) illustrates a phenomenon that is unusual for Matses consonants: with any non-approximant consonant we would expect the syllable break to fall between the two consonants. The pattern illustrated in (212) and (213) might suggest that the approximants /w/ and /j/ and their vowel counterparts, /u/ and /i/, are treated phonologically as single distinctive segments by the language. However, many other morphophonological processes discourage this analysis. First, as opposed to what would be expected of identical vowels at morpheme boundaries (§2.6.2.1), /u/ + /w/ (214a) and /i/ + /j/ (215a) do not reduce at morpheme boundaries; (214b) and (215b) show forms that would be homophonous with (214a) and (215a) if these forms exhibited vowel reduction.

- (214) a. [ka.pú.wa.noʃ]
kapú-wan-o-s
 hunt-come-Past-3
 ‘He came here to hunt.’
- b. [ka.pwá.noʃ]
kapú-an-o-ʃ
 hunt-Incep-Past-3
 ‘He started hunting again’

- (215) a. [tʂúʂ.kaj.jóʔ]
tʂúʂka-e-jok
 reprimand-Npast-Counter
 ‘But he’s reprimanding him.’
- b. [tʂúʂ.ka.jóʔ]
tʂúʂka-ak-jok
 reprimand-Infer-Counter
 ‘But he must have reprimanded him.’

Also, we note that /u/ never becomes a /w/ when it is the middle vowel of a trivocalic sequence (216-218), despite speakers’ difficulty in pronouncing these trivocalic sequences and their ease in pronouncing bisyllabic words with an intervocalic /w/. In fact, what we find is that glides instead become full vowels in (214a, 215a, 216b and 217b).

- (216) a. [iʷ]
iʷ
 ‘small biting ant’
- b. [iʷen]/*[i.wén] ‘ant (contrasted)’
iʷ-en
 ant-Contrast
- (217) a. [maw] ~ [mau]
mau
 ‘bat falcon’
- b. [maʷen]/*[ma.wén] ‘bat falcon (contrasted)’
maʷ-en
 bat.falcon-Contrast
- (218) a. [pju]
piu
 ‘red’
- b. [pjuɛʔ]/*[pi.wéʔ] ‘It is reddening.’
piu-e-k
 red-Npast-Indic
- c. [pjuaʔ]/*[pi.wáʔ]
piu-ak
 red-Infer
 ‘It (evidently) reddened.’
- d. [pjué.sa]/*[pi.wé.sa]
piu-esa
 red-Neg.Hab
 ‘It does not redden.’

We find the same pattern for /i/ and /j/: /i/ (occurring as a full vowel or as a glide) does not become an approximant when it occurs as the middle vowel of a trivocalic sequence, but instead remains or becomes a full vowel (219 & 220).

- (219) a. [ʃwi]
sui
 'penis'
- b. [ʃwien]/*[ʃu.yén] 'penis (contrasted)'
sui-en
 penis-Contrast
- (220) a. [naj] ~ [nai]
nai
 'two-toed sloth'
- b. [naien]/*[na.yén] 'two-toed sloth (contrasted)'
nai-en
 two-toed sloth-Contrast

Thus, again we find a disinclination toward word-medial vowel-initial syllables, but instead of avoiding them by splitting these into easily-pronounceable smaller syllables, speakers opt for pronouncing the whole syllable as a single unit, arguably blocked by the lack of identity between approximants and vowels.

An important analogous pair that confirms that the approximant /w/ and the vowel /u/ do not share a single identity is (218b & 221a/b).

- (221) a. [tsi.wéʔ]/*[tsjuéʔ] 'It is laying in the aft end.'
tsi-we-e-k
 butt-lay-Npast-Indic
- b. [tsi.wéʔ]/*[tsjuéʔ]
tsiwék
 'last, after'

Comparing (218b) and (221) we note that if /u/ and /w/ were the same phoneme, the end of these words should all have the same syllable structure and should sound the same, yet they are strikingly different structurally and phonetically. In SIL orthography, both /w/ and /u/ are represented with the same symbol (u), and so the words in (218b & 221) would contain the identical letter sequence, iué, despite the significant difference in pronunciation.

Recall the glide formation rules in section 2.6.2.2, where the full vowels [u] and [i] became glides when in contact with other vowels: this is represented in (222a-222c). With the patterns revealed here, we can make some new rules to generalize about the patterns in trivocalic sequences as well (222d & 222e).

- (222) a. $V + V_{[i] \text{ or } [u]} \rightarrow VV_{\text{glide}}$ ($V_{\text{full vowel}} \rightarrow V_{\text{glide}}$)
 b. $V_{[i] \text{ or } [u]} + V \rightarrow V_{\text{glide}}V$ ($V_{\text{full vowel}} \rightarrow V_{\text{glide}}$)
 c. $V_{[i] \text{ or } [u]} + V_{[i] \text{ or } [u]} \rightarrow V_{\text{glide}}V$ ($V_{\text{full vowel}} \rightarrow V_{\text{glide}}$)
 d. $C + C_{\text{approximant}}V \rightarrow CV_{\text{glide}}V$ ($C_{\text{approximant}} \rightarrow V_{\text{glide}}$)
 e. $VV_{\text{glide}} + V \rightarrow VV_{\text{full vowel}}V$ ($V_{\text{glide}} \rightarrow V_{\text{full vowel}}$)
 *($V_{\text{glide}} \rightarrow C_{\text{approximant}}$)

In other words approximants can become glides but not full vowels; full vowels can become glides, but not approximants; and glides can become full vowels but not approximants. Figure 2.2 summarizes these generalizations, illustrating via morphophonological alternations how: i) there exists a connection among approximants, glides, and the vowels /i/ and /u/; ii) glides stand between consonants and full vowels; iii) full vowels and glides are more closely associated than are approximants and glides; and iv) there are no direct alternations between full vowels and approximants.

approximants \rightarrow glides \leftrightarrow full vowels

Figure 2.2. Morphophonological alternations between approximants and vowels.

2.6.4 Vowel insertion (vs. vowel deletion)

The issue in this section centers around two forms: the diminutive noun phrase enclitic *-npi* (§4.6.2) and the polysemous/homophonous noun phrase postpositional enclitic, *-n* ‘Ergative, Instrumental, Genitive, Locative, Temporal’ (§4.6.4). Both of these enclitics occur with an initial /i/ when they follow consonants, and without the /i/ following vowels (223 & 224).

- (223) a. [ka.pám.pi] ‘dwarf squirrel’ b. [kwes.bá.nim.pí] ‘little bat’
 kapá-npi kuesbán-npi
 squirrel-Dim bat-Dim

- (224) a. [ka.pán] ‘squirrel (Ergative)’ b. [kwes.bá.nín] ‘bat (Ergative)’
 kapá-n kuesbá-n
 squirrel-Erg bat-Erg

The issue here is whether we should consider these cases of vowel insertion or of vowel deletion. Although I have determined that this phenomenon is best described as vowel insertion, one could present multiple arguments supporting either of these interpretations. These arguments will be presented below, where other cases of vowel insertion and vowel deletion will also be presented.

The strongest argument against calling this vowel insertion is that there is almost no other indication in the language that /i/ should be the default vowel to be inserted. In fact, the third morpheme that exhibits a parallel pattern, the verbal suffix, -p/-pa (§5.5.9) would suggest that the default vowel to be inserted should be /a/:

- (225) a. [nid.póš] ‘went’ b. [nid.pá.tsjaš] ‘would go’
 nid-p-o-š nid-p-tsia-š
 go-Comment-Past-3 go-Comment-Npast.Cond-3

Thus if we wish to call (223b), (224b), and (225b) all cases of vowel insertion, we would have to posit at least two “default” vowels to be inserted. To avoid this awkward conclusion, one might wish instead to call (223a), (224a), and (225a) all cases of vowel deletion.

The displeasing aspect of analyzing these as instances of vowel deletion is that there is no satisfying answer to the question: “why are these vowels deleted?” We would simply have to say that these three forms idiosyncratically lose their vowel when adjacent to other vowels. The vowel deletion in these cases would have to be an irregular process considering that vowel sequences ending in /i/ or beginning with /a/ are common enough

in the language, both morpheme internally and at morpheme boundaries (§2.4.2).

Additionally, there are similar forms that do not exhibit vowel deletion, such as the noun phrase enclitic -pa 'large: Characterizer,' the verbal derivational suffix -ua 'again,' the noun phrase enclitic -en 'Contrast,' and the verbal derivational suffix -onda 'Distant Past.'

By contrast, we find a strong language-internal motivation for vowel insertion based on the observation that syllable-internal consonant clusters do not occur elsewhere in the language (§2.5). Thus, vowel insertion functions to break up syllable-internal consonant clusters that would otherwise inevitably occur at morpheme boundaries with -npi, -n, and -p. With the enclitic -npi, it is evident that unless a vowel is inserted, a three-consonant cluster will occur any time it is attached to a morpheme ending in a consonant, inevitably producing at least one syllable-internal consonant cluster. With -n, this is not so clear. When -n is word-final or followed by a morpheme that starts with a consonant, attaching -n to a syllable that begins with a consonant will similarly produce a syllable-internal consonant cluster (either a word-final two-consonant cluster or a word-internal three-consonant cluster). But we could imagine a situation where if -n is followed by a morpheme that begins with a vowel, a three-consonant cluster would not result, eliminating the need to break up consonants, as in the hypothetical word in (226a). If vowel insertion was triggered solely by the motivation to break up syllable-internal consonant clusters, we would expect the /n/ allomorph in this situation, despite occurring directly following a consonant. This scenario could only be realized with the nominal enclitic -en 'Contrast,' the only form beginning with a vowel that could be phonologically attached following -n, but what we find is that the language, rather than providing us with an opportunity to test our hypothesis, imposes the grammatical

restriction that the emphatic enclitic -bi ‘Emphatic’ must occur between -n and -en whenever these two forms co-occur in a word (226b).²⁷

- | | | | |
|----------|---|----|---|
| (226) a. | * <u>[bús.nen]</u>
<u>bus-n-en</u>
owl.species-Erg-Contrast | b. | <u>[bú.sim.bjén]</u> ‘owl (Ergative, Contrast).’
<u>bus-n-bi-en</u>
owl-Erg-Emph-Contrast |
|----------|---|----|---|

The motivation for splitting up consonant clusters with -p is somewhat different. Unlike -n, -p can occur in many situations where three-consonant clusters would not occur, such as in (227).

- | | |
|-------|---|
| (227) | <u>[tʃo.pá.tsjaʃ]</u> /* <u>[tʃop.tsjáʃ]</u> ‘would come’
<u>tʃo-p-tsia-s</u>
come-Comment-Npast.Cond-3 |
|-------|---|

But what would be impermissible about these two-consonant clusters, such as the disallowed one in (227), namely /pts/, is that /p/ does not occur syllable-finally anywhere in the language (see §2.4.3 for the description of limited distribution of consonants word-finally).

2.6.4.1 Borrowing as an argument for vowel insertion

Another argument for vowel insertion can be found in the borrowing of Spanish terms into Matses. What we find is that whenever there are syllable-internal consonant clusters in the original Spanish, they are split up by a vowel, increasing the number of

²⁷ As an aside, it is interesting to note two things about the enclitic -bi. First, in cases like (226b), the emphatic meaning of -bi does not obtain, suggesting that the motivation for obligatoriness -bi after -en, may be more phonological than grammatical. The second interesting thing about -bi is that its allomorph /i/ follows consonants except /n/, while /bi/ follow vowels and /n/. It is hard to account for this allomorphic pattern phonologically, as /d/ the other voiced consonant that can occur syllable-finally, is not similarly grouped with /n/ and the vowels.

syllables. The vowel that is inserted is not completely unpredictable. One (or more) of three possible processes determines the vowel that will be inserted. All three processes are common in borrowing. One process is for the vowel in the original Spanish syllable to be distributed to the two new syllables, as in (228a), (229a), (230b), (231a), (232a), and (233a). Another process is for the inserted vowel to be the same as that in the preceding syllable (of course, this is only possible when the inserted vowel is not in a word-initial syllable), as in (230a) and (231b). In words like (228) where both original vowels are the same, it is impossible to say which (or if both) of these two processes is being applied. The third vowel insertion process for borrowed words is (default) insertion of /i/ without any vowel harmony effects, as in (232b), (233b), (234a), and (235a). (Original Spanish stress may have some effect on which process is applied.)

Original Spanish		More common Matses borrowing	Less common Matses borrowing
(228) <i>Sandra</i>	'woman's name'	a. [sán.da.rá]	b. —
(229) <i>cuatro</i>	'four'	a. [kwá.to.ró]	b. —
(230) <i>Pablo</i>	'man's name'	a. [pá.ba.ró]	b. [pá.bo.ró]
(231) <i>Pedro</i>	'man's name'	a. [pé.to.ró]	b. [pé.te.ró]
(232) <i>tabla</i>	'board'	a. [tá.ba.rá]	b. [tá.bi.rá]
(233) <i>tres</i>	'three'	a. [te.rés]	b. [ti.rés]
(234) <i>Brashico</i>	'Brazilian'	a. [bi.rá.ji.kú]	b. —
(235) <i>Blanca</i>	'woman's name'	a. [bi.rán.ka]	b. —

This last process is to me strong evidence that the default vowel to be inserted is /i/. The first two processes could be considered a type of vowel harmony, especially the second process (i.e., that in 230a & 231b), rather than involving any default vowel. (For argument's sake, one could even claim that in all cases of vowel insertion in borrowed terms the original inserted vowel is /i/, which is then sometimes altered in response to vowel harmony.) Finally, note that the motivation for breaking up the borrowed words

seems to be to avoid word-initial two-consonant clusters (233, 234 & 235), word-internal three-consonant clusters (228), and/or disallowed consonant clusters (§2.5), such as */td/ (219 & 223), */bd/ (230, 232, 234 & 235), and */dd/ (228 & 231).

2.6.4.2 *Vowel harmony as an argument for vowel insertion*

Vowel harmony is found in Matses to a very limited extent as a productive process (§2.6.6.2), involving only the vowels /u/ and /o/ in some suffixes/enclitics (and in borrowing, as described in the preceding paragraph). However, it seems evident that vowel harmony was more widespread historically in Matses. The apparent historical vowel harmony patterns observed in lexicalized verbs with the anticausative formative /d/ lend further minor support for the position that /i/ is a default vowel for morphophonological vowel insertion. What we find in Matses is that there is a productive detransitivizing suffix -ad, which has no irregular allomorphy (i.e., /ad/ follows all consonants and vowels, except /a/, where there the expected vowel reduction occurs) and functions to detransitivize transitive verb stems, creating anticausative, reflexive and passive verb stems (236; §11.6).

- | | |
|-------------------------------|-------------------------------------|
| (236) a. [ta.njád] | b. [tan.tjád] |
| <u>tané-ad</u> | <u>tantiá-ad</u> |
| tie-Rflx/Antcaus/Pass | undertand/hear- Rflx/Antcaus/Pass |
| ‘tie oneself’ (reflexive) | ‘hear oneself’ (reflexive) |
| ‘get tangled’ (anticausative) | ‘be understandable’ (anticausative) |
| ‘get tied up’ (passive) | ‘get heard/understood’ (passive) |

Additionally, there are many verbs in the language that end in /d/ with transitive counterparts lacking the /d/ or /Vd/ (§5.3.1.1). Because these transitive counterparts cannot be suffixed productively with the suffix -ad, one might wish to simply call the intransitive counterparts irregular verbs, taking irregular forms of -ad. However, in

addition to their irregular form, one can identify anticausative lexicalized verbs because they never have a passive reading, while productively-derived stems can have anticausative, reflexive or passive meanings (if logical for the verb in question; see §5.3.1.1 for a discussion of these distinctions).

Specifically, the patterns in these causative-anticausative verb root pairs suggest that there was a suffix *-d* with an allomorph /d/ that followed vowels (237a-b) and an allomorph /id/ that followed consonants. It seems that the /i/ was then generally assimilated to the vowel quality of the vowel in the directly preceding syllable (i.e., vowel harmony; 237g-h), except after nasals (237c-e).

	Transitive	Intransitive
(237) a.	<u>kant</u> fé ‘squeeze, give birth’	<u>kant</u> fé <u>d</u> ‘squeeze out on it own’
b.	<u>omp</u> ó ‘hide somethin’	<u>omp</u> ó <u>d</u> ‘hide (oneself)’
c.	<u>nain</u> ‘finish off’	<u>naim</u> í <u>d</u> ‘run out’
d.	<u>san</u> ‘put (Plural O)’	<u>sam</u> í <u>d</u> ‘lay (Plural S)’
e.	<u>pan</u> ‘wash’	<u>pam</u> í <u>d</u> ‘get cleaned’
f.	<u>kwi</u> ş ‘split with grain’	<u>kwi</u> şí <u>d</u> ‘split with grain’
g.	<u>bi</u> şúk ‘skin, peel’	<u>bi</u> şúk <u>d</u> ‘peel’
h.	<u>tif</u> ‘squeeze, give birth’	<u>tif</u> í <u>d</u> ‘squeeze out on its own (e.g., pus)’

The reason why I suggest that the allomorph was /id/ rather than generally /Vd/ is that it seems that not all transitive roots triggered vowel harmony. What we find in cases like (237c-e), where the transitive roots end in /n/, is that there is no vowel harmony and the (default) vowel preceding /d/ is always /i/.²⁸ Therefore, if we show with this internal reconstruction that there was more widespread vowel insertion in the past (with *i* as the default vowel), it is easier to believe that it continues to be a productive process.

²⁸ Interestingly, it seems that labialization of the root-final nasal was also a morphophonological process associated with this (possible) historical suffix *-d*. Or historical /m/ has been lost root-finally (in accordance with the present absence of word-final /m/).

2.6.4.3 Conclusions about vowel insertion: synchronic vs. diachronic evidence

More significant than this historical speculation is that since we already must posit vowel insertion as a productive process in borrowing (with /i/ as the default vowel to be inserted), we do not need to posit a separate synchronic process to account for the alternation of -n/-in and -npi/-inpi. At this point, we can make the following generalization for Matses: any time that a disallowed consonant cluster (§2.5) is potentially formed by affixation/cliticization or by borrowing, these consonant clusters will be split up through the insertion of /i/, which in some instances of borrowing may assimilate to another vowel in response to vowel harmony effects. Furthermore, we can predict where the vowel will be inserted. With suffixation/encliticization, the vowel is inserted at the morpheme boundary. Note that three-consonant clusters, like that in (238) could theoretically be split up by inserting the vowel in two alternate positions, and word-final consonant clusters with -n (e.g., 239) could be split up by adding a vowel at the end—but the vowel nevertheless always goes at the morpheme boundary. With borrowing (from Spanish, at least), there is never more than one logical place where the inserted vowel could be inserted, but we note that the syllable with the inserted vowel is always left unstressed (thereby determining the odd-stressed vs. even-stressed stress pattern of the new word).

- | | |
|--|---|
| <p>(238) [kwes.bá.nim.pí]/*[kwes.bán.mi.pí]
 <u>kuesbán-npi</u>
 bat-Dim
 ‘little bat’</p> | <p>(239) [kwes.bá.nin]/*[kwes.bán.ni]
 <u>kuesbán-n</u>
 bat-Erg
 ‘bat (Ergative case)’</p> |
|--|---|

Unfortunately, the suffix -p ‘Comment’ does not fit well into this analysis, and its unique allomorphic pattern will have to be described as an irregularity, and henceforth its basic form will be represented as -pa. The synchronic irregularity of the -pa/-p is less

perplexing if one considers a diachronic explanation. Reduction of grammatical forms is a regularly observed historical process in all languages, and -pa is not only a very frequently encountered morpheme, it is evidently a very old one, as evinced from its multiple subtle meaning, varied functions, and its obligatory presence in some construction types (§5.5.9). Thus, we could posit that it has been reduced regularly, except where its reduction would result in ill-formed syllable structure.²⁹ Likely as this scenario may be, it does not determine that vowel deletion when adjacent to a non-identical vowel is a synchronic morpho-phonological process (like vowel deletion in sequences of identical vowels is; §2.6.2.1). Historical speculation, especially when supported with comparative work with other languages in the family, can provide satisfying explanations for otherwise perplexing existing patterns in a language. However, there are two pitfalls that must be avoided when considering historical explanations. One is that there no implication that a historical process responsible for the genesis of a pattern continues to be a productive pattern in a language, no more than learning that mammals evolved from reptiles implies humans are cold-blooded. The other is that one should not automatically stop looking for a synchronic functional or cognitive explanation, just because there is a historical account for a current pattern.

In short, the patterns we find with -n and -npi quite possibly developed historically from a reduction process, but as shown in section 2.6.4.1, there is a productive vowel insertion process in the language, and as shown in section 2.6.4.2, this vowel insertion process has apparently been in place for some time. Therefore, for descriptive purposes, there is no need to propose an additional synchronic vowel

²⁹ Reduction of other common verbal suffixes is also observed with in the language, specifically -quio is reduced to -qui before vowels, -ts̥c̥ is reduced to -ts before vowels, and -bo + a reduced to -bo.. See section 2.6.8 on irregular allomorphy

reduction process. And cognitively, we can consider that these allomorphy patterns have been reanalyzed as an insertion process and that has been extended to borrowing. The suffix *-pa* follows a pattern that is not applicable across the language, and therefore should be considered irregular (and the basic form should be *-pa*, since no process can predict the insertion of *a*).

2.6.5 *Stress movement*

Some morphophonological processes cause a shift in (or “reassignment of”) the lexically-assigned stress of the root from one syllable to another (see §2.2.3 for phonemic stress). The apparently exceptionless rule of word stress is that once you know whether the first syllable is stressed or not, you know which other syllables in the word will carry stress (§2.7.1). For example, if you know that the first syllable carries stress, then you know that every other odd syllable (counting left to right) will carry stress, regardless of what morphology follows the root. Morphophonological phenomena *can* affect stress assignment, however, if they act on the *first syllable of the root*. Thus, expectedly, prefixation is always relevant to stress, as prefixes always attach to the first syllable of the root (only one prefix can occur per word). Suffixes and enclitics can only affect stress assignment if they directly follow a monosyllabic root; there is no way that a suffix or enclitic can affect the first syllable of a root if the root is polysyllabic, or if there is an intervening suffix or enclitic.

By “affected” I mean that either the syllable’s position in the word or the syllable’s structure is altered; alteration of a consonant’s quality through assimilation or dissimilation is not relevant for stress assignment. There are two ways in which the first syllable of a root can be affected by an affix/clitic: i) *position change*: prefixation can cause the first syllable of the root to become the second syllable of the word (240b &

241b)³⁰; ii) *change in syllable structure*: prefixation or suffixation/encliticization involving a vowel-vowel encounter at the morpheme boundary will result in merger of the affix/enclitic with the first syllable of the root (242b & 243b), as described in section 2.6.2. Note in (243a) that a monosyllabic root may occur in a word without taking stress; i.e., not all monosyllabic roots are intrinsically stressed.

(240) a. [bi.ri]	b. [bi.bi.ri]	(241) a. [i.ni]	b. [i.ni.ni]
<u>bi</u> di	<u>bi</u> - <u>bi</u> di	<u>ni</u>	<u>ni</u> - <u>ni</u>
'spots'	face-spot	'liquid'	tail-liquid
	'spotted-faced'		'tail wound liquid'
(242) a. [i.se]	b. [poj.sem.bo]	(243) a. [tfo.ta]	b. [tfoa.roʃ]
<u>ise</u>	<u>po</u> - <u>ise</u> - <u>nbo</u>	<u>tfo</u> - <u>ta</u>	<u>tfo</u> - <u>ad</u> - <u>o</u> - <u>ʃ</u>
'smooth'	belly-smooth-Aug	come-Imper	come-Pass-Past-3
	'smooth-bellied'	'Come!'	'It let us come.'

Both of these processes result in the first syllable of the root being stressed; if a prefix does not merge with the first syllable of the root, the word will be even-stressed (240b & 241b), and if the prefix merges with the root, the word will be odd-stressed (242b).

Whether prefixation shifts the stress of the original root depends on the original lexically-assigned stress pattern of the root: even-stressed roots have their stress shifted by prefixation (244b), odd-stressed roots do not (245b). Thus, contrastive phonemic stress can be neutralized by prefixation (246). Or it can reveal internal morphological differences (247).

(244) a. [bi.ris.kja?]	'It swelled.'	b. [po.bi.ris.kja?]	'His belly swelled.'
<u>bi</u> diske-ak		<u>po</u> - <u>bi</u> diske-ak	
swell-Infer		belly-swell-Infer	

³⁰ Note that I will not be marking sentence-level stress (always of the last syllable of the utterance; §2.7.2) in this section, since here I am illustrating a word-level phenomenon, and sentence-level stress is not contrastive.

- (245) a. [búʃ.kawʃ] ‘He blew it.’
búʃka-o-ʃ
 blow-Past-3
- b. [di.búʃ.kawʃ] ‘He blow in his nose.’
di-búʃka.o-ʃ (e.g., tobacco)
 nose-blow-Past-3
- (246) a. [tʃu.wá] ‘Miss it!’
tʃuwá-Ø
 miss-Imper
- b. [biʃ-tʃú.wa] ‘Miss it by a just a bit!’
biʃ-tʃuwá-Ø
 Deintens-miss-Imper
- c. [tʃú.wa] ‘Heat it up!’
tʃúwa-Ø
 heat.up-Imper
- d. [biʃ-tʃú.wa] ‘Heat it up a little!’
biʃ-tʃúwa-Ø
 Deintens-heat.up-Imper
- (247) a. [pó.ta.róʃ] b. [po.tá.roʃ]
po-otád-o-ʃ po-tad-o-ʃ
 belly-get.stuck-Past-3 belly-plane-Past-3
 ‘It (tree) got stuck across middle.’ ‘He planed the middle of the tree trunk’

Whether a word with a suffixed, merged monosyllabic root like that in (243b) is even- or odd-stressed depends on whether it is prefixed (248b) or not (248a).

- (248) a. [njád.tsjaʃ] b. [ni.njád.tsjaʃ]
ne-ad-tsia-ʃ ni-ne-ad-tsia-ʃ
 throw.out-Antcaus-Npast.Cond-3 water-throw.out-Antcaus-Npast.Cond-3
 ‘It would get tossed out/lost.’ ‘It would fall in the water.’

Because there is no prefixable root consisting of a single vowel, no monosyllabic roots can be altered simultaneously at both ends by a prefix and a suffix/enclitic (a ‘there by second person’ and u ‘far/there away from first and second person’, and i ‘stingray’, are the only consonantless roots in the language, none of which takes prefixes). Comparison of (248) and (249) illustrates that syllable mergers do not affect the word’s stress pattern, unless they are in the root-initial syllable.

- (249) a. [dɛʔ.tá.to.tsjáʂ]
dektáto-tsia-s
 ascend-Npast.Cond-3
 ‘He would climb up.’
- b. [dɛʔ.tá.toad.tsjáʂ]
dektáto-ad-tsia-s
 ascend-Antcaus-Npast.Cond-3
 ‘It would be climbable.’

The set of verbs the end in /ke/ or /ka/, as described in section 2.7.1, follow a different stress assignment pattern, and the stress of these roots is apparently never affected by prefixation of any other process.

Another detail that is worth pointing out is that some monosyllabic roots are intrinsically stressed and some are not.³¹ Their underlying stress pattern becomes evident when these are suffixed/encliticized and the underlying stress remains on the monosyllabic root,³² instead of going on the second syllable (which is the preferred stress pattern). For example, the structurally similar roots, tad ‘plane’ and tsad ‘sit’ differ in that the first root is intrinsically stressed (250), while the second is not (251).

- (250) a. [tad] b. [tá.roʂ]
tad-Ø tad-o-s
 plane-Imper plane-Past-3
 ‘Plane it!’ ‘He planed it’
- (251) a. [tsad] b. [tsa.róʂ]
tsad-Ø tsad-o-s
 sit-Imper sit-Past-3
 ‘Sit!’ ‘He sat.’

Since it is only the leftmost syllable that can affect the word’s stress pattern, rather than the rightmost syllable or some other syllable, it seems that stress is calculated from left to right.

³¹ Evidently most monosyllabic verb roots are not underlyingly stressed (tad in 250 being one the exceptions), while roots in all other lexical classes are underlyingly stressed.

³² All monosyllabic *words* are prominent in discourse, regardless of whether the root is underlyingly stressed or not, unlike the contrasting Spanish *si* ‘if’ vs. *sí* ‘yes’ or the Portuguese *e* ‘and’ vs. *é* ‘is.’

A final interesting pattern associated with morphophonological effects on stress is where abbreviatable kinship terms (§4.3.1) are phonologically bound to first-person genitive pronouns, as in (252).

- (252) a. [kún̩.ku] ‘my cross uncle’
 kun kukú
 1Gen cross.uncle
- b. [kún̩.tʃi] ‘my grandmother’
 kun tʃitʃi
 1Gen grandmother
- c. [kúm̩.pa] ‘my father’
 kun papá
 1Gen father
- d. [kun.tá] ‘my mother’
 kun titá
 1Gen mother

Most abbreviatable kinship terms have a duplicate syllable (e.g., 252a-c), and it appears that it is the first (unstressed) syllable that is retained. Meanwhile, the only abbreviatable kinship term that does not have duplicate syllables (252d), exhibits a different stress pattern when attached to kun, perhaps because it is the second (stressed) syllable that is retained when tita is abbreviated, while for the other words, it is the first (unstressed) syllable that is retained.

2.6.6 Sporadic processes

In the following subsections, I describe processes that are not generally applicable in the language, but are unique to a few suffixes or groups of roots.

2.6.6.1 Duplication and reduction of /k/

As mentioned in section 2.2.1.1, word-internal series of /k/ occur both morpheme-internally and at morpheme boundaries (always word-internally and heterosyllabically; the first segment being realized as [ʔ], a conditioned allophone of /k/). At some morpheme boundaries, where a morpheme ends with /k/ and the next begins with /k/, /kk/ is expected (253), but at morpheme boundaries involving the suffixes -o ‘Recent Past’

and -onda ‘Distant Past’ and -ondaid ‘Recent Past Nominalizer’ the single /k/ is unexpectedly duplicated (254).

- (253) a. [bi.fú?.kwe.nóʃ] ‘He began to skin it.’ b. [ta?.kwés] ‘hit on the abdomen’
bi.fúk-kuen-o-s tak-kues
 skin-Incho-Past-3 abdomen-hit
- (254) a. [bi.fú?.koʃ] ‘He skinned it.’ b. [i?.kón.daʃ] ‘it was (long ago)’
bi.fúk-o-s ik-onda-s
 skin-Past-3 be-Dist.Past-3

These three suffixes happen to be the only suffixes/enclitics that begin with /o/. The extra /k/ does not appear when suffixed/cliticized with morphemes beginning with other vowels (255a & b) or with consonants (255c). Or when -o, -onda or -ondaid follow consonants besides /k/ (256).

- (255) a. [bi.fú.kəʃ]/*[bi.fú?.kəʃ] b. [i.ké?]/*[i?.ké?]
- | | | |
|--|---|--|
| c. [a?.tsjaʃ]
<u>ak-tsjə-s</u>
drink-Npast.Cond-3
‘would drink it.’ | <u>ik-e-k</u>
be-Npast-Indic
‘is’ | <u>bi.fúk-aʃ</u>
skin-Conjec
‘(presumably) skinned it’ |
|--|---|--|
- (256) a. [tsa.róʃ]/*[tsad.kóʃ] b. [tʃi.ʃón.dajd]/*[tʃiʃ.kón.dajd]
- | | |
|---|--|
| <u>tsad-o-ʃ</u>
sit-Past-3
‘sat.’ | <u>tʃiʃ-ondaid</u>
carve-Dist.Past.Nzr
‘thing that was carved a long time ago’ |
|---|--|

This phenomenon also does not occur when the order of the /k/ and the /o/ at the morpheme boundary is inverted (257), or with prefixation (258).

- (257) a. [ka.ró.kwe.nóm.bi]/*[kwi.nó?.kwe.nóm.bi] b. [po.ká.sen]/*[po?.ká.sen]
- | | |
|---|---|
| <u>kadó-kuen-o-nbi</u>
sharpen-Incho-Past-1S
‘I began carrying it.’ | <u>po-ka.sen</u>
belly-get.thin
‘get thin at the belly’ |
|---|---|

- (258) a. [[ʃjó.ta.ró.bi]/*[ʃiʔ.kó.ta.ró.bi]
ʃik-otád-o-bi
 ribs-get.stuck-Past-1S
 ‘I got stuck across the chest.’
- b. [ʃiό.ta.róʃ]/*[ʃiʔ.kó.ta.róʃ]
ʃik-otád-o-ʃ
 arrowhead-get.stuck-Past-3
 ‘(The arrow) got stuck by the point.’

We note further that /ko/ segment sequences occur morpheme-internally without any duplication of the /k/:

- (259) a. [ma.pjó.kos] ‘common opossum’
 b. [ma.sjó.ko] ‘small biting ant’
 c. [mo.kó] ‘ax’
- d. [tʃo.kóʃ] ‘metal pot’
 e. [no.kóʃ.ka] ‘paint, coat’
 f. [ton.kó.ro] ‘tree species’

Thus, it seems that /k/ duplication is a morphophonological process specific to the suffixes -o ‘Recent Past,’ -onda ‘Distant Past’ and -ondaíd ‘Distant Past Nominalizer’ (the second two could be analyzed as containing -o ‘Past’). In light of this, it might be best to list two phonetically-conditioned allomorphs for each suffix: -o/-ko, -onda/-konda and -ondaíd/ -kondaíd in the verb morphology chapter, rather than posit a morphophonological rule.³³

What makes this alternation worth pointing out here in the morphophonology section is the pattern in (258). We note in these examples that despite the absence of duplication, the /ko/ sequence is nevertheless not realized: the /k/ segment is lost at the morpheme boundary. However, this process is not limited to morpheme boundaries involving /o/ (260a), nor is it a general rule, always applying consistently (260b & 261).

- (260) a. [náj.n.taʔ]
nak-inták
 abdomen-blood
 ‘blood inside abdomen’
- b. [na.kú.su.réʔ]
nak-usúd-e-k
 abdomen-be.inside-Npast-Indic
 ‘be inside abdomen’

³³ In fact, a possible internal reconstruction involves recognizing this /k/ as a copula (§5.6.1.2).

- (261) [tʃúʃ.ka.jóʔ] ‘He must have really reprimanded him!’
 tʃúʃka-ak-jok
 reprimand-Infer-Counter

The process is somewhat idiosyncratic with prefixes, and with the suffix -ak, it seems to only occur when followed by the counter-expectation suffix.³⁴ Thus, several prefixes (nak-/na- ‘abdomen’, sik-/si- ‘teeth, arrowhead, beak, bill, (crab) pincer,’ fik-/fi- ‘ribs, house rafters’) and the suffix -ak/-a ‘Recent Past Inferential’ must simply be listed with two allomorphs. (But note that some prefixes like tak- ‘underside’ never vary and contrast with prefixes like ta- ‘foot, root, base’.)

A final minor related phenomenon is that the more frequently used verbs that end in /ke/ or /ka/ (which have many irregular phonological properties; §§2.7.1, 2.8.2) are frequently pronounced without the /k/:

- (262) a. /kodóka/ [ko.ró.ka]~[ko.róá] ‘cook/boil (transitive)’
 b. /kodoke/ [ko.ró.ke]~[ko.róé] ‘cook/boil (intransitive)’

In conclusion, /k/ is identified as a segment associated with multiple morphophonological irregularities. See the end of section 2.6.8 for another isolated case.

2.6.6.2 Vowel harmony

Vowel harmony in Matses is extremely limited. It has already been introduced in section 2.6.4.2 as a phenomenon occurring in vowel insertion in borrowed words and possibly in a historical suffixation process. Here, I describe vowel harmony as it occurs in suffixation and encliticization. It occurs only between the two back (unrounded) vowels: /o/ and /u/. The assimilation that occurs is as follows: if the first vowel in a

³⁴ Note that the copula ik is often reduced to [j] (§2.6.7), so, as with -o/-ko and -onda/-konda, the irregular pattern observed with the counter-expectation suffix -jok may have to do with a historical association with the copula: perhaps ik-o-k ‘It was!’ > -jok ‘Counter-expectation.’

suffix is /u/, it will assimilate to the final vowel in the root/preceding suffix/enclitic if that vowel is /o/ (263).

(263) a. [tʃo.nó]	b. [ka.ró.ʃon]	c. [tsad.tó.noʔ]
<u>tʃo-nu</u>	<u>kadó-sun</u>	<u>tsad-do-nuk</u>
come-Intent: 1	lift-after: S/A>A	sit-Incep-while: Diff.Ref
'I'm going to come.'	'after lifting'	'while it stops to sit'

Thus, it would be possible to account for all vowel harmony in the language listing all suffixes whose first vowel is /u/ together with their /o/-allomorphs, as in Table 2.11.

Table 2.11. Suffixes and enclitics and their vowel-harmony altered allomorphs.

Suffix/enclitic	Allomorph	Meaning	Morpheme type	Section
- <u>nu</u>	- <u>no</u>	'Intention: 1'	verb inflectional suffix	5.6.3.1
- <u>nuk</u>	- <u>nok</u>	'while: S/A>A'	verb subordinating suffix	12.4.2.1
- <u>nun</u>	- <u>non</u>	'Purpose: S/A>A'	verb subordinating suffix	12.4.2.7
- <u>nunda</u>	- <u>nonda</u>	'Future: perhaps'	verb inflectional suffix	5.6.3.2
- <u>nuş</u>	- <u>noş</u>	'Purpose: S/A>S'	verb subordinating suffix	12.4.2.7
- <u>nuse</u>	- <u>noşe</u>	'Future: potential'	verb inflectional suffix	5.6.3.2
- <u>sun</u>	- <u>son</u>	'after: S/A>A'	verb subordinating suffix	12.4.2.2
- <u>sun</u>	- <u>son</u>	'Applicative'	verb derivational suffix	11.5.3
- <u>sun</u>	- <u>son</u>	'Event Initiation'	adverbial enclitic	7.6.1.2

One cannot make a general statement that *all* suffixes and enclitics whose only or first vowel is /u/ are affected by this vowel harmony process, because the verbal derivational enclitic -bud 'Continuously/Downward' is not affected by this vowel harmony process (264).

(264) [ka.ró.bu.róş]/*[ka.ró.bo.róş]	'He lifted continuously.'
<u>kadó-bud-o-ş</u>	
lift-Cont-Past-3	

The suffix -bud is phonologically distinct from the vowel-harmony-altered suffixes/enclitics only in that it ends with a /d/, but it is not unique in having the /u/ in a closed syllable. Similarly, -bud is not unique grammatically: -sun ‘Applicative’ is also a verbal derivational suffix, and as such undergoes assimilation in response to vowel harmony. It is notable, however, that most of the suffixes/enclitics that are affected by vowel harmony are verbal inflectional suffixes, non-finite verbal morphology, or otherwise suffixes/enclitics that generally occur at the end of words.

We can see that the process does not work the other way around, as the suffixes/enclitics -no ‘Locative/Directional,’ -do ‘Inchoative,’ -bo ‘Plural,’ and -bo ‘Prior’ do not have the allomorphs /tu/, /bu/, or /bu/ following roots with /u/ as its final syllable (265).

- | | |
|---|---------------------------|
| (265) a. [ka.pú.to.tsjáʂ]/*[ka.pú.tu.tsjáʂ] | b. [ma.jú.bo]/*[ma.jú.bu] |
| <u>kapú-do-tsia-ʂ</u> | <u>majú-bo</u> |
| walk-Incep-Npast.Cond-3 | non.Matses.Indian-Pl |
| ‘He would start to walk.’ | ‘the non-Matses Indians’ |

Unfortunately we cannot know if this process also works from left to right because no prefixes contain /u/, and no suffixes/enclitics that contain /u/ (except the unchanging -bud; see 264) can occur in front of a suffix/enclitic containing /o/.

2.6.6.3 Segment deletion

There are at least two roots that are reduced when prefixed. The unexpected thing about this process is that the root is reduced at the end of the word, rather than at the beginning, where it comes into contact with the prefix. Specifically, when prefixed, two color terms, usu ‘white’ and tsiʂi ‘black,’ lose their final vowel, consequently being

reduced from a two-syllable root to a one-syllable root (266; see §6.7.2 for more examples).

- | | | |
|--------------------|---------------|------------------------------|
| (266) a. [ma.tʃiʃ] | b. [pawʃ] | c. [i.nuʃ i.nuʃ.kjo] |
| <u>ma-tʃiʃi</u> | <u>pa-uʃu</u> | <u>redup in-uʃu-kjo</u> |
| head-black | ear-white | partly tail-white-Aug |
| 'black-headed' | 'white-eared' | 'having a white-tipped tail' |

Note in (265b) that a prefix ending in a vowel will combine with /uʃu/, further reducing the number of syllables in the word. Segment deletion is reportedly a common process in Panoan languages (Loos 1999), but in Matses it is evidently restricted to these two roots (tantia/tante 'listen/understand' works differently but could be a third example; §2.6.7).

2.6.6.4 Ablaut?: verb pairs ending in /ke/ and /ka/

There is a large group of verbs, possibly all originating from sound symbolism (§2.9), where transitive and intransitive pairs of verbs differ formally only in whether they end in /ke/ or /ka/; /ke/ is always on the intransitive version, and /ka/ on either a causative (267) or non-causative (268) transitive version.

- | | | | |
|----------|---|----------------|-----------------------------|
| | Intransitive | | Transitive (causative) |
| (267) a. | <u>nike</u> 'run off (plural S)' | <u>nika</u> | 'chase off (plural O)' |
| b. | <u>tadánke</u> 'slip' | <u>tadánka</u> | 'cause to slip' |
| c. | <u>pitfike</u> 'be on fire, burn oneself' | <u>pitfika</u> | 'burn something' |
| d. | <u>béske</u> 'scratch (as a chicken scratches in the dirt)' | <u>béska</u> | 'sweep floor or trash' |
| | Intransitive | | Transitive (non-causative) |
| (268) a. | <u>sedénke</u> 'weep' | <u>sedénka</u> | 'weep for someone' |
| b. | <u>ónke</u> 'talk' | <u>ónka</u> | 'tease verbally, flirt' |
| c. | <u>ke</u> 'say' | <u>ka</u> | 'say to/tell' |
| d. | <u>tsúske</u> 'complain, bark' | <u>tsúska</u> | 'complain about, reprimand' |

From looking at the pattern exhibited by these verbs. One might suspect that verbs ending with /ke/ and /ka/ represent a productive derivational process where vowel change from /e/ to /a/ (i.e., “ablaut”) is a grammatical means of deriving a transitive verb from an intransitive verb (or vice-versa: a change from /e/ to /a/ being a process for detransitivizing verbs). This analysis is discouraged by the observation that no other derivational process in Matses uses ablaut, and that it is only following /k/ in the final syllable that this vowel alternation would be possible. However, there are grammatical arguments for analyzing this as a productive process (e.g., it would provide an explanation for why the /ke/ forms cannot be causativized with *-me*; §5.5.1). In the end, however, it is impossible to prove whether this is a synchronically productive process versus the remnant of a historical word-formation process. So if one is disposed to do so, it is possible to claim that ablaut occurs in Matses in this isolated case.

2.6.7 Irregular verbs

There are very few roots that have irregular alternate forms. All of them are verbs (except for the two adjectives described in §2.6.6.3). None of these irregular forms can be accounted for by regular morphophonological processes; i.e., the speaker must know that these forms are irregular. Three of these verbs have in common that the root ends in a bivocalic sequence and the alternate form exhibits vowel reduction of some form (169-271). One motivation for these irregular forms may be to avoid trivocalic sequences. Evidence for this is that the vowel sequence in these irregular verbs is reduced only when

suffixed with a vowel-initial morpheme. A fourth root (272) follows an analogous pattern to the roots in (269) and (270), but does not end in a bivocalic sequence³⁵:

(269) a. [tʃwi.tʃjáʃ]	b. [tʃjoʃ]	(270) a. [ʃwi.tá]	b. [ʃjén.da]
<u>tsui-tsia-s</u>	<u>tsui-o-s</u>	<u>sui-ta</u>	<u>sui.enda</u>
tell-Npast.Cond-3	tell-Past-3	tell-Imper	tell-Neg.Imper
‘He would tell.’	‘He told.’	‘Tell!’	‘Don’t tell!’
(271) a. [tan.tjá.nu]	b. [tan.tjóʃ]	(272) a. [ta.wí.nu]	b. [ta.ják]
<u>tantiá-nu</u>	<u>tantiá-o-s</u>	<u>tawí-nu</u>	<u>tawí-ac</u>
hear-Intent:1	hear-Past-3	burn-Intent:1	burn-Infer
‘I’m gonna listen.’	‘He heard.’	‘I’m gonna burn it.’	‘He burned it.’

The formally similar roots in (269) and (270) exhibit the same irregularity: upon suffixation with a vowel-initial suffix, the /u/ of the on-glide is lost. The form in (271) is similar to these, but it is an approximant that is lost. The verb tantiá (272) exhibits a different irregularity in the same environments: upon suffixation with a vowel-initial suffix, the final vowel is lost. This would be expected when followed by a suffix beginning in /a/, but not before all vowels; i.e., other verbs ending in /a/ do not behave this way (272). But I call attention to the irregular verbal derivational suffix, -pa ‘Comment,’ described in detail in section 2.6.4, which likewise loses the /a/ when followed by any vowel-initial suffix.

(272) [mwaoʃ]/*[mwoʃ]	‘He lied.’
<u>mua-o-s</u>	
lie-Past-3	

³⁵ A fifth somewhat similar root (that I learned too late to fully integrate into the discussion here), is tsiu ‘wear (e.g., ornaments or clothes),’ which is reduced to tsi preceding vowels.

A fifth irregular verb is the very common copular/auxiliary verb ik 'be,' which word initially will sometimes becomes [j], usually in free variation (as in 273a), but obligatorily at least in the word jakno (273b).

- | | |
|-----------------------------|---|
| (273a) [jeʔ] ~ [i.kéʔ] 'is' | (273b) [jáʔ.no] ~ ?[i.káʔ.no] 'the place where' |
| <u>ik-e-k</u> | <u>ik-ak-no</u> |
| be-Npast-Indic | be-Act.Nzr-Loc |

This verb is also the only one that regularly forms contractions with preceding words, usually adjectives and adverbs, generally reducing to -k ([ʔ]) after vowels, but sometimes disappearing altogether after roots ending in /k/:

- | | |
|----------------------------------|---|
| (274a) [nwáʔ.kid] ~ [nwa iʔ.kíd] | (275b) [piʔ.tsíʔ.kid] ~ [piʔ.tsíʔ iʔ.kíd] |
| <u>nua ik-kid</u> | <u>piktsík ik-kid</u> |
| large be-Agt.Nzr | small be-Agt.Nzr |
| 'large one' | 'small one' |

These allomorphic patterns are relevant for the internal reconstructions of several forms to be discussed below, including the past tense suffixes -o/-ko, -onda/-konda and -onaid/-konaid (§§2.6.6.1, 5.6.1.1), the counter-expectation suffix -jok/-ok (§§2.6.6.1, 5.6.6), and the conjunction suffix -ke/-je/-e (§5.7)

2.6.8 Irregular allomorphy

Here I draw attention to irregular patterns associated with some affixes and enclitics that cannot be accounted for with regular morphophonological rules. Only two of these irregular morphemes are phonologically conditioned. Description of grammatically-conditioned allomorphy really belongs in the morphology chapters, but some grammatically-conditioned patterns will be pointed out here for the sake of comparison with the phonologically-conditioned forms.

The augmentative enclitic -nbo/-kio exhibits the following allomorphic pattern: /nbo/ occurs following vowels (276), and /kio/ following consonants (277). It is not unexpected that of the two allomorphs, that /kio/ should be the one that follows consonants, because if /nbo/ followed consonants directly (i.e., without vowel insertion) a three-consonant cluster would result (277b).

- | | | | | | |
|-------|----------------|---------------|-------|-------------------|-------------------|
| (276) | a. [pjúm.bo] | b. *[pjú.kjo] | (277) | a. [bun.táʔ.kjo] | b. *[bun.táʔ.mbo] |
| | <u>piu-nbo</u> | | | <u>bunták-kio</u> | |
| | red-Aug | | | young-Aug | |
| | 'very red' | | | 'very young.' | |

What is unexpected is the radically different forms of the allomorphs. It is hard to be sure of the historical source of these allomorphs: there are two possible lines of conjecture: i) they could reflexes of an earlier form, perhaps related to the Matis form *kimo* 'Augmentative' that that kept the labial element following vowels and the velar portion following consonants (i.e., *kimbo > Matis: kimo, Matses: -kimbo, -kio and -mbo); or ii) they could have collapsed from two near-synonyms (in roughly the same fashion that English suppletive paradigms like *be/is/are* and *go/went* were created). The grammatical pattern of this form is also noteworthy here: the /nbo/-/kio/ allomorphic pattern occurs with nouns (§4.6.6), adjectives (§6.6.2.1), adverbs (7.6.4.1) and postpositions (§8.6.4.1), but only /kio/ occurs on verbs, after both vowels and consonants (§5.5.6). Thus, it seems perhaps due to their phonological dissimilarity, that speakers are perhaps beginning to treat these two allomorphs as separate grammatical units; or conversely it could be due their disparate historical distributions, rather than innovation. For this reason and because it is difficult to pick one or the other of these two allomorphs as basic based on phonological patterns, in this grammar I will present the both of these forms together in prose (i.e., "-nbo/-kio"), and the surface form that occurs in examples'

morpheme-by-morpheme lines (as in 276 & 277), as opposed to all other cases of allomorphy, where I present only the basic form.

Another irregular phonologically-conditioned allomorphic pattern is instantiated in the emphatic enclitic -bi (introduced above in §2.6.4), which occurs as /bi/ following vowels and /n/ (278), and as /i/ following all other consonants (279).

(278)	a.	[taí.mi.bi]	b.	[nun.tám.bi]	(279)	[i.kí.ru.kí]
		<u>taími-bi</u>		<u>nuntán-bi</u>		<u>ikíduk-bi</u>
		downstream-Emph		indoors-Emph		inside-Emph
		‘just downstream’		‘really indoors’		‘right inside.’

Two aspects of the allomorphic pattern of this enclitic are quite unexpected. The first is that /n/ is classified together with the vowels rather with the consonants, despite the presence of another voiced consonant, /d/, which can occur syllable-finally. (Note, however, that this grouping of phonemes is parallel to that associated to voice dissimilation; §2.6.1.2.) The other odd thing about the /bi-/i/ alternation is that there seems to be no phonological motivation for this conditioning pattern. One account for the restriction against attaching /i/ to vowel-final morphemes is that it is a strategy for avoiding trivocalic sequences, but there is no reason why /bi/ should not follow all segments. This pattern is made even more mysterious after comparing the allomorphic pattern of -bi with those of the enclitics -bo ‘Plural’ (§4.6.1.1) and -ba ‘first’ (§4.4.5.2) both of whose full allomorphs (/bo/ and /ba/) can follow any consonant or vowel. Interestingly, -bo and -ba, like -bi, have consonantless allomorphs (/o/ and /a/), but these are grammatically rather than phonologically conditioned: /bo/ is attached to most noun roots, and /o/ to nominalizations; and /ba/ is attached to full nouns (and adverbs, postpositions and interrogatives), while /a/ follows pronouns.

The suffix -bi shows another irregular pattern: in at least one clear case it results in the loss of a morpheme-final /k/, instead of being realized as [i], the usual allomorph following /k/.

(280a) [nid.núʔ] <u>nid-nuk</u> go-while:Diff.Ref 'while going'	(280a) [nid.nú.bi]/*[nid.nú.ki] <u>nid-nuk-bi</u> go-while:Diff.Ref-Emph 'while going (completely separate events)'
--	--

This appears to be an isolated case, but looking at cliticization of verbs with pronominal enclitics suggests there was historically also a loss of word-final /k/ (see section 2.6.6.1 for other irregular cases of loss of /k/ at morpheme boundaries):

(281a) [ni. réʔ u.bi] <u>nid-e-k ubi</u> go-Npast-Indic 1Abs 'I will go.' (indicative)	(281b) [ni.ré.bi] <u>nid-e-bi</u> go-Npast-1S 'I will go.' (indicative)
---	--

Similarly to -pa/-p, described in section 2.6.4, the suffix/enclitics -kjo 'Intensifier' / 'Augmentative' and -tsik 'Diminutive' are usually reduced to -ki and -ts preceding vowels (§§5.5.6, 5.5.8, 6.6.2.1) and adverbializing suffixes beginning with a lose the a when they follow the verbal suffix -bo 'Prior' (e.g., -bo + -aʒ --> [boʒ]; §5.5.11). These could all be assumed to fit the typical cross-linguistic diachronic pattern of phonetic reduction of commonly used forms.

2.7 Prosody

The three main prosodic phenomena in Matses are the word-level alternating stress system (§2.7.1), utterance-level stress (§2.7.2), and utterance-level intonation contours (§2.7.3). There is also an emphatic mode of speaking where word-level and

utterance-level prosodic patterns are neutralized (§2.7.4). Word-level stress involves stressing alternate syllables, is quantity-insensitive, is lexically assigned to roots, and can be affected by morphological processes (= stress shift; §2.6.5). By contrast, utterance-level stress occurs at the end of an utterance, with no lexical basis, without being affected by morphological processes, and independent of word-level stress. One of the most tricky parts of studying Matses prosody is that that utterance-level stress can obscure word-level stress (i.e., stressing the final syllable in an utterance, which would be unstressed by the word-level stress assignment), so the key to understanding word-level stress is to elicit words in non-final position, and to be careful that single-word elicitation are not being treated by speakers as imperatives (i.e., bare verb roots) or other one-word utterances (e.g., bare nouns as answers to questions, or inflected verbs with covert third-person arguments). Also, I found it useful to ask speakers to repeat words at different speeds and to use them in sentences (in addition to using recorded texts), in which case the *differences* in vowel length and pitch were emphasized (as opposed to making all syllables uniformly long and higher in pitch). An additional (but secondary) means of identifying stress was by asking some of the literate speakers to transcribe the words, and mark the syllables that they felt were stressed, and so any time their transcription differed from mine, we spent more time on the word, and tagged it for careful replication with other speakers. Most of my work on stress has been concerned with word-level stress.

2.7.1 *Word-level stress*

Word-level stress in Matses is governed by an alternating stress system where every-other syllable in a (phonological) word carries stronger stress than the adjacent

syllables.³⁶ The stress system is quantity insensitive (i.e., not sensitive to syllable weight), but unstressed heavier syllables (i.e., closed syllables, especially those containing vowel sequences) often sound somewhat more stressed than lighter syllables. As a result, the difference in stress between a heavy unstressed syllable and an adjacent (stressed) lighter syllable is not always so clearly perceived (282 and 283a), but careful attention to the phonetic correlates of stress (mainly vowel length and pitch) allows one to unquestionably detect the stressed syllables; i.e., in (282), for example, vowel length and higher pitch make it clear that it is the open syllables that are stressed in these words.

- | | | | |
|--------------------|---------------|------------------------|------------------|
| (282) a. [win.té:] | 'heart' | (283) a. [tsim.pí:ru?] | 'valley' |
| b. [wá:ʃan] | 'tiger heron' | b. [ní.mi.rú:ʔ] | 'primary forest' |

In any particular word, either all odd or all even syllables in the word are stressed. Words composed of identical segment sequences can contrast with respect to being odd-stressed (284a) vs. even stressed (284b; see §2.2.3 for more contrasting pairs).

- | | | | |
|-------------------|-----------|-------------|--------|
| (284) a. [tʃú.wa] | 'heat up' | b. [tʃu.wá] | 'miss' |
|-------------------|-----------|-------------|--------|

Even-stressed words are much more common than odd-stressed words.³⁷ There seems to be a preference for even-stressed words. For example, (285a) and (286a) are the lexicalized names for the chachalaca (a bird the size of a small chicken) and for Spix's

³⁶ The term "rhythmic stress" could be used instead of alternating, but I avoid it because Hayes (1995:31-32) uses this term as contrasting with "morphological stress." Matses stress being determined partly by lexical assignment, partly by morphological processes, and partly by the alternation rule, would be a mix of these different stress systems.

³⁷ It is interesting to note that Chiankuëshbo (a very closely related language spoken by a captive woman living with the Matses at Nuevo San Juan) exhibits the opposite patterns, with odd-stressed words more common. Many Matses-Chiankuëshbo cognates differ only in that the Matses root is even stressed (e.g., [i.wí] 'tree (archaic)') and the Chiankuëshbo term is odd-stressed ([í.wí] 'tree'). Matses speakers pointed this out to me before I even started working on the Chiankuëshbo language.

guan (a chicken sized bird, related to the chachalaca), but when imitating these birds, Matses stress the first syllable, as in (285b) and (286b),³⁸ which is in fact closer to what the birds' calls sound like.

- (285) a. [ma.ró.ko] 'chachalaca' b. [má.ro.ko má.ro.ko] 'chachalaca imitation'
 (286) a. [kwi.bú] 'Spix's guan' b. [kwí.bu kwí.bu] 'guan imitation'

Similarly, borrowed words are sometimes adapted from the original Spanish to an even-stressed pattern (§2.10), and lexicalized roots (e.g., personal pronouns) may take on an even-stressed pattern (§4.4.1).

Once you know whether the first syllable is stressed or not, you can predict which other syllables in the word will carry stress. For example, if you know that the first syllable carries stress, then you know that every odd syllable will carry stress, regardless of what morphology follows the root (287-289).

- (287) a. [tʃú.wa] 'heat up'
 b. [tʃú.wa.tán] 'go heat up'
 c. [tʃú.wa.tán.tsjaʃ] 'would go heat it up'
 d. [tʃú.wa.tán.tsjam.bí] 'I would go heat it up'
- (288) a. [tʃu.wá] 'miss'
 b. [tʃu.wá.tan] 'go miss'
 c. [tʃu.wá.tan.tsjáʃ] 'would go miss'
 d. [tʃu.wá.tan.tsjám.bi] 'I would go miss'
- (289) a. [ta.né.te] 'electric eel'
 b. [ta.né.tem.pí] 'little electric eel'
 c. [ta.né.te.rá.pa] 'big electric eel'
 d. [ta.né.tem.pí.ʃen.dá] 'little electric eel (Mirative)'
 e. [ta.né.te.rá.pa.ʃén.da] 'big electric eel (Mirative)'

³⁸ These are not hunting calls nor lexicalized terms, but just casual imitations of these birds. When Matses imitate these, they use approximately the same segments in the lexicalized terms, but try to approximate the birds' calls more.

The rightmost word-level stress seems to be the strongest, but not very noticeably so (especially with words with varying syllable types), so I do not distinguish between primary and secondary word-level stress. (Note that utterance-final stress, not marked on examples in this section, is stronger than any word-level stress.)

Morphophonological phenomena can affect stress assignment, but only if they act on the first syllable of the root. Monosyllabic roots are intrinsically stressed or intrinsically unstressed. Their underlying stress pattern becomes evident when they are suffixed/encliticized. For example, the structurally similar roots, tad ‘plane’ and tsad ‘sit’ differ in that the first root is intrinsically stressed (290), while the second is not (291).

(290)	a. [tad]	b. [tá.roʃ]	(291)	a. [tsad]	b. [tsa.róʃ]
	<u>tad</u> -Ø	<u>tad</u> -o-ʃ		<u>tsad</u> -Ø	<u>tsad</u> -o-ʃ
	plane-Imper	plane-Past-3		sit-Imper	sit-Past-3
	‘Plane it!’	‘He planed it’		‘Sit!’	‘He sat.’

Monosyllabic words in discourse are always prominent. Whether they are lexically intrinsically stressed affects whether they “hold onto” their stress when suffixed. See section 2.6.5 for more on this phenomenon of stress shift.

The phonetic correlates of stress are vowel length and pitch (292). Unstressed (= short) vowels are centralized and less distinctive to varying levels depending on the environment.

(292)	[wé: tá:.nuʔ]	‘September (lit. ‘when the rains begin’)
	<u>we</u> ta-nuk	
	rain begin-while:Diff.Ref	

two phonologically independent (but grammatically unified) elements, across which alternating stress, syllabification rules and morphophonological rules do not apply. This phenomenon is discussed in detail in section 2.8. The other situation where alternating stress does not apply is in onomatopoetic animal names that have reduplicated elements. This is also described in detail below (§2.8.3).

2.7.2 Phase-level and sentence-level stress

Unlike with bound morphemes (297), the word-level stress pattern does not carry across words in multi-word phrases (298).

- | | |
|---|---|
| <p>(297) a. [ka.ná.ra.pá]
 <u>kaná-dapa</u>
 macaw-large
 ‘large macaw’</p> | <p>b. [já.ma.rá.pa]
 <u>jáma-dapa</u>
 short.tailed.opossum-large
 ‘large short-tailed opossum’</p> |
| <p>(298) a. [a.tón tʃám.pi] / *[a.tón tʃam.pí]
 <u>atón tʃánpi</u>
 3Gen daughter
 ‘his/her/their daughter’</p> | <p>a. [já.ma iʔ.sá] / *[já.ma iʔ.sa]
 <u>jáma</u> <u>iksá</u>
 short.tailed.opossum bad
 ‘awful short-tailed opossum’</p> |

It is possible that phrases form some sort of intonation unit, but I still have not studied this topic in detail.

The general pattern of sentence-level stress is to emphasize the last syllable in the last word by pronouncing it louder, longer and with a higher pitch (i.e., overall more intensely) than other syllables in the utterance, regardless of whether this last syllable carries word-level stress or not. I have not done much work with this level of stress, and cannot say much as to whether it has any role in subordination in complex sentences, etc.

2.7.3 *Intonation Patterns*

I have recognized the following distinctive intonation patterns in Matses: i) unmarked affirmative intonation (falling, unless a word is emphasized); ii) imperative intonation (falling, with louder final syllable, often with an abrupt pause at the end); and iii) interrogative intonation (final rising contour).

2.7.4 *Emphatic monotone*

The Matses have a mode of speaking which I call “emphatic monotone.” The domain of this speech pattern is the sentence. When speaking in this mode, speakers slow down their speech considerably, inserting pauses between all syllables and lengthening all the syllables, and de-emphasizing pitch differences. The Matses (especially older women) switch to this emphatic manner of speaking to relate an unexpected event or the observation of an extreme condition. This mode of speech is useful for identifying syllable boundaries, as described in section 2.3.1.1.

2.8 **Reduplication**

Reduplication is very common in Matses: reduplication of verbs (§5.9), adverbs (§7.7), and postpositions (§8.7) carries an iterative, distributive or ‘hurried’ meaning; reduplication of adjectives carries de-intensification semantics (§6.7); and nouns are adverbialized through reduplication (§6.8.1). Two formally distinct types of reduplication occur productively in the language: i) **full reduplication** of the entire root, and, if present, any prefixes and certain verbal derivational suffixes (§2.8.1); and ii) **partial reduplication**, where the final syllable of the root is not reduplicated (§2.8.2). Full reduplication is by far the more common process—all nouns, adjectives, adverbs and postpositions and most verbs are reduplicated in this way. Partial reduplication, by

contrast, is applied only to a very limited number of verbs, all of which end in /ke/ or /ka/. Additionally, many onomatopoeic animal names repeat the syllables representing the animal's call twice (generally motivated by the repetitive sounds in the animal's call), and, interestingly, these name coinages do not conform to the phonological pattern of most Matses words, but take on some of the anomalous phonological properties of reduplicated words (§2.8.3).

All reduplication processes in Matses generally produce two phonologically separate (but grammatically unitary) words; i.e., stress, syllable formation and (most) morphophonological rules do not apply across the boundary between the **reduplicand** (the reduplicated element, in Matses the one that comes first) and the **base** (in Matses, the second instance of the root, the only one that is inflected). There are some exceptions, where a single phonological word is produced instead, or where some morphophonological rules apply across the two components while others do not—these cases will be presented in the following subsections.

2.8.1 Whole-word reduplication

Whole-word reduplication is accomplished by repeating the whole root (287). Inflectional and certain other suffixes/enclitics are attached only to the base (288). Any prefixes (bold segments in 289) and most derivational suffixes (bold font segments in 290) are reduplicated along with the root. The two phonologically-independent components are always identical in terms of stress pattern.

- | | | | | | |
|-------|-------------------------|-----------|-------|----------------------------------|-----------------------|
| (299) | [pju pju] | ‘reddish’ | (300) | [tʃud tʃu.reʔ] | ‘He has sex hastily.’ |
| | <u>redup</u> <u>piu</u> | | | <u>redup</u> <u>tʃu-e-k</u> | |
| | Deintens red | | | Distr copulate.with-N past-Indic | |

- (301) [ma.pjú ma.pjú.pa.tsí?] (302) [kwis.búd.tan kwis.búd.tan.kíd]
redup ma-piu-patsik redup kwis-bud-tan-kid
 partly head-red-Dim Distr pick-Cont-go-Hab
 ‘Partly red-headed (small entity)’ ‘They keep on going back to pick (fruits).’

The general rule (exceptions will be presented at the end of the section) is that the two reduplicated forms are identical in terms of segment composition, except for the final segment of the base, which may be altered by morphophonological rules at its boundary with a non-reduplicating suffix/enclitic, as in (303).

- (303) a. [ta.né ta.njós] b. [ta.nún ta.núm.pam.bó]
redup tane-o-s redup tanún-panbo
 hastily tie-Past-3 Deintens gray-Aug
 ‘He hastily tied it.’ ‘grayish (and large)’

Alternating syllable stress assignment (304) and syllabification rules, such as preclusion of vowel-initial non-word-initial syllable (305), do not (generally) apply across the boundary between the reduplicand and the base.

- (304) [po.tá.nun po.tá.nuŋ.kjó/*[po.tá.num.pó.ta.núŋ.kjo] ‘partly gray-bellied’
redup po-tanún
 partly belly-gray
- (305) [o.té o.tém.bo]/*[o.tjó.tem.bó] ‘somewhat tight (e.g., tightly woven)’
redup oté-nbo
 Deintens tight-Aug

Similarly, most morphophonological rules (those that do not normally apply across word boundaries) also do not apply across the reduplicated forms (but do apply within the base and reduplicand). For example, if this were a typical morpheme boundary in (305), one would expect syllables to combine and for the /e/ to raise to an /i/, subsequently forming

an on-glide (see §2.6.2.3). Similarly, in (306), the /d/ does not assimilate to the following /ʃ/, as expected at a word-internal morpheme boundary (§2.6.1.1).

- (306) [ʃa.kád ʃa.kád.tsiʔ.kjó]/*[ʃa.káʃ ʃa.kád.tsiʔ.kjó]
redup ʃakád-tsikjó
 Deintens loose-Derog
 ‘somewhat loose (and therefore not very good)’

Exceptions to these generalizations are limited to cases where a *monosyllabic* root is the reduplicated element. For example, in (307) we find forms where alternate stress assignment, syllabification rules and morphophonological rules all apply across the reduplicand-base boundary. But note that not all monosyllabic roots violate the reduplication generalization (308a), and other monosyllabic forms reduplicate optionally as either phonologically separate words or as a single word (308b).

- (307) a. [u.ʃú.ʃoʃ]/*[uʃ ú.ʃoʃ]
redup uʃ-o-ʃ
 hastily sleep-Past-3
 ‘He had a short nap.’
- b. [i.sí.seʔ]/*[is i.séʔ]
redup is-e-k
 hastily see-Npast-Indic
 ‘He visits for only a short time.’
- (308) a. [aʔ á.keʔ]/*[a.ká.keʔ]
redup ak-e-k
 hastily drink-Npast-Indic
 ‘He drinks hurriedly.’
- b. [u.rú.reʔ] ~ [ud ú.reʔ]
redup ud-e-k
 hastily root-Npast-Indic
 ‘It [e.g., pig] roots hastily.’

All the known cases of phonological union involve *unstressed* monosyllabic verb roots (e.g., 307 & 308a), but not all unstressed monosyllabic verb roots follow the same pattern (e.g., 308b).

It should be pointed out that the morphophonological (and general phonological) rule that /d/ is pronounced as flap between vowels often applies across reduplicated

polysyllabic forms (309), but this rule similarly often applies between word boundaries anyway, especially in fast speech (310), so this is not so much of an exception.

- | | |
|---|--|
| (309) [de.ró.re.rós]/*[de.róde.rós]
<u>redup dedó-o-s</u>
Distr lift-Past-3
'They all lifted.' | (310) [ma.ní de.rós] ~ [ma.ní re.rós]
<u>mani dedó-o-s</u>
plantain lift-Past-3
'He lifted the bunch of plantains.' |
|---|--|

One rule that does apply across even polysyllabic reduplicated forms is fricative place assimilation (§2.6.1.1), but with reduplicated forms it applies in an interestingly unique manner. It seems to be a sort of "copying" aimed at keeping the segments in the two reduplicated forms as similar as possible (as mentioned above, both reduplicated elements in the grammatical word tend to have identical segment compositions, particularly the leftmost segments of each reduplicated element). Specifically, the (grammatical) word-initial fricative is altered along with the fricative at the morpheme boundary (311).

- | | |
|---|---|
| (311) a. [siʔ.bís siʔ.bís.pam.bó]
<u>redup ʃik-bis-panbo</u>
Adjzr chest-projections-Aug
'with a chest rash' | b. [siʔ.bís siʔ.bís.pam.bó]
<u>redup ʃik-bis-panbo</u>
Adjzr tooth-projections-Aug
'rough mouthed (like a stingray)' |
| c. [ʃa.míʃ ʃa.mí.ʃɛʔ]
<u>redup ʃa-míʃ-e-k</u>
hastily crotch-touch-Npast-Indic
'He hastily touches her crotch' | d. [sa.kwés sa.kwé.soʃ]
<u>redup ʃa-kues-o-s</u>
Distr crotch-hit-Past-3
'He repeatedly hit him between the legs.' |

This phenomenon does not seem to occur in the opposite direction; i.e., with the fricatives at the morpheme junction assimilating from right to left (and possibly then with the final fricative of the second reduplicated form assimilating along with the final segment of the first reduplicated form). What we find instead is that there is no right-left

assimilation at all across the reduplicated forms (312 & 313)³⁹. Unfortunately, there are no opportunities to see if the pattern in (312) and (313) holds for other fricative combinations.

(312) [ʃiʔ.tʃíʃ ʃiʔ.tʃí.ʃaʔ] /*[ʃiʔ.tʃíʃ ʃiʔ.tʃí.ʃaʔ]/*[ʃiʔ.tʃíʃ ʃiʔ.tʃí.ʃaʔ]
 redup ʃik-tʃíʃ-ak
 hastily chest-shave-Infer
 ‘She hastily shaved his chest hair.’

(313) [ʃi.kúʃ ʃi.kúʃ.pam.bó]/*[ʃi.kúʃ ʃi.kúʃ.pam.bó] /*[ʃi.kúʃʃi.kúʃ.pam.bó]
 redup ʃik-uʃu-panbo
 partly chest-white-Aug
 ‘white-chested (e.g., a species of bat)’

Note that as with other cases of fricative place assimilation there is some speed-dependent and sociolinguistic variation between assimilated and non-assimilated forms: assimilation is more common in faster speech; older speakers assimilate more than younger speakers; and common forms are assimilated more consistently than unfamiliar or nonce formations.

2.8.2 Partial reduplication: roots ending in /ke/ or /ka/

As with whole-word reduplication, partial reduplication of roots ending in /ke/ or /ka/ (generally) produces two phonologically independent, but grammatically unitary words. The unique characteristic of the reduplication process described in this subsection is that when reduplicating any verb root that ends in /ke/ or /ka/, the /ke/ or /ka/ ending is not reduplicated (314a & 315a) unless a derivational suffix is reduplicated along with the verb root (314b & 315b).

³⁹ Recall the fricative dominance hierarchy from §2.6.1.1: s > ʃ > ʃ. According to this hierarchy, we would not expect the /ʃ/ to assimilate to the /ʃ/.

- (314) a. [tus tús.kawʃ]
 redup túska-o-ʃ
 hastily sew-Past-3
 ‘He hastily sewed.’
- b. [tús.ka.tán tús.ka.tá.noʃ]
 redup túska-tan-o-ʃ
 Distr sew-go-Past-3
 ‘He repeatedly went to sew.’
- (315) a. [to.ʃó to.ʃó.keʔ]
 redup toʃóke-e-k
 Distr cough-Npast-Indic
 ‘He repeatedly coughs.’
- b. [to.ʃó.ke.búd to.ʃó.ke.bú.rɛʔ]
 redup toʃóke-bud-e-k
 Distr cough-Cont-Npast-Indic
 ‘He repeatedly continuously coughs.’

Verb roots ending in /ke/ or /ka/ are also phonologically unique in that their stress pattern is predictable from their form (the second-to-last syllable, i.e., the syllable preceding /ke/ or /ka/, is always stressed; §2.7.1), and the /k/ can be optionally deleted (§2.6.6.1). This group of verbs is also anomalous in being the only category of verbs that cannot be suffixed with the causative *-me* (§5.3.1.4). It is also evident that /ke/ and /ka/ were historically verbalizing or transitivity-marking suffixes (words ending in /ke/ are all intransitive, and words ending in /ka/ are all transitive; §5.3.1.4). Also, one analysis is that /ke/ and /ka/ represent the only instance of ablaut in the language (§2.6.6.4), and it is possible that all /ke/ and /ka/ words are of sound symbolic origin (§2.9). Thus, it is not a complete surprise to find that these verbs, already exceptional in so many ways, also exhibit a unique reduplication process. The examples in (316) show that this reduplication pattern is a property of these unique verbs, rather than a phenomenon triggered by any root ending in /ke/ or /ka/.

- (316) a. [mu.ká mu.kám.bo]/*[mu mu.kám.bo] ‘somewhat bitter’
 redup muká-nbo
 Deintens bitter-Aug

- b. [ma.ká ma.ká.pam.bó]/*[ma ma.ká.pam.bó] ‘full of rats’
redup maká-panbo
 Advzr rat-Aug

With this partial reduplication process there are fewer exceptions to the generalization that morphophonological rules, etc. do not apply across the reduplicated forms. This is perhaps due to the fact that the only monosyllabic forms in this verb class (recall that exceptions to full reduplication were limited to monosyllabic roots), ka ‘say to, tell’ and ke ‘say’ do not have reduplicatable elements. The one morphophonological rule that does often apply across the boundary between the reduplicand and the base is the pronunciation of /d/ as a flap between vowels. This is especially true of words that contain many /d/’s, as in (317).

- (317) [di.rí.rí.rí.kawm.bí] ‘I hung them up hastily.’
redup didika-o-nbi
 hastily hang-Past-1A

2.8.3 Reduplication in onomatopoeic forms

Onomatopoeic animal terms that involve adjacent repeated identical syllables (or syllable sequences) behave phonologically similarly to reduplicated terms. It is hard to call it reduplication because there is no meaning attached to the reduplication, it is just an imitation of nature. There are no pauses in regular speech, but stress (318) and syllabification rules (319) do not carry across the reduplicated forms.

- (318) a. /tsek tsek/ [tse? tse?]/*[tse?.tsé?]/*tsé?.tse? ‘grasshopper/katydid’
 b. /tuk tuk/ [tu? tu?]/*[tu?.tú?]/*[tú?.tu?] ‘owl species’
 c. /ʃon ʃon/ [ʃon ʃon]/*[ʃon.ʃón]/*[ʃón.ʃon] ‘toad species’
 d. /tsin tsin/ [tsin tsin]/*[tsin.tsín]/*[tsín.tsin] ‘dragon fly, damsel fly’
 e. /tʃik tʃik/ [tʃi? tʃi?]/*[tʃi?.tʃí?]/*[tʃí?.tʃi?] ‘cricket species’

(319) /uis uis/ [wis wis]/ *[wi.swis] ‘jacamar (bird)’

By contrast, stress and syllabification rules do apply in onomatopoetic forms *within* the parts of the duplicate forms (320), as well as in onomatopoetic forms not containing reduplication (321). In other words, the recurring isolatable correlate of anomalous phonological patterns in (318) and (319) is their property of containing duplicate syllables or duplicate syllable sequences, rather than just the fact that they are onomatopoetic forms.

- (320) a. /kuibí kuibí/ [kwi.bí kwi.bí] ‘euphonia (bird)’
 b. /kodó kodó/ [ko.ró ko.ró] ‘green ibis (wading bird)’
 c. /bedén bedén/ [be.rén be.rén] ‘tabanid fly’
 d. /tʃikí tʃikí/ [tʃi.kí tʃi.kí] ‘antshrike (bird)’
- (321) a. /madóko/ [ma.ró.ko] ‘chachalaca (large bird)’
 b. /todófokó/ [to.ró.fo.kó] ‘small toad’
 c. /kuefkuéfo/ [kwef.kwé.fo] ‘screaming piha (bird)’

There are other forms in the language with repeated identical syllables that do not follow reduplication stress patterns (322). It is interesting to note that all of these known forms consist of repeated *open* single syllables, as opposed to *most* onomatopoetic forms with reduplicated single syllables, which tend to be made up of closed syllables (318 & 319). It would be nice to be able to say that all forms like those in (322) are non-onomatopoetic forms, but (322e) and (322f) would be clear exceptions. Thus, whether the reduplicated elements are open or closed syllables seems to also be a relevant factor for predicting which reduplicated onomatopoetic animal terms will exhibit irregular stress patterns.

- (322) a. /papá/ [pa.pá] 'father'
 b. /tʃítʃí/ [tʃi.tʃí] 'grandmother'
 c. /níní/ [ni.ní] 'tobacco'
 d. /dadá/ [da.rá] 'man, body'
 e. /pupú/ [pu.pú] 'owl species'/'cultivated fruiting bush'
 f. /tʃétʃe/ [tʃé.tʃe] 'potoo (nocturnal bird)'

2.9 Sound symbolism

Animal names of onomatopoeic origin like those described in the preceding section are all nouns. There is also a formally, phonologically and grammatically distinct category of verbs that are either all or almost all of onomatopoeic origin. These are the class of verbs ending in /ke/ or /ka/ introduced in section 2.6.6.4 and further discussed in Section 2.8.2. The roots ke 'say (intransitive)' and ka 'say to, tell (transitive)' occur as quotative verbs in the language (§12.5.1). Thus, verbs ending in /ke/ or /ka/ describing human orally-produced audible actions, like those in (323), could be interpreted as the direct quotation of a sound produced by a human.

- (323) a. toʃóke 'cough' f. táʃke 'clack teeth'
 b. sódke 'snore' g. búʃka 'blow'
 c. aíkke 'burp' h. kaíʃka 'clear throat'
 d. súdka 'slurp' i. ʃáidka 'whistle at'
 e. ʃónke 'whistle using cupped hands' j. édke 'gasp'

Similarly, verbs denoting orally-produced animal sounds (324) could be interpreted as the direct quotation of an animal. In fact, (324a) and (324b) could also be interpreted as the quotation of humans, considering that these two verbs are also used to refer to Matses' hunting calls imitating woolly and spider monkeys.

- (324) a. tšodókke ‘make woolly monkey vocalization’
 b. edédke ‘make spider monkey vocalizations’
 c. jóke ‘make howler monkey vocalization’
 d. tšúske ‘bark’
 e. tíkídíske ‘make paca vocalization’
 f. sóske ‘make gnawing sound (for rodents)’

While this is the likely source of the verbs in (323) and (324), it should be kept in mind that these forms represent roots (both phonologically and grammatically), rather than a quotation followed by a quotative verb. Phonologically, we note that all of these verbs conform to the same stress pattern (the syllable preceding /ke/ or /ka/ is always stressed; /ke/ and /ka/ are never stressed), regardless of what stress pattern might best represent the natural sounds. Grammatically, I draw attention to the fact that there are no forms in the language that match the forms in (323) and (324) in the absence of the /ke/ or /ka/ (e.g., *sod, *tšodók).

The language-external source of verbs describing orally-produced sounds like those in (323) and (324) are fairly transparent. Other verbs ending in /ke/ or /ka/ require a little (325) or ample (326) imagination to posit the real-word source of the onomatopoeic forms.

- (325) a. tsínka ‘blow nose’
 b. tsáske ‘crack knuckles’
 c. tónka ‘fire gun’
 d. šokóške ‘rustle leaf litter’
 e. tšéjke ‘scratch’
 f. móska ‘chew’
 g. tšifjke ‘rustle branches’
 h. buáške ‘exale through blowhole (for dolphin)’

- (326) a. súkke ‘fan’ (fan flapping air)
 b. nídínke ‘burn’ (crackling sound of burning leaves and brush)
 c. tséska ‘clear undergrowth’ (machete cutting through small stems)
 d. béska ‘sweep’ (broom brushing against floor)
 e. tíbóke ‘breathe, catch one’s breath’ (inhale followed by an exhale?)
 f. tadánka ‘slip’ (the sound of a sliding foot followed by a thumping butt??)

Other verbs seem impossible to connect to any real-world sound from which they might have originated (327), but because the vast majority seem to be traceable to a sound-symbolic origin, it seems plausible that in words like those (327) the source of the sound has been obscured due to meaning shift over time. Or, it is possible the source of some of these sound-symbolic words are actions that don't make a sound (e.g., Meira 1999:488-490 for such words in Tiriyo) (*zip* would be an English example, but as an extension to noiseless movement, rather than a word originating from a noiseless action).

- | | | | | |
|-------|--------------------|----------------|--------------------|--------------|
| (327) | a. <u>di</u> dike | 'be hanging' | e. <u>ni</u> ske | 'hurt' |
| | b. <u>ni</u> ka | 'make run off' | f. <u>no</u> kóske | 'paint body' |
| | c. <u>bi</u> díske | 'swell' | g. <u>tʃi</u> nke | 'shine' |
| | d. <u>tʃo</u> dke | 'rot' | h. <u>ʃi</u> kke | 'balance' |

It should be noted that many of these verbs are prefixable, and that the prefixes detract from the word's similarity to the natural sound of its origin. If one does not recognize that the root is prefixed, one will have an even harder time detecting the origin of the word. This is particularly true with lexicalized prefixed roots, whose meaning is often shifted. For example, the form in (328) almost certainly contains the prefix bi- 'eyes, forehead, face' and the ending /ke/, but the middle part is neither traceable to a sound-symbolic origin nor an allowable syllable type in the absence of bi-.

- (328) bistídke 'raise eyebrows'

An interesting case of onomatopoeia is the name for the kinkajou (a small nocturnal arboreal mammal). Its longer name is kuitʃikkékíd, but now most people refer

to it simply as kuitfik. This lexicalized term is not really synchronically segmentable, but it is transparent enough to be easily analyzed as in (329a) or (329b).

- | | |
|------------------------------------|------------------------------------|
| (329) a. [kwi.tʃiʔ.ke.kid] | b. [kwi.tʃiʔ.ke.kid] |
| <u>kuitfikke-kid</u> | <u>kuitfik</u> _____ <u>ke-kid</u> |
| make.kinkajou.vocalization-Agt-Nzr | kinkajou.vocalization say-Agt.Nzr |
| ‘one that vocalizes as a kinkajou’ | ‘one that says “kuitfik”’ |

In addition to these two forms representing alternate nouns for referring to the kinkajou, there is the verb kuitfikke ‘make kinkajou vocalization.’ Thus, in these words we note that verbs of sound symbolic origin are differentiated from other verbs by the presence of /ke/ or /ka/, while nouns of onomatopoeic origin carry no such formal distinguishing characteristic (but note the distinctive phonological pattern of onomatopoeic noun reduplication described in the preceding section).

2.10 Borrowing

I have already mentioned borrowing in section 2.6.6.2, where the form of borrowed words help to confirm that vowel insertion is a productive phenomenon in Matses, and in section 2.2.2.1, where borrowing patterns reveal a lack of congruence between Spanish and Matses back vowels. In this section, I will point out some borrowings from Spanish that reflect Matses phonological patterns in the way that the original Spanish terms are transformed phonetically when incorporated into the language.⁴⁰

⁴⁰ Recall from chapter 1 that older, monolingual people tend to use these pronunciations, while younger Matses, especially bilingual ones, try to approximate Spanish pronunciation.

	Local Spanish		Matses borrowing
(330) a.	<i>Davy</i> [déj.bi]	'man's name'	[dé.bi]
	<i>mamei</i> [ma.méj]	'mamay apple'	[ma.mé]
b.	<i>Fernando</i> [fɛr.nán.do]	'man's name'	[wen.nán.do]
c.	<i>motor</i> [mo.tór]	'motor'	[mo.tód]
d.	<i>Segundo</i> [se.gún.do]	'man's name'	[se.kún.do]
e.	<i>Rosa</i> [ró.sa]	'woman's name'	[do.sá]
f.	<i>Jaime</i> [háj.me]	'man's name'	[áj.me]
g.	<i>trece</i> [tré.se]	'thirteen'	[te.ré.se]
h.	<i>cucaracha</i> [ku.ka.rá.tʃa]	'cockroach'	[ku.ká.ra.tʃá]
i.	<i>Brasilero</i> [bra.si.lé.ro]	'Brazilian'	[bi.rá.se.bé.ro]
j.	<i>gallina</i> [ga.ɟʒi.na]	'hen'	[ka.tʃi.na]

- a. no /ei/ vowel sequences (§2.4.2)
- b. no labio-dental fricatives (§2.2); flaps only occur inter-vocalically (§2.2.1.1)
- c. flaps only occur inter-vocalically
- d. no voiced velar stop in Matses (§2.2)
- e. no trills (§2.2); even-stressed syllables are preferred (§2.7.1)
- f. no glottal fricatives (§2.2)
- g. no syllable-internal consonant clusters (§2.5)
- h. alternating stress (§2.7.1)
- i. no syllable-internal consonant clusters, no laterals (§2.2), alternating stress
- j. no voiced velar stops; no voiced affricates (§2.2)

There is additionally one borrowing pattern that is not predictable from the phonological characterization of Matses presented in this chapter. This pattern is the addition of a segment or a syllable to the beginning of some borrowed words (331).

	Local Spanish		Matses borrowing
(331) a.	<i>lancha</i> [lán.tʃa]	'river boat'	[i.rán.tʃa]
b.	<i>avión</i> [a.bjón]	'airplane'	[da.bjón]

2.11 Problems with the SIL "phonemic" orthography

In this section I summarize the flaws that are presently found with the SIL writing system, several of which have been pointed out in preceding sections of this chapter.

This writing system was developed for the Matses by Summer Institute of Linguistics

personnel, and is the only writing system that the Peruvian Matses use. These flaws may stem from changes that the language has undergone very recently, but most likely represent errors in analysis.

The SIL writing system...

1. does not recognize phonemic contrast between /tʃ/ and /tʂ/ or between /ʃ/ and /ʂ/ (§§2.2.1.3, 2.2.1.4);
2. does not recognize phonemic stress (§2.2.3);
3. uses the symbol u for both vowels and consonants (§§2.4.4, 2.6.3); and
4. does not recognize geminate fricatives (§2.6.1.1);
5. does not recognize /nm/ consonant clusters (§2.2.1.2);
6. does not recognize geminate /n/ morpheme-internally (§2.2.1.2);
7. does not recognize that some reduplicated forms are single phonological words (§2.8.1);
8. and writes many phonologically bound forms as phonologically independent words.

All of these flaws result in homographs that are actually pronounced quite differently.

For example, both words in (332) would be spelled as ushun in SIL orthography.

(332a) [ú.ʂun]	‘from there’	(332b) [uʂ.ʂún]	‘after sleeping’
<u>u-ʂun</u>		<u>uʂ-ʂun</u>	
there-Ev.Init:Tr		sleep-after:S/A>A	

Problems 1-3 are problems with the alphabet, the rest are problems with the missionaries’ spelling. A further weakness of the SIL alphabet is that it uses two symbols to represent the phoneme /k/: c preceding /a/, /o/ and /u/, and qu preceding /e/, /i/ and /i/. This problem, which gives children difficulty in learning to write their language, was transplanted from the Spanish writing system into the Matses orthography evidently in hopes of speeding up the process of learning to read and write in Spanish after learning to

write their own language. Many Matses speakers, particularly the bilingual school teachers, have detected these flaws and many Matses would like to have a spelling reform to make their writing system more true to their language and easier to learn and understand. Many Matses have already unofficially corrected many of the missionaries' spelling errors in their own writing (e.g., using geminate fricatives and nasals, correcting word boundary errors, etc.), but they still have not modified the alphabet. Likewise, I use the SIL alphabet in the rest of the chapters in this work, but do not adopt the missionaries' (mis)spelling conventions.

CHAPTER 3

INTRODUCTION TO MORPHOLOGY

3.1 Introduction

Matses is a language that is hard to classify with respect to word complexity. It stands between isolating languages (where most words consist of a single morpheme) and polysynthetic languages (where words tend to consist of many morphemes). While single-morpheme words are common, and very long words up to about 10 morphemes grammatically acceptable, in practice, only about 3 to 4 morphemes per word is usual, with verbs generally longer than nouns, adjectives, adverbs, postpositions, or particles. Likewise, Matses stands between agglutinative languages (where each morpheme represents a single sememe; sememes defined below) and inflecting/fusional languages (where morphemes tend to represent several sememes simultaneously; i.e., **portmanteau** morphemes). What we find in Matses is that about half of the morphology (prefixes, most enclitics and non-class-changing derivational suffixes) are simple morphemes, while the verbal inflectional suffixes, transitivity agreement enclitics, and class-changing suffixes are, with very few exceptions, portmanteau morphemes.

Morphological processes include suffixation, prefixation, cliticization, reduplication, and arguably ablaut. Matses can be characterized by its large repertoire of (productive) bound morphemes (114 suffixes, 30 prefixes, and 41 enclitics = 185), which, while not generally producing very long words, represents the many functions performed morphologically in Matses, that in other languages would be performed by free adverbs or auxiliaries/modals, subordination, etc. As such, much of this grammatical description is dedicated to the morphology of the language. The morphology portion of this

grammar is divided into seven chapters, this chapter, and one chapter covering each of the six recognized lexical classes: nouns (chapter 4), verbs (chapter 5), adjectives (chapter 6), adverbs (chapter 7), postpositions (chapter 8) and particles (chapter 9). Chapters 4-9 describe the bound morphemes associated with each lexical class, as well as grammatical properties distinguishing the lexical class from the other five lexical classes, subclassifications of the roots in the lexical class, and, in the case of the classes with a limited number of roots (adverbs, postpositions and particles), also some discussion on the semantics, usage and sub-morphemic forms of the roots. Topics concerning phrasal and clausal syntax are reserved for the syntax chapters (chapters 10-12).

The present chapter addresses some issues relevant to the descriptions of the morphology of the six lexical classes in the following chapters, including definition of morphological units, such as roots, stems, formatives, words, suffixes, clitics, etc. (§3.2). The six lexical classes, their subclasses, their interrelationships, and the class-changing process are introduced in the second half of the chapter (§3.3). Distinguishing the lexical classes from each other is reserved for the next six chapters (but §3.3.1 gives a summary).

3.2 Morphological units: terminology

The purpose of this section is to orient the reader in my terminology and to point out, where they occur, the tensions that exist between traditional labels and the patterns in Matses. I will go about this by presenting the different types of morphological units in Matses and the different processes binding them. Let us start with one of the most basic terms: **morpheme**. According to Anderson (1985a:159-160), “The notion of a ‘smallest recurrent unit of sound/meaning association’ implies that a one-to-one association between the two domains is general.” However, I do not limit the use of the term morpheme to one-to-one associations, but include portmanteau morphemes as fine

examples of morphemes (and call those forms associated with a single meaning “**simple morphemes**”). A distinction that I do make is to require morphemes to be (productive) synchronically segmentable forms, reserving the term **formative** to historical forms that can still be recognized as fossilized sub-morphemic elements with an (often tentative) form-meaning association (see section 3.2.5 for discussion of sub-morphemic elements).

3.2.1 *Roots, stems, and words*

The traditional definitions of “root” define it as a morpheme that contains a lexical meaning and makes up the nuclear part of a word. Verbal suffixes like -tan ‘go’ and enclitics like -tsen ‘next’ in (1) could be easily argued to have lexical content, and there is no a-priori means of determining which element in the words in (1) are “nuclear.”

- | | | | |
|-----|-----------------------------------|-----|--------------------------|
| (1) | <u>mimbi-tsen</u> <u>pe-tan-Ø</u> | (2) | <u>mimbi</u> <u>pe-Ø</u> |
| | 2Erg-next eat-go-Past-Imper | | 2Erg eat-Imper |
| | ‘You go eat next!’ | | ‘You eat!’ |

What helps us identify mimbi and pe as roots is that they are **free** morphemes (i.e., they may occur alone, without any other phonologically attached material, as in [2]), while -tan and -tsen can *never* occur phonologically unattached to other elements (i.e., they are **bound** morphemes). So using the notions of “free” vs. “bound” helps us distinguish roots from affixes/clitics. However, the problem arises again with some adverbs that must be inflected for transitivity agreement (e.g., padpide(-ec/-en) ‘again’), and with verbs that cannot be used in the imperative mode (e.g., chodque ‘rot, become soft, get infected’), and cannot occur alone as monomorphemic words (due to the semantic incompatibility with imperative mode). Thus, our definition of root in Matses must be a bit more intricate, relying on the definition of inflection (§3.2.4): a **root** is a morpheme

that can occur in an utterance with no other phonologically-attached material, or with just inflectional morphology.

A **stem** is a combination of a root with one, none, or multiple derivational affixes/clitics (derivation vs. inflection will be discussed in §3.2.4). In other words, a root can be a stem, but not all stems are roots. The advantage of talking about roots as one-morpheme stems is really only for notational simplicity, so that one can say, for example, “this inflectional suffix attaches to noun stems” rather than “this inflectional suffix attaches to noun stems and noun roots.” It also allows us to treat class-changed stems (e.g., nominalized verbs) together with the roots in the relevant lexical classes (e.g., “only noun stems can be case-marked”). Stems are theoretically “not ready to be used in discourse,” but with imperatives and roots that do not require inflection, there is no difference other than the presence of the abstract $-\emptyset$ (i.e., an absence associated with a specific meaning).

A **word**, as defined here, is a stem, combined with inflectional suffixes, if required, which is formally ready for discourse. In (3a), cani would be root or a stem, but not a word (cani cannot occur as an imperative, the only situation where an unsuffixed verb root may appear in discourse); in (3b), cani-cuen would be a stem, but not a root or a word; and in (3c), cani-cuen-ac would be a word, but not a stem or a root.

- | | | | | | |
|------|-----------------------|------|---|------|--|
| (3a) | <u>cani</u>
'grow' | (3b) | <u>cani-cuen</u>
grow-Incho
'begin to grow' | (3c) | <u>cani-cuen-ac</u>
grow-Incho-Infer
'It has started growing.' |
|------|-----------------------|------|---|------|--|

The morphemes cho in (4) and bēdi in (5) could be considered simultaneously roots, stems and words, depending on whether we consider $-\emptyset$ to have the status of a suffix/enclitic.

- (4) cho-Ø 'Come!' (5) bëdi-Ø is-o-mbi 'I saw a jaguar.'
 come-Imper jaguar-Abs see-Past-1A

More for the sake of facilitating description than to make any theoretical claims, I will consider the -Ø as a suffix/enclitic, and not talk of words in sentences as roots or stems, reserving the terms root and stem for word formation and lexical classification contexts.

It should be noted that the distinction between roots and bound morphemes is not always easy to make. This is due to the diachronic process by which phonologically independent roots become bound clitics or affixes over time. Any synchronic description is certain to encounter some of these morphemes in the process of becoming bound morphemes, and therefore to possess an intermediate set of properties. Two properties that are associated with bound morphemes is that i) they cannot occur without the root they bind to, and ii) their position relative to the root is fixed (i.e., in Matses we have no morpheme that can occur both as a prefix and as a suffix, and no enclitics can occur as proclitics). In Matses we find that postposition roots (e.g., dayun 'beside') and noun phrase particles (e.g., pado 'late (deceased)') are phonologically independent, but cannot occur without the postpositional object or head noun, respectively, and must always follow the noun they are associated with. Therefore, while clearly identified as "roots" by my definition, they have at least two properties of typical of bound morphemes. Therefore, one must understand that there is actually a continuum between bound and free morphemes, rather than two discrete, discontinuous categories. An interesting result of this continuum is that the lexical class of postposition roots is distinguished from the rest of the lexical classes, not just by morpho-syntactic properties, but by the status of the class as intermediate between roots and enclitics.

3.2.2 Phonological vs. grammatical words

It is not unusual for the grammatical word and the phonological word in a language to not be isomorphoric (Anderson 1985a; see Meira 1999 for an example). This is the case in Matses. The clearest source of the lack of one-to-one correspondence is reduplication. As described in section 2.8, reduplication, except with some monosyllabic roots, normally produces two phonologically independent words (in terms of word-level stress patterns and morphophonological alternation) that function as a single grammatically-unified word (in terms of the domain of suffixes, inflection requirements, class-changing patterns, etc.). For example, in (6), the reduplicand (the first instance of uënës-bud) can hardly be considered a separate grammatical word, since i) it lacks inflection or class-changing morphology, ii) is not free to occur apart from the base (the second instance of uënës-bud), and iii) it does not head its own clause, etc. It can only be understood grammatically as combining with the base to compose a unit in the language that has the status of a word (see §3.2.7 for more on reduplication).

- (228) aid matses uënësbud uënësbudac
aid matses redup uënës-bud-ac
 that.one Matses **Distr** die-Dur-Narr.Past
 ‘Those Matses have all died off one by one.’

+ K-XXII 005 chema 050

Another source of lack of isomorphism, in this case in the opposite direction, is **contraction**, where two grammatical words occur as a single phonological word. It is common in fast speech for adjacent words to merge phonetically, but with contraction, the phonologically bound term is an optional alternant even in the slowest speech. In Matses, this only occurs with the copular/auxiliary verb ic, particularly after adjectives and adverbs, as in (7).

- (7) piushën titado bacuë piumbocquid nec
 piush-n titado bacuë piu-mbo ic-quid ne-e-c
 tortoise-Gen peach.palm fruit red-Aug be-Agt.Nzr be-Npast-Indic
 ‘Piushën titado palm fruits are red (lit. ones that are red).’

A-I 010 piushën titado 01

It would be unusual to call piumbocquid a single grammatical word, when we can see that it clearly contains an adjective and a noun (the nominalized copula), each with an independent syntactic function, and optionally occurring as two phonologically independent words with no change in meaning.

3.2.3 *Affixes vs. clitics*

Affixes and clitics are bound morphemes that modify the central meaning of a root (or a phrase, in the case of clitics) in a consistent way. The bound morphemes in Matses consist of **suffixes** (lexical-class-specific, bound morphemes that follow roots and have a single word as their domain), **prefixes** (bound morphemes that precede roots and have a single word as their domain) and **enclitics** (lexical-class-unspecific, bound morphemes that follow roots and may have more than one word as their domain). There are no infixes (occurring inside a root), circumfixes/ambifixes (occurring simultaneously on both sides of a root), transfixes (composed of multiple co-varying segments in a root, as in Hebrew), suprafixes (composed of a suprasemantal; stress is contrastive in Matses, but not associated with any distinct meaning), or proclitics (clitics that precede roots). Ablaut (meaning change by vowel alternation) might arguably exist in one limited case (§§2.6.6.4, 5.3.1.4).

The distinction between suffixes and enclitics is not a useful one for Matses, since these never have an opportunity to contrast on a single phrase. However, they are useful for comparison to other languages, and for helping the reader understand correctly the

scope of the bound morpheme being described. Clitics differ from affixes essentially by their scope: affixes apply to a single (grammatical) word, while clitics may have a multi-word phrase as the scope. Clitics also have the general tendency to occur phonologically attached to stems in a variety of different lexical classes, while affixes are in general class-specific. The situation in Matses can be generalized with the following statement: all post-root bound morphemes have the phrase as their scope. However, verbs do not form multi-word phrases (except for a few marginal cases, like negative constructions, which involve an auxiliary verb), and so verbal suffixes, in practice at least, have a single word (i.e., a one-word phrase) as their scope. This verbal post-root morphology is additionally, with one clear case (-tsēc 'Diminutive') and two marginal cases (-quio 'Intensifier' and -quimbo 'Intensifier'), completely specific to verbs. Adjectives and adverbs seldom form multi-word phrases, but all of their post-root morphology also occurs on nouns and/or postpositions, where they do regularly have phrases as their scope. Therefore, we can say that post-root verbal morphology behaves as do typical suffixes, and post-root noun, adjective, adverb, and postposition morphology behaves as enclitic generally do. For descriptive simplicity, I refer to the verbal morphology as suffixes and the rest as enclitics (except for first-person pronominal enclitics, which do occur on verbs along with most lexical classes). If we called them all enclitics, it would not matter, since there is never a chance for contrasting scope.

Prefixes never have more than one word as their scope, but they are a bit clitic-like in that they occur on three of the six lexical classes.

In light of the lack of any important language-internal distinction between affixes and clitics, I represent them all with a dash (e.g., -o 'Past'), rather than using an equal sign for clitics or other means of distinguishing the two. Note that roots, even ones that

can never occur without inflection, are never represented with a dash (e.g., tuashque 'bloom,' not tuashque-).

3.2.4 *Inflection vs. derivation*

It is useful for descriptive purposes to distinguish between inflection and derivation. **Inflection** can be defined as bound morphemes composing an obligatory category for a lexical class, while **derivation** is not obligatory (by obligatory, I mean stems require this morphology to occur as words in discourse). In Matses, inflection really only occurs on verbs as a lexical-class-wide and syntactic-position-wide phenomenon, where there is a set of suffixes occurring in paradigmatic contrast (including finite inflection and class-changing suffixes), which must occur on finite verbs (sans imperatives). Adjectives can also be described as having an lexical-class-wide inflection, but this is only required in one of the two main syntactic slots in which adjectives. Adverbs and postpositions exhibit a marginal inflectional category: transitivity agreement, which is required for a subset of roots in a subset of syntactic situations. Case-marking could be argued to be the nominal inflection, since it is required in most positions, but since it works at the phrasal level, it is harder to see it as a word-level phenomenon.

Derivational morphology traditionally includes class-changing, valence-changing, and meaning-changing morphology. In this grammatical description, I prefer not to treat class-changing morphology together with valence-changing and meaning-changing morphology. This is because class-changing morphology patterns more closely with inflectional suffixes. For verbs, class-changing suffixes and inflectional suffixes are in paradigmatic contrast (8), so one could say that all verbs require either inflection or class-changing morphology, and so in a sense they are equally obligatory.

- (8a) opa cuen-me-nu inflection
 dog run.off-Cause-Intent:1
 'I'm going to make the dog run off'
- (8b) opa cuen-me-boed nid-ac nominalization
 dog run.off-Cause-Rec.Past:Nzr go-Infer
 'The one who made the dog run off has left.'
- (8c) opa cuen-me-ash nid-o-sh adverbialization
 dog run.off-Cause-after:S/A>S go-Past-3
 'After making the dogs run off, he left.'

Also, class-changing suffixes function as clause subordinators (e.g., 8b & 8c), and in that sense pattern more closely with inflectional morphology in defining the syntactic status of verbs as finite vs. non-finite. Therefore, in this grammar, I use the term "derivational" to refer only to valence-changing and meaning-changing morphology, and I refer to class-changing morphology as simply "class-changing suffixes," to avoid confusion. This allows us to make the generalizations in Table 3.1.

Table 3.1. Differences between derivational and inflectional/class-changing morphology in Matses.

Derivational morphology	Inflectional/Class-changing morphology
optional	obligatory (at least in some situations)
closer to root	further from root
generally simple morphemes	almost all are portmanteau morphemes
most lexical classes have them	most are restricted to verbs

3.2.5 Sub-morphemic elements

The linguist is often able to identify morphemes, free or bound, that exhibit patterns that reveal sub-morphemic elements that are associated with a meaning or a grammatical function. For example, the recurring *m* in English *him*, *them* and *whom* can

be seen to be associated with the meaning “non-subject,” yet we would hesitate to call *-m* a case suffix in modern English. Such sub-morphemic elements have the properties of low frequency and lack of productivity, and consequently, cannot be confidently assigned a meaning. This, along with frequent phonological irregularities, make attempts to assign these forms to the lexicon descriptively more complex, and, additionally, the status of the form-meaning connections in the minds of speakers for these sub-morphemic forms is at best tentative. As such, this level of analysis (at least for languages without a written tradition) belongs to the realm of historical speculation, rather than to the synchronic study of word formation patterns in a language’s grammar. In practice, however, we find many forms that are intermediate, and therefore worth identifying if for nothing else than to justify our decision not to segment out the form. Also, even forms that obviously have no synchronic status as independent elements are worth noting for those readers who are interested in historical reconstructions. The main goal of this morphological description is to provide a synchronic snapshot of the elements in the lexicon, and of the productive word-formation processes in the Matses language as spoken during the period of my fieldwork. Historical speculation is included as auxiliary material, and presented as such. I recognize two types of sub-morphemic elements, formatives and cranberry morphemes.

3.2.5.3 *Formatives*

A **formative**, as defined here, is a form (composed of one or more phonemes) that does not occur productively in the language, but a meaning can be assigned to it based on its occurrence in *multiple* roots associated with a recurring meaning or function. Usually, it implies a historically productive morpheme. This can be illustrated by the verbal suffixes in (9) - (13) and the verbs in (14) below. We note that the segment b is associated with transitivity, and that the segments cu ([kw]) are associated with

intransitivity. Neither b and cu nor pieces like eded and idan occur elsewhere as productive morphemes in the languages, yet we can recognize them all as formatives. Yet, as is frequently the case for formatives, it is hard to assign b or cu a precise synchronic meaning or function, or even to be sure we are segmenting them at the right spot.

	Only on transitive verbs		On intransitive or transitive verbs
(9a)	- <u>beded</u> 'Collective A'	(9b)	- <u>cueded</u> 'Collective S/A'
(10a)	- <u>bidan</u> 'do X and continue going'	(10b)	- <u>cuidan</u> 'do X and continue going'
(11a)	- <u>bëtsen</u> 'do X and continue coming'	(11b)	- <u>cuëtsen</u> 'do X and continue coming'
(12a)	- <u>ben</u> 'do X while passing'	(12b)	- <u>cuen</u> 'do X while passing'
	Only on transitive verbs		Only on intransitive verbs
(13a)	- <u>ben</u> 'do X while passing'	(13b)	- <u>cuen</u> 'do X while passing'
	Transitive verb		Intransitive verb
(14a)	<u>buen</u> 'pass by carrying'	(14b)	<u>cuen</u> 'pass by, run off'

3.2.5.4 Cranberry morphemes

Cranberry morphemes can be considered types of formatives, but they are distinguished primarily by their frequency in the language and therefore by the means of deriving their meaning. The method for identification of formatives as in the above example could be described as "finding the common denominator." A process that requires a minimum of two occurrences in the language. **Cranberry morphemes** are characterized by occurrence in a root where the other part of the root is a productive morpheme. Thus, separating off the productive morpheme allows us to identify its form from a single occurrence, and to assign it a tentative meaning by "subtracting" the meaning of the known morpheme from that of the composite morpheme. For example, the form cas in (15) does not occur anywhere else at all in the language, yet we can

tentatively assign it a meaning like ‘feel inclined to X.’¹ And in (16), we recognize the cranberry morpheme acho as meaning something like ‘forest near X.’ But since we cannot attach acho to other nouns, we cannot be sure of this meaning—maybe it means ‘low-lying terrain’ or ‘extension of.’

(15a) ushcas ‘be sleepy’
 (15b) ush ‘sleep’

(16a) actiacho ‘floodplain forest’
 (16b) acte ‘river/stream’

However, in practice, formatives are frequently identified by combining the subtraction and common denominator methods. For example if only (17a) existed, we could still tentatively identify the meaning ‘one with defective X’ as associated with shu. Likewise, if the prefixes in (17b) and (17d) did not exist as productive morphemes, we could still identify shu from just looking at (17a) and (17c), but with both methods available, the formative is less likely to be missed and we can be more confident about its historical meaning.

(17a) pashu ‘(partially or fully) deaf person’
 (17c) bēshu ‘(partially or fully) blind person’

(17b) pa- ‘ear’
 (17d) bē- ‘eye/face’

But at the same time we are discouraged from calling -shu a productive morpheme since it cannot occur with any other morphemes (e.g., *dē-shu ‘one who can’t smell’). It is not part of Matses speakers’ repertoire of word formation elements. In fact, we cannot even be sure that these two words are not borrowings from another Panoan language. In this work, I will point out these sub-morphemic elements where appropriate, but they will not be listed in morpheme inventories, and I will not segment them in examples.

¹ Identification of -cas, in turn, leads us to speculate that the verb occas ‘be nauseous’ comes historically from uc ‘to vomit’ and -cas (despite the difference in the initial vowel), and that the verb pias ‘to be hungry for meat’ contains the elements pe ‘eat’ and -as, a reduced form of -cas (in these two cases -cas would additionally decrease the valence of the original verbs).

3.2.6 Lexicalized terms

What I call a **lexicalized term** is a type of unit which could be analyzed as composed of synchronically productive morphemes, but the meaning of the morpheme is not predictable from its component parts. In other words, we have a case of two productive morphemes with a single **sememe** (a minimal unit of meaning). The lexicalized term tambisëmpi in (18a) cannot be synchronically segmented into the productive morphemes that obviously make it up, and still have the separate glosses add up to the term's meaning. Lexicalized terms often exist side-by-side with their superficially identically synchronically segmentable counterparts (18b).

(18a) tambisëmpi 'spiny rat' or, more generically, 'muroid rodent (mice and rats)'

(18b) tambisëmpi 'little paca' [a paca is a fox-sized cavymorph rodent]
tambis-mpi
 paca-small

The term tambisëmpi, then, has intermediate status between a root and a productively-produced polymorphemic stem. I hesitate to call it a "root," due to its composite nature, but it can clearly be called a **lexeme**, a unit consisting of one or more productive morphemes that has a single sememe, and therefore must be listed in the lexicon to be understood. This is opposed to formative-containing units described in the preceding section, which *are* roots (and therefore also lexemes), at least in a synchronic sense. Terms containing cranberry morphemes are clearly lexemes, but are intermediate between being roots and polymorphemic stems.

Sometimes semantic shift in lexicalized terms is accompanied by a phonologically irregular form of one or more of the morphemes. The examples in (19a) - (19c) illustrate this in that they exhibit phonological union, which is not a property of synchronic uses of

adjectives or the postposition mëduc. Note as well that the hypothetical original root, ni ‘plant/forest’ appears to have undergone semantic shift (to a more specific meaning) to where the synchronic meanings don’t add up to the meaning of the lexicalized terms.

- | | | | |
|----------------------|---|--------------------|----------------|
| (19a) <u>nicsa</u> | ‘species of weed’/‘overgrown forest’ | (19e) <u>icsa</u> | ‘bad’ |
| (19b) <u>nibëda</u> | ‘forest with open understory/good soil’ | (19f) <u>bëda</u> | ‘good’ |
| (19c) <u>nimëduc</u> | ‘primary (“virgin”) forest’ | (19g) <u>mëduc</u> | ‘in middle of’ |
| (19d) <u>ni</u> | ‘poisonous plant’ | | |

Another situation is exemplified in (20) and (21), where semantic shift/restriction is accompanied by phonological consonant reduction.

- | | | | |
|----------------|----------------------------|---------------|------------|
| (20a) [nid.tó] | (21a) [nid.té] | (20b) [ni.tó] | ‘stand up’ |
| <u>nid-do</u> | <u>nid-te</u> | | |
| go/stand-Incho | go/stand-Inst.Nzr | (21b) [ni.té] | ‘leg’ |
| ‘start going’ | ‘thing for going/standing’ | | |

Phonological irregularity is a symptom that helps identify polymorphemic units as lexemes, but phonologically irregular forms that are not accompanied by semantic shift are simply considered irregular forms, and not listed as additional entries in the lexicon. In examples, I do not segment multi-morpheme lexeme words, but I do segment phonologically irregular words composed of more than one lexeme (unless it is phonologically irregular to the point that it is hard to find morpheme boundaries).

A lexeme could also be a multi-word phrase. There is no compounding in Matses of the sort we find in English, as in *blackbird*, where there is phonological union between two roots. The functional equivalent of compounding in Matses is what I call a **lexicalized phrase**², where two roots become associated in such a manner that the phrase

² Lexicalized phrases are discussed in section 10.1, and throughout chapter 10. Also, the topic of Fleck *et al.* (2002) was distinguishing lexicalized terms and phrases from *ad hoc* ones.

behaves as a unit semantically, with a non-additive referent, despite the lack of phonological union (i.e., referring to a single sememe). These lexicalized phrases also take on some word-like morpho-syntactic properties, such as inseparability, fixed scope for enclitics, etc. Lexicalized phrases often exist alongside superficially identical unlexicalized ones (22).

- | | | |
|--|--|---|
| (22a) <u>bēdi piu</u>
jaguar red
'puma'
'red/orange jaguar' | (22b) <u>cana shēta</u>
macaw beak
'species of bush'
'macaw beak' | (22c) <u>tsusio-n punu</u>
old.man-Gen tendon/vein
'noodles'
'old man's tendon/vein' |
|--|--|---|

Inconsistent with my practice of not segmenting multi-morpheme, for one-word lexemes, I provide glosses of both the component words in the morpheme gloss line. This is a potential source of confusion (as are English terms like *foxtail* and *shepherd's purse* for those unfamiliar with these weeds), so I orient the reader in the translation line, as in (23) or (24).

- (23) bēchun shui cuēno-shun poshca-shun
capuchin.monkey penis sharpen-after:S/A>A make.hole-after:S/A>A
 '...after sharpening a **nail** [lit. 'capuchin monkey penis'], after boring through ...'
 2-p65-L poshto shēta 02
- (24) cun champi bundo-ac-que piush bēchi mē-te-tan-Ø
 1Gen daughter get.hungry-Infer-so **tortoise fat** brach-cut-go-Imper
 "My daughter is hungry, so go cut down some **piush bēchi fruits!**"...'
 + K-XXII 011 chema 104

3.2.7 Reduplication

Payne (1990:218) puts forth the generalization that in lowland South American languages, "In all cases the reduplication is iconic," that is, indicating plurality, imperfective action, progressive aspect, iterativity, greater intensity, or onomatopoeia of repeated sounds. Matses does not bear out this generalization. In Matses there are

several different meanings associated with reduplication, including iconic ones, non-iconic ones, and “counter-iconic” ones. We have already discussed phonological aspects of reduplication (full and partial reduplication, §2.8; and the one- vs. two-word status of reduplication, §3.2.2), and detailed descriptions are to be found in all the morphology chapters where the lexical class undergoes reduplication (§§5.9, 6.7, 6.8.1, 7.7, 8.7).

Here I will only summarize the different functions and meanings of reduplication:

Iconic:

- suffixed verb reduplication = distributive (iterative, plural, habitual, spatial distribution)
- adverb reduplication = distributive
- cliticized postposition reduplication = distributive
- some animal names mimic animal call with repetitive notes

Non-iconic:

- noun reduplication = adjectivization

“Counter-iconic”

- unsuffixed verb reduplication = incompletely, improperly, hurriedly
- unprefixed adjective reduplication = de-intensification (i.e., ‘somewhat X’)
- prefixed adjective reduplication = partly (i.e., adjective only applies to part of the prefixed body part)
- uncliticized postposition reduplication: de-intensification

3.3 Lexical Classes

I have divided the roots in the Matses lexicon into six **lexical classes** (= word classes/parts of speech): nouns, verbs, adjectives, adverbs, postpositions, and particles. The basis for this classification is strictly morpho-syntactic, as suggested in Schachter (1985). Most categories have semantic commonalities, such as nouns being prototypically time-stable concepts and adjectives being property notions, but these notional characterizations were useful simply for assigning names to the different classes, not as factors to be taken into account for classifying roots. For example, we find many property concepts in Matses coded by noun roots (e.g., pada ‘flat(ness)’) or by adverb

roots (e.g., nua ‘big’), instead of by adjective roots. Lexical classes tend to exhibit prototype structure, which has two implications: i) not all members have identical morpho-syntactic properties; and ii) in principle at least, no single distinguishing property defines a lexical class.

Lexical classes can be open or they can be closed. **Open lexical classes** have a very large number of basic roots, and there tend to be productive morphological processes for deriving stems that behave morpho-syntactically like roots in the target class. **Closed lexical classes** consist of a small, finite number of roots, and have no class-changing processes that create new members. Although over time new roots are added to (and old roots lost from) all of the lexical classes, it is a general tendency for new lexical items, be it from borrowing, onomatopoeia, or lexicalization of polymorphemic forms, to enter open classes more readily than closed ones. Using these guidelines, we can classify the lexical classes in Matses as in Table 3.2.

Table 3.2. Open and closed lexical classes in Matses.

Lexical class	Number of roots	Productive class-changing processes
Prototypical open classes:		
nouns	>2000	nominalizing suffixes
verbs	>2000	zero-verbalization, suffixation with <u>-ua</u>
Non-prototypical open classes:		
adjectives	58	reduplication, adjectivalizing suffixes
adverbs	51	adverbializing suffixes
Closed classes:		
postpositions	32	none
particles	55	none

As we can see in Table 3.2, the adjective and adverb classes stand in between: they have few roots, but there exist productive class-changing processes that form adjective and

adverb stems. In addition to productive class-changing to form “temporary stems,” new lexemes are continually added to the lexicon via the lexicalization of nominalizations, and, to a lesser extent, from verbalization with *-ua*. Additionally, words are commonly borrowed (currently, almost exclusively from Spanish and Portuguese) into the noun and verb classes, and in a few instances, to the adjective (a few color terms) and adverb class (mostly numbers). New lexical items also enter the language through onomatopoeia, but this are evidently completely restricted to nouns and verbs.

The means by which lexical classes can be identified morpho-syntactically is fairly straightforward. Most morphemes occur on only a subset of roots/stems, and others may have different meanings, functions, or phonological properties when attached to different roots/stems. Likewise, syntactic processes tend to treat different words in different ways. (And, occasionally, some morpho-phonological process may be restricted to a subset of roots, or a class of roots will have some characteristic phonological feature, such as *wh* in English interrogative words.) Each of these morpho-syntactic processes defines a category of roots (at least in some cases) independently of other morpho-syntactic processes. When the linguist sees that several of these categories independently converge on a subset of roots, then s/he recognizes this as a significant category in the language, then proceeds to search for more independent converging properties (i.e., properties that apply to all or most of this set of roots, but not to other roots), and may label it based on semantic and/or grammatical similarity to root classes in other languages (e.g., “noun,” “verb,” “determiner,” etc.). Thus recognizing morphosyntactically-defined categories of roots is (at least in theory) straightforward enough, but things get tricky when we try arrange these categories into a taxonomy. Particularly, two aspects of this process of classification require some discussion, **cross-classification** (when subcategories are not neatly nested inside larger categories, but include roots from two or

more categories) and **ranking** (e.g., determining whether a recognized category should be a main lexical class, on par with nouns and verbs, or considered a subclass of a main class, on the level of, say, manner adverbs).

Members of lexical classes, as mentioned above, exhibit a prototype category structure, and, as such, there is inevitable heterogeneity in the lexical classes. Often, within lexical classes, certain subsets of roots tend to share some morpho-syntactic properties that other roots in the main class do not (forming a prototype structure of their own, often with semantic commonalities). If these shared properties are numerous and salient enough, the linguist will find it convenient to recognize them as significant category within the main lexical class (i.e., as a **subclass**). Often, this subclass is neatly nested into a larger lexical class (e.g., pronouns in the noun class or transitive verbs in the verb class), but this is not always the case. A good example is interrogative roots, which in Matses share some unique grammatical features, like a tendency to occur first in interrogative sentences and co-occurrence with interrogative-inflected verbs, but they share most of their grammatical properties with either nouns or adverbs. Thus, I recognize this as a noteworthy cross-cutting category, but do not include it in my taxonomy of roots classes. By contrast, in Tiriyo (Cariban), Meira (1999) has identified considerably more unique converging properties for interrogative nouns and adverbs, and describes them in a separate chapter (attributing them dual membership). Thus, unlike with phylogenies of biological taxa, there is no theoretical reason to assume there cannot be cross-cutting categories in a language, and my findings for Matses bear this out. In this grammar, I will point out the noteworthy cross-cutting categories where relevant.

The second issue, that of ranking, is worth discussing, but cannot be completely resolved. In most cases, one can make a strong case for lumping or splitting categories, but occasionally it will depend on the linguist's proclivity whether to split a main class or

lump several classes into one main class. For example, I have lumped a heterogeneous assortment of morpho-syntactically defined subclasses of roots into the adverb class, including manner, locative, quantitative, and dimension notions. In this case, the number of independent converging properties shared by these roots is compelling enough to make the adverb category easily defended. By contrast, my lumping of phrasal particles, clausal particles, sentence margin particles and interjections into the same class is more a matter of convenience. My decision to combine them is based on their lack of morphological possibilities and their lack of freedom of movement within clauses, but the morpho-syntactic differences among the subclasses of particles are considerable. So if a different linguist decided to split these, I could hardly argue that they were wrong.

Conversely, another linguist might object to my postposition lexical class, arguing that Matses postpositions should be considered a subclass of adverbs. Matses postpositions differ from adverbs essentially only in that postpositions take postpositional objects (other minor differences are discussed in §8.2), so one might argue that since nouns and adverbs have multiple (dozens, if one counts the different suffixes and enclitics separately) independent converging properties, it would be wrong to place postpositions at the same taxonomic level as nouns and verbs. One argument for splitting postpositions and adverbs would be that some properties carry more weight than others. But I would argue that it is not just a matter of some properties having more weight, but that some properties are different *kinds* of properties, and should be considered somewhat apart from other morpho-syntactic properties, as I shall explain. Matses postpositions essentially create adverbs: postpositional phrases are in that sense two-word adverbs. Since adverb morphology is restricted to enclitics, the same set of enclitics that attaches to adverbs attaches to postpositions. And adverbs and postpositional phrases (and therefore also postpositions) occur in the same syntactic slots. This obscures morpho-

syntactic differences between adverbs and postpositions, and so superficially postposition *words* have the same grammatical properties as adverbs, save the postpositional object. But on the other hand, postposition *roots* are radically different from adverb roots because they cannot take on any adverb properties unless they first combine with a noun or pronoun to become an adverb. So, in a sense, postpositions are adverbializers with some relation semantics, and, in fact, one fourth of postpositions are enclitics, rather than phonologically independent words. We would not call nominalizers “nouns” just because the same set of enclitics that follow nouns also follow nominalizers, and nominalizers occur (together with the verb, etc. stem) in nominal syntactic slots. We would not call nominalizers “nouns” because they are bound morphemes. So, once again we are confronted by a cross-cutting classification: bound vs. free morphemes. Postpositions are intermediate between bound and free morphemes in Matses: i) their position is fixed (unlike most other Matses words); ii) they have a class-changing function; iii) they cannot occur alone as a constituent (i.e., without the postpositional object); and iv) several morphemes with identical function are (bound) postposition enclitics. Thus, postpositions are considered apart because i) their morpho-syntactic similarities to adverbs are essentially a result of postpositions’ class-changing functions; and ii) adverbs and post-positions are distinguished by being in different places in the intersecting continuum of bound morphemes vs. roots.

Table 3.3 lists the major subclasses of roots that I recognize for Matses.

Table 3.3. Lexical classes and their main morphosyntactically-defined subclasses.

Classes	Subclasses	Subclass divisions	Number of roots
Nouns:	full nouns		>2000, + derived stems
	pronouns:	personal	11
		interrogative/indefinite	10
demonstrative		3	
Verbs:	intransitive:	simple intransitive	>1000, + derived stems
		double absolutive	2
	transitive:	(mono) transitive	>1000, + derived stems
		ditransitive	6, + derived stems
	pro-verbs		6
Adjectives:	physical property		38, + derived stems
	color		7
	human propensity/age		8
	value		2
Adverbs:	manner		10, + derived stems
	locative/temporal		19
	noun-modifying:	quantifiers	8
		dimension adverbs	8
	interrogative adverbs		8
	proadverbs		2
Postpositions:	locative/temporal		24
	comparative/quantitative		6
Particles:	grammatical:	phrase-level	10
		clause-level	4
	lexical:	sentence-margin	13
		exclamations	28 (probably more)

It is notable that there are few open subclasses, and that class-changing processes only target certain subclasses (e.g., no process creates pronouns or color adjectives).

In addition to sub-classification of lexical classes, it is possible to identify similarities among the among the main lexical classes and posit superordinate categories. Based on shared morpho-syntactic properties, it is possible to posit the following taxonomy for the main Matses root classes:

- 1 Verbs
- 2 (Substantives)
 - 2.1 Nouns
 - 2.2 (Modifiers)
 - 2.2.1 Adjectives
 - 2.2.2 (Adverbials)
 - 2.2.2.1 Adverbs
 - 2.2.2.2 Postpositions
- 3 Particles

Based on properties of prototypical free morphemes and prototypical bound morphemes, we can place roots in the continuum below among the bound morphemes (Figure 2.1).

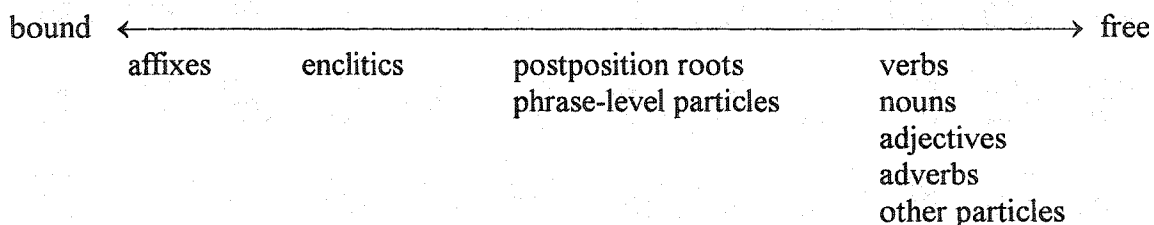


Figure 2.1: Continuum between prototypical bound and free morphemes in Matses.

It is notable that this continuum cuts across the particle class and also across the superordinate categories posited above.

3.3.1 Summary of differences among lexical classes

I have decided to describe the morpho-syntactic differences among the lexical classes in the beginning of each of the morphology chapters (§§4.2, 5.2, 6.2, 7.2, 8.2, 9.2). Here I only provide Table 3.4, a very general summary of the main morphological and syntactic properties that are useful for distinguishing the 6 lexical classes from each other.

Table 3.4. Morphological and phonological properties that distinguish lexical classes.

	Verb	Noun	Adj	Adv	Post	Part
prefixes	yes	yes	yes	no	no	no
suffixes	yes	no	no	no	no	no
enclitics (excluding pronominal forms)	no	yes	yes	yes	yes	no
case-marking	no	yes	no	no	no	no
obligatory TAM-person inflection	yes	no	no	no	no	no
- <u>mbo</u> / <u>-quo</u> , etc. function as inflection	no	no	yes	no	no	no
transitivity agreement (adverbial inflection)	no	no	no	yes	yes	no
reduplication = adjectivalization	no	yes	no	no	no	no
reduplication = de-intensification	yes	no	yes	no	yes	no
reduplication = distributive/iterative	yes	no	no	yes	yes	no
can occur alone as A/S/O	no	yes	no	no	no	no
uses <u>ne</u> as copular verb	no	yes	no	no	no	no
uses <u>ic</u> as copular verb	no	no	yes	yes	yes	no
can be only word in a full sentence	yes	no	no	no	no	no
bare root can be first in a sentence	yes	yes	no	yes	yes	yes
head of PP phrase	no	no	no	no	yes	no
can be PP object	no	yes	no	no	no	no
can be zero-pronominalized	no	yes	no	no	no	no
can be proverbalized	yes	no	no	no	no	no
can be substituted by pro-forms <u>ad</u> and <u>nad</u>	yes	no	yes	yes	no	no

A general trend is for verbs to be morphologically more complex than the other word classes; particles, at the other extreme, have almost no morphological possibilities. A phonological correlate, as pointed out in section 2.6.5, is that some verbal monomorphemic roots do not have underlying stress, while monosyllabic roots of other lexical classes, with no hitherto encountered exception, are intrinsically stressed.

3.3.2 Class-changing processes

Only a few roots occur polysemously in more than one lexical class (e.g., 25-27).

	Adjective	Noun
(25a) <u>shēni</u>	'old'	'older namesake'
(25b) <u>bata</u>	'sweet'	'species of tree (that has sweet fruits)'
(25c) <u>chushi</u>	'rough'	'armored catfish (which has rough scales)'
	Noun	Verb
(26a) <u>mua</u>	'liar'	'lie'
(26b) <u>ampe</u>	'thief'	'steal'
(26c) <u>isun</u>	'urine'	'urinate'
	Postposition	Verb
(27) <u>nuntan</u>	'inside'	'submerge (transitive)'

The vast majority of roots must undergo a class-changing process (suffixation, reduplication or “zero-verbalization”) to take on the morpho-syntactic properties of another lexical class. Furthermore, some lexical classes simply do not participate in class-changing processes at all. Table 3.5 is a summary of the class-changing possibilities in Matses.

Table 3.5. List of class-changing processes.

Source	Process	Product	Section
noun/adjective/adverb/postp.	+ -∅	= (intransitive) verb	5.10
noun/adjective	+ -ua	= (transitive) verb	5.10
noun	reduplication	= adjective	6.8.1
verb	+ adjectivalizing suffix	= adjective	6.8.2
verb	+ nominalizing suffix	= noun	4.7
verb/adjective	+ adverbializing suffix	= (manner) adverb	7.8

Note: most derived stems can undergo further class-changing processes.

Note: particles do not participate in class-changing processes.

Each of these class-changing processes will be described in detail in the chapter of the lexical class of the derived stem (e.g., nominalization in the noun chapter; see Table 3.5 for section references).

3.4 Notational conventions

See Table 1.4 (page 68) for notational conventions. It is important to recall that only basic morphemes are included in the morpheme break line in examples. The only exception is the suppletive enclitic -mbo/-quio 'Augmentative/Emphatic' for which it is impossible to determine a basic shape, and because the allomorphs are so different formally. Also, where possible, I try to use a single gloss consistently in the examples for each word/morpheme. But with some polysemous morphemes, if the meanings of the polysemous glosses cannot be captured by a more abstract or inclusive term (e.g., "locomote" for 'walk,' 'fly,' 'crawl,' 'travel by canoe,' 'swim,' etc.), and do not necessarily follow automatically from a basic meaning (especially when it is not possible to determine the basic meaning), I will provide different morpheme-line glosses in different examples, so that the reader can better understand the sentences (only one gloss per example, unless two of the meanings are relevant for different interpretations, in which case the meaning in the gloss will be separated by a slash).

CHAPTER 4

NOUNS AND PRONOUNS

4.1 Introduction

This chapter describes the subcategories of nouns and their morphology. The noun lexical class is an open class *par excellence*: it has at least two thousand members, nominalization is very productive, and newly-coined and borrowed terms are constantly entering the lexicon into the noun lexical class. Within the category of nouns, the closed subclass of pronouns composes an important category, containing several subclasses (personal pronouns, interrogative pronouns, indefinite pronouns and demonstrative pronouns). The morphological possibilities of nouns are restricted to prefixation and encliticization (clitics are attached to the last element in the noun phrase; see §3.2.3 for the distinction between Matses enclitics and suffixes). Reduplication of nouns results in adjectivalization. In this chapter, I first describe how nouns are distinguished from other lexical classes (next section). In sections 4.3 and 4.4, I describe the subclasses of nouns and pronouns. Sections 4.5. and 4.6 describe the morphological possibilities of nouns, prefixes and enclitics. The last section is dedicated to the complex system of verb nominalization in Matses. Description of noun syntax, including noun phrase syntax, has been reserved for the syntax chapters (chapters 11-13).

4.2 Distinguishing nouns from other lexical classes

Nouns can be identified in Matses as a distinct class of stems on morphological and syntactic grounds. Although the basis of the categorization of stems into the noun class is not semantic, this group of stems can nevertheless be characterized notionally. The roots (underived stems) refer prototypically to time-stable concepts (people, animals,

places, and things), and thus contrast with verbs, which refer prototypically to time unstable concepts (actions and events). Derived (nominalized) noun stems contain verb roots, but the nominalizing morphology generally specifies that the nominalization refers to a particular participant (e.g., Agent, Instrument, etc.); action nominalizations are the exception, and, accordingly, are not recognized as nouns by some grammatical processes (see section 4.7 on nominalization).

Only a few morphological properties are specific widely applicable to nouns. The following widely-applicable morphemes are specific to nouns (and nominalizations): the size enclitics -mpi 'small' and -dapa 'large' (§4.6.2), the plural enclitic -bo (§4.6.1.1), and the case-marking enclitic -n 'Ergative, Instrumental, Genitive' (§4.6.4). A few enclitics are specific to nouns, but not widely applicable to the whole class: The enclitic -ado 'Plural: Extension' only occurs on kinship terms (§4.6.1.2), and -ben 'alone' occurs only with pronouns (§4.4.5.1). The reader should be warned that noun phrase enclitics are attached to the final element in the noun phrase, whether this be a noun or a word from another lexical class; therefore, it is possible to find noun-specific morphology on, say, adjectives, when these follow a head noun in a noun phrase (1b), but it should be kept in mind that this is not possible when the adjective is not part of a noun phrase (1c).

- | | | |
|--|---|--|
| (1a) <u>opa-mpi</u>
dog-small
'little dog' | (1b) <u>opa</u> <u>piu-mpi</u>
dog red-small
'little red dog' | (1c) * <u>piu-mpi</u>
red-small
'(little red one)' |
|--|---|--|

Other morphological properties help differentiate nouns from only some of the other lexical classes. Most of the noun phrase enclitics (except for the ones mentioned above) can occur as well on adjectives, adverbs, and postpositions, but these distinguish nouns from verbs, which have a whole different set of post-root morphology, and from particles,

which (with very few exceptions) take no morphology at all. Prefixation is restricted to nouns, verbs and adjectives. Stems from all the lexical classes (except for some closed classes within these, like pronouns and interrogative adverbs) except particles can be reduplicated, but only with nouns does reduplication serve an adjectivalization function.

Nouns can also be distinguished from the other word classes syntactically. Most importantly, only nouns can appear as core arguments (A/S/O) or as postpositional objects (see §11.2 for grammatical relations). Also, only nouns occur in copular constructions with the copula ne 'be' (§11.7.1); adjectives and adverbs can also occur in copular clauses, but only with the copular verb ic 'be.' Adjectives can only modify nouns, and only form phrases with nouns (§10.3.3). Only nouns can be substituted by pronouns. See Table 3.5, where the main properties that distinguish all the different lexical classes from each other are listed.

4.3 Subclasses of noun roots

The only strikingly morpho-syntactically distinct subclass of noun roots is the closed class of pronouns, discussed in section 4.4. There are a few semantic subclasses of nouns that are correlated with one or a few morpho-syntactic properties that are worth pointing out; these are described below in the subsections of the present section. Derived nouns, accomplished by morphologically nominalizing verb stems, are of two types: participant nominalizations and action nominalizations. Participant nominalizations have almost the same morpho-syntactic patterns as noun roots, and are a source of new noun lexemes. Meanwhile, action nominalizations, while clearly nouns, have reduced nominal morpho-syntactic possibilities. Section 4.7 describes the process of nominalization, but the syntactic properties of nominalizations are described in section 12.2.

4.3.1 Kinship terms

The category of roots coding kinship terms has multiple disparate morphological and semantic properties, as well as some grammatically very extraordinary members.

One main source of irregularity has to do with possession. Kinship terms can be divided into two categories with respect to possessibility: one, made up of only two terms, amē ‘father’ and ani ‘mother’ (of people or animals), *cannot* be possessed (2) or used vocatively (i.e., as in *Mom!*).

- (2) isa-uid-bi is-ac-mbi ani-uid-bi
 porcupine-only-Emph see-**Infer**-1A mother-only-Emph
 ‘I have only seen the porcupine itself, only the mother.’

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Otherwise, there are no unpossessible full nouns in Matses (even personal names can be possessed as a term of affection, e.g., *cun debi* ‘my Davy’; pronouns cannot be possessed). The other much larger category of kinship terms, which includes the possessible counterparts of amē and ani, papa and tita, are always possessed, unless used vocatively sense, in which case they are used as bare roots.¹ Possession can be by a genitive pronoun, a genitive-marked noun/noun phrase, or covertly: the absence of an overt possessor preceding a possessible kinship term (in a non-vocative sentence) is always interpreted as possessed by the second person (e.g., ‘Is mom home?’ = ‘Is *your* mom home?’). This is the only time the possessive pronoun min ‘Second-person: Genitive’ can occur covertly. Nine kinship terms must always be (overtly) possessed, even in the vocative. Six of the seven non-archaic obligatorily possessed kinship term

¹ The general rule, across kinship terms and across speakers, is that in vocative usage kinship terms are not possessed. However, a few kinship terms must be possessed in the vocative (see below), and some speakers occasionally use possessed kinship terms to address people, although others say it sounds awkward (as in English *Hello, my son.*)

have polysemous meanings, and so the possessive pronouns help disambiguate the meanings: bo ‘male’s parallel uncle/nephew’ (no polysemous meaning) matses ‘male’s distant cross uncle/father-in-law’ (also means ‘person/Matses’), dada ‘male’s distant male cousin’ (also means ‘man’ or ‘body’), utsi ‘brother’ (also means ‘other’ or ‘another’), chido ‘wife’ (also means ‘woman’ or ‘female’), shëni ‘older namesake’ (also means ‘old’), and chuca ‘younger namesake’ (also means ‘new’). Two of the obligatorily possessed kinship terms are archaic and suppletive in that they have bound and irregular possessive pronouns not seen elsewhere in the language: auin ‘his wife’ and uënembo ‘my (male’s) sister or female parallel cousin’/minembo ‘your (male’s) sister or female parallel cousin.’² There are no other obligatorily possessed nouns in Matses. When possessed (and therefore generally not when used vocatively³), those kinship terms that have duplicate syllables (and also tita, but not dada or baba ‘grandchild’) can be optionally abbreviated (3; Table 4.1).

(3)	<u>matsesën</u>	<u>cunta</u>	<u>bedpac</u>	<u>cadennec</u>
	<u>matses-n</u>	<u>cun</u>	<u>tita</u>	<u>bed-pa-ac</u>
	<u>Matses-Erg</u>	<u>1Gen</u>	<u>mother</u>	<u>grab-Comment-Narr.Past</u>
				<u>say-Rem.Past-Indic</u>
	‘They used to tell that my mother was kidnapped by Matses.’			

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² The speakers I worked with only knew these forms, so these archaic kinship terms may have incomplete paradigms, but these speakers suggested I might learn the complete paradigms from older speakers, whom I have not yet consulted on this topic.

³ Some speakers occasionally use these abbreviated forms vocatively, either possessed or unpossessed, but only in very informal or intimate situations. Abbreviated forms cannot be used unpossessed in non-vocative sentences, even with second-person possessor.

Table 4.1. Abbreviatable kinship terms.

<u>tita</u>	<u>ta</u>	'mother' or 'male's cross niece/daughter-in-law'
<u>papa</u>	<u>pa</u>	'father'
<u>chuchu</u>	<u>chu</u>	'older sister/female parallel cousin'
<u>chichi</u>	<u>chi</u>	'maternal grandmother/maternal grandmother's sister'
<u>cucu</u>	<u>cu</u>	'cross uncle/father-in-law'

These abbreviated terms bind phonetically to the first-person genitive pronoun, cun (3; §2.6.1.3).

Almost all kinship terms are gender specific with respect to alter (the referent), but an interesting property of kinship terms is that some come in gender-specific pairs with respect to ego, particularly those concerned with cross-relative relations (Table 4.2).⁴ Therefore, for example, only males can use the term shanu in the vocative sense. The set of terms in Table 4.2, which can refer to in-laws, are the only roots in the language that can take the prefix pash- 'nearly' as in 'nearly (became) my mother-in-law' (§4.5.2). This set of terms is opposed to terms for parallel relatives, which for the most part do not make this gender-oriented distinction for ego, but several make the relative age distinction instead (Table 4.3).

⁴ "Cross cousins" are the sons and daughters of a parent's opposite-sex sibling; i.e., father's sisters and mother's brothers (= cross uncles and cross aunts). Opposed to cross cousins are "parallel cousins," the sons and daughters of a parent's *same*-sex sibling; i.e., father's brothers and mother's sisters (= parallel uncles and parallel aunts).

Table 4.2. Kinship terms associated with cross relatives.

Term	Consanguines ^a	Affines ^b	Endearment
<u>shanu</u>	male's female cross cousin	male's sister-in-law	girlfriend
<u>mëntado</u>	female's male cross cousin	female's brother-in-law	boyfriend
<u>dauës</u>	male's older male cross cousin	male's older brother-in-law	
<u>caniua</u>	male's younger male cross cousin	male's younger brother-in-law	
<u>tsabë</u>	female's female cross cousin	female's sister-in-law	
<u>cucu</u>	cross uncle	father-in-law	
<u>nachi</u>	male's cross aunt	male's mother-in-law	
<u>chaya</u>	female's cross aunt	female's mother-in-law	
<u>piac</u>	male's cross nephew	male's son-in-law	
<u>namia</u>	female's cross nephew	female's son-in-law	
<u>tita(-mpi)</u>	male's cross niece	male's daughter-in-law	
<u>babanën</u>	female's cross niece	female's daughter-in-law	

^a blood relatives^b relatives related by marriage

Table 4.3. Kinship terms associated with parallel relatives.

Term	Nuclear family	Extended nuclear fam.	Extended family
<u>buchi</u>	older brother	older half-brother	older male parallel cousin
<u>utsimpi</u>	younger brother	younger half-brother	younger male parallel cousin
<u>chuchu</u>	older sister	older half-sister	older female parallel cousin
<u>chibi</u>	younger sister	younger half-sister	younger female parallel cous.
<u>papa utsi^a</u>			parallel uncle
<u>bo</u>			male's parallel uncle/nephew
<u>tita usti^b</u>		mother's co-wife	parallel aunt
<u>namia</u>			woman's parallel uncle/neph.
<u>mado</u>	son	co-wife's son	parallel nephew
<u>champi</u>	daughter	co-wife's daughter	parallel niece

^a literally 'other father'^b literally 'other mother'

Comparing Table 4.2 and 4.3, it can be seen that kinship terminology reflects Matses ideal marriage patterns as being with one's (opposite-sex) cross cousin, and that one's parallel cousins (often simultaneously genetically one's half-siblings due to polygamy involving sisters, and wife-sharing among brothers and male parallel cousins) are in the

same category as full siblings. Table 4.4 lists some kinship terminology not specific to cross vs. parallel relatives. I have not done an intensive study of Matses kinship. In Tables 4.2-4.4, I have only listed those terms that I have encountered currently in common usage at Nuevo San Juan. See Fields and Merrifield (1980), Romanoff (1984) and Matlock (2002) for more terms and a fuller treatment of Matses kinship.

Table 4.4. Common kinship terms not specific for parallel or cross relatives.

Term	Kinship relation	Polysemous meanings
<u>papa</u>	father	
<u>tita</u>	mother	
<u>amē</u>	father	large (adverb)
<u>ani</u>	mother	^a
<u>baba</u>	grandchild	
<u>buchido</u>	grandfather	
<u>chichi</u>	maternal grandmother/great aunt	
<u>shanu acho</u>	paternal grandmother	
<u>bēnē</u>	husband	male (animal, palm, papaya plant, etc.)
<u>chido</u>	wife	woman, female
<u>david</u>	co-wife	
<u>shēni</u>	older namesake	old (adjective)
<u>chuca</u>	younger namesake	new (adjective)

^a there is no polysemous form for ani, but there is the formally similar adverb ania 'small'

Kinship terms are also the only roots in the language that occur with the enclitic -ado 'Plural: Category Extension' (§4.6.1.2) and the particle amano 'adopted' (§9.3.4). Also, the enclitic -sio 'dear' (in its endearment use; §4.6.1) and the particle pado 'deceased' (§9.3.4) only occur following kinship terms and personal names. Example (4) illustrates the different ways kinship terms can be modified with enclitics (described in

this chapter) and particles (described in §9.3.4).⁵ This is about twice as many such distinctions as are available for non-kinship nouns.

- (4a) cun buchi 'my older full-brother(s)/half-brother(s)/male parallel cousin(s)'
 (4b) cun buchi pado 'my late (deceased) older full-/half-brother(s)/male parallel cousin(s)'
 (4c) cun buchi-sio 'my dear (fat) older full-/half-brother/male parallel cousin'
 (4d) cun buchi amano 'my adopted older full-/half-brother(s)/male parallel cousin(s)'
 (4e) cun buchi-mbo 'my true (not adopted) full-/half-brother(s)/male parallel cousin(s)'/ 'my full older brother'
 (4f) cun buchi icbo 'my full older brother(s)'/ 'my intimate brother(s)'
 (4g) cun buchi-ado 'all my older brothers and older male parallel cousins'
 (4h) cun buchi-bo 'my older full-/half-brothers and/or older male parallel cousins'
 (4i) cun buchi chedo 'my older brother(s), cousin(s), uncle(s), etc.' (heterogenous group including older brother/male parallel cousin)

4.3.2 Other minor subcategories of nouns

Most body-part terms have corresponding body-part prefixes that are used instead of the full nouns in some noun incorporation-like constructions (§4.5.1). Also, only body-part terms may occur with the enclitic -pa 'large: Characterizer (§4.6.2).

Terms referring to humans, including terms like 'woman,' personal names, some pronouns, and animal terms referring clans are distinguished from other words (with a handful of exceptions) in the ability to take the enclitic -bo as a simple plural marker (§4.6.1.1). However, in the end, these distinctions are semantic ones, depending on whether the word can point to a human referent in some context, and therefore the use is an effect of the semantics of -bo, rather than of a grammatically-recognized subclass of nouns. The interrogative pronouns also make a human-nonhuman distinction (§4.4.3).

Count nouns and mass nouns are not treated differently by the grammar, except that with dimension adverbs, mass nouns will take an amount reading (5b) and count

⁵ It is hard to ignore the fact that all these forms end with o. It seems doubtful that this is a mere coincidence, but I have no ready synchronic or diachronic explanation for this pattern.

nouns a size reading (5a), while with quantifier adverbs, count nouns will take a number reading (6a) and mass nouns a partitive reading (6b).

- | | |
|--|--|
| <p>(5a) <u>chido</u> <u>nua</u> <u>ic-o-sh</u>
 woman large be-Past-3
 ‘There was a big/fat woman.’
 ‘The woman was big/fat.’</p> | <p>(5b) <u>sicaid</u> <u>nua</u> <u>ic-o-sh</u>
 manioc.beer large be-Past-3
 ‘There was much of manioc beer.’</p> |
| <p>(6a) <u>chido</u> <u>dadpen</u> <u>ic-o-sh</u>
 woman many be-Past-3
 ‘There were many women.’</p> | <p>(6b) <u>sicaid</u> <u>dadpen</u> <u>ic-o-sh</u>
 manioc.beer many be-Past-3
 ‘There were many (pots of) manioc beer.’</p> |

4.4 Pronouns

A **pronoun** is “a word used as a substitute for a noun or noun phrase” (Schachter 1985:25). Pronouns in Matses can be divided into four types: personal (e.g., English *he/him*), interrogative (e.g., *who*), indefinite (e.g., *whoever*) and demonstrative (e.g., *that one*). Each of these would then include three case-specific forms or case-marked versions, absolutive, ergative/instrumental and genitive (Table 4.5). Pronouns, like most Matses nouns, are not distinguished for number, gender, social status, or personal relations between the interlocutors (as in Spanish *Usted* vs. *tu*). The set of personal pronouns distinguish first, second, third, and fourth persons (fourth person = third-person co-referential), as well as a first-person inclusive form (and two archaic second-person plural forms). Interrogative and indefinite pronouns make a human vs. non-human distinction and demonstrative pronouns distinguish proximal vs. distal relative to the first- or second-person.⁶ These forms are all summarized in Table 4.5.

⁶ Some deictic adverbs make a visible vs. not visible distinction (§7.3.3), but no pronouns do.

Table 4.5. Comparison of all pronoun forms in Matses.

	Absolutive	Ergative	Instrumental	Genitive	Possessed
Personal					
1 (independent)	<u>ubi</u> ^a	<u>umbi</u> ^a	—	<u>cun</u>	—
1 (enclitic)	<u>-bi/-i</u>	<u>-mbi</u>	—	—	—
2	<u>mibi</u> ^b	<u>mimbi</u> ^b	—	<u>min</u>	—
1+2	<u>nuqui</u> ^c	<u>nuqui</u> ^c	—	<u>nuquin</u>	—
2Pl ^d	<u>mitso</u>	<u>mitso</u>	—	<u>mitson</u>	—
2Pl ^d	<u>miqui</u>	<u>miqui</u>	—	<u>?miquin</u>	—
3	<u>∅</u>	<u>∅</u>	—	<u>aton</u>	<u>-a</u>
4/3	<u>abi</u>	<u>ambi</u>	<u>ambi</u>	—	—
Interrogative^e					
human	<u>tsuda</u>	<u>tsundan</u>	—	<u>tsundan</u>	—
non-human	<u>atoda</u>	<u>atondan</u>	<u>atondan</u>	<u>atondan</u>	—
definite	<u>midacquid</u>	<u>midacquid-n</u>	<u>midacquid-n</u>	<u>midacquid-n</u>	—
Indefinite					
human	<u>utsi-bi</u>	<u>utsi-n-bi</u>	—	—	—
non-human	<u>atoda-bi</u>	<u>atondan-bi</u>	<u>atondan-bi</u>	—	—
Demonstrative					
Proximal to 1	<u>nēid</u>	<u>nēid-n</u>	<u>nēid-n</u>	<u>nēid-n</u>	—
Proximal to 2	<u>aid</u>	<u>aid-n</u>	<u>aid-n</u>	<u>aid-n</u>	—
Distal to 1&2	<u>uid</u>	<u>uid-n</u>	<u>uid-n</u>	<u>uid-n</u>	—

^a Older speakers sometimes use ēbi and ēmbi instead of ubi and umbi.

^b Speakers in Brazil and Nuevo Cashishpi occasionally use the forms bibi and bimbi

^c Speakers in Brazil, Nuevo Cashispi and San José de Añushi occasionally use the form iqui instead.

^d Archaic forms.

^e All these forms have an alternate where the /da/ is replaced by /tsi/, e.g., tsuda/tsutsi.

The first pattern that jumps out at the reader upon inspecting Table 4.5 (even without the bold font) is that many of these pronouns have nasals associated with the ergative, instrumental, and genitive cases. It is tempting to segment these (it is perhaps irresistible for a novice linguist), and there are arguments both for a synchronic segmentation (allowing for some suppletive forms), as well as for recognizing these as lexicalized forms analyzable only historically. After having changed my mind several

times, enough compelling evidence has presented itself to finally let me settle on listing these as lexicalized forms. This evidence will be presented below in the subsections of the present section where I describe the meanings of the pronouns and consider their quasi-segmentable sub-morphemic elements. Pronouns will be taken up again later in the discussion on grammatical relations (§11.2), so here I will concentrate on morphological properties of pronouns, and their syntactic properties will receive only brief mention with a reference to the relevant sections in the syntax chapters.

4.4.1 Personal pronouns

Personal pronouns are those that stand in for a speech act participant (first and/or second person) or a third-person participant made obvious by context, usually by being mentioned previously in the discourse. In other words, they have in common that the noun or noun phrase they stand in for are identified by the speech act: by who is speaking, who is being spoken to, or who/what has been talked about, but they differ in that first- and second-person pronouns are deictic (in the sense of being indexes, with referents shifting in response to discourse parameters), while the third-person one is generally anaphoric (i.e., referring back to a previously mentioned referent).

Demonstrative pronouns are also third-person forms, but are geared toward relying on extralinguistic context (spatial deixis), though one, aid ‘that one,’ has a back-reference function (demonstrative pronouns and spatial deixis are discussed below in §4.4.4). First and second person pronouns never have an impersonal reading (as in ... *when you least expect it*), but the third-person zero pronoun can (see §11.2.4 for impersonal constructions).

In Matses, most personal pronouns are ambiguous with respect to plural vs. dual vs. singular, unless they occur with the pronoun-specific enclitic -ben ‘alone/in vain/for

no reason' (§4.4.5.1) or one of the two quantitative postpositions, daëdi 'both of' or tedi 'all of' (§8.3.4). Table 4.6 lists these ambiguities and the distinctions that can be made in the contemporary personal pronouns system (excludes archaic second-person plural forms).

Table 4.6. Absolutive pronouns compared with pronouns followed by the pronoun-specific enclitic -bën(-tsēc) and the postpositions daëdi 'both of' and tedi 'all of.'

Pronoun	Singular	Dual	Plural (>2)
<u>ubi/-bi</u>	1Sg	1+3Sg	1+3Pl
<u>u-ben-tsēc</u>	1Sg	—	—
<u>ubi daëdi</u>	—	1+3Sg ('us two')	—
<u>ubi tedi</u>	—	1+3Sg ('all of us')	1+3Pl ('all of us')
<u>nuqui</u>	—	1+2Sg	1+2Pl or 1+2Sg/Pl+3Sg/Pl
<u>nuqui daëdi</u>	—	1+2Sg ('both of us')	—
<u>nuqui tedi</u>	—	1+2Sg ('just us two')	1+2/Pl ('all of us')
<u>mibi</u>	2Sg	2Dl	2Pl
<u>mi-ben-tsēc</u>	2Sg	—	—
<u>mibi daëdi</u>	—	2Dl ('you two')	—
<u>mibi tedi</u>	—	2Dl ('just you two')	2Pl ('all of you')
∅	3Sg	3Dl	3Pl
<u>abentsēc</u>	3Sg (one/alone)	—	—
<u>abi daëdi</u>	—	3Dl ('both of them')	—
<u>abitedi</u>	—	3Dl ('everyone/-thing')	3Pl ('everyone/-thing')
<u>abi</u>	3/4Sg	3/4Dl	3/4Pl

Interestingly, personal pronouns cannot take the collective noun phrase postposition -bo 'Plural' which is restricted as a homogenous plural to human referents (§4.6.1.1). This is strictly and consistently forbidden for most pronouns (7), the sole exception being the

archaic second-person form mitso, which occurs optionally (and unaccompanied by any meaning change) with -bo (7i)⁷.

(7a) * <u>ubi-bo</u>	(7e) * <u>umbi-bo</u>	(7i) <u>mitso-bo</u>
(7b) * <u>mibi-bo</u>	(7f) * <u>mimbi-bo</u>	2Pl-Pl
(7c) * <u>abi-bo</u>	(7g) * <u>ambi-bo</u>	'you all'
(7d) * <u>nuqui-bo</u>	(7h) * <u>miqui-bo</u>	

Pronouns can occur with the particle chedo 'et cetera/too' (§4.6.3), to specify a heterogeneous category (8).

(8a) <u>mimbi chedo</u>	'you and them'/'	(8b) <u>ubi chedo</u>	'me and others'/'
2Erg etc/too	'You too.'	1Abs etc/too	'Me too!'

Additionally, verb roots sometimes specify plural subjects or objects (§5.3.2), and verbal suffixes can specify collective core arguments (§5.5.5), but most of the time, as with most full nouns, plurality is not specified and is left to be deduced from context.

Another significant property of personal pronouns is that the unmarked third-person pronoun, for both absolutive and ergative case (and as objects of locative postpositions) is \emptyset (9), referred to here as a **zero pronoun** or a **covert pronoun**. Meanwhile, the forms expected to fill this slot are instead fourth-person pronouns (as defined for Eskimo in Anderson and Keenan 1985), which express co-reference between a subordinate clause argument and a matrix verb argument (10). Or, they are used in simplex sentences or main clauses as third-person pronouns only in special cases (without the co-referential meaning), specifically when a noun phrase enclitic (which always require a root to attach to) needs a third-person anaphoric pronoun to attach to (11; see

⁷ A second marginal exception is that a few speakers allowed the form ?nuqui-bo-bi '1+2-Plural-Emphasis,' but forms like *mibi-bo-bi were rejected by all speakers.

enclitics cannot attach to Ø, the “form” that has taken over as the regular third-person ergative/absolutive anaphoric pronoun.

The next set of forms to consider are the pronominal enclitics (Table 4.7). This type of pronominal form exists only for the first-person (the other pronominal enclitic, -a ‘3: Possessee’ is restricted to possessive clauses, see next section).

Table 4.7. First-person pronominal enclitics.

Enclitic	Meaning	Corresponding full pronoun
<u>-mbi</u>	1 A	<u>umbi</u> ‘1 Ergative’
<u>-bi</u>	1 S	<u>ubi</u> ‘1 Absolutive’
<u>-ni</u> ^a	1 S	<u>ubi</u> ‘1 Absolutive’
<u>-bi</u> ^b	1 O (2 A)	<u>ubi</u> ‘1 Absolutive’
<u>-i</u> ^c	1 O (3 A)	<u>ubi</u> ‘1 Absolutive’

^a archaic form apparently restricted to deictic adverbs

^b with some inflections, -bi represents the O when A is second or third person

^c -i occurs only following the third-person subject agreement marker -sh and -pahun ‘Desiderative’

Note: these are all *exclusive* first-person pronouns = 1(+3Sg/Pl)

They occur most frequently on verbs, in place of subject person agreement suffixes (14).

- (14) ai u-ben-tsēc-bi ush-e-bi ca-onda-mbi
 yes 1-alone-Dim-Emph sleep-Npast-1S say-Dist.Past-1A
 “‘Yes, I’m going to sleep alone,” I told him.’”

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These would be suffixes, if it were not that they also occur on the particle ada and ma, and on some adverbs. The function of these on verbs is discussed in section 5.6.5, and their syntactic properties are discussed in detail in section 11.2.6. Essentially, unlike third-person pronouns, overt first-person pronouns are required in almost all clause and sentence types (first-person specific verbal inflections require first-person pronouns to be

elided, namely -mane 'Future: Potential:1' and -nu 'Intention: 1'; and they can be equi-deleted in some complex constructions), and in most clause types, the speaker has a choice of using either full first-person pronouns or the enclitics. The full pronouns, where optional, indicate a slight level of emphasis, similar to using *yo* 'I' or *eu* 'I' in Spanish and Portuguese, and the enclitics represent the less-marked case.

The second word in sentence (14) brings us to the next property of anaphoric pronouns (one of the most compelling patterns suggesting that personal pronouns *should* be synchronically segmented). The pronoun-specific enclitic, -ben 'alone/in vain/for no reason' (§4.4.5.1) must occur with one-syllable versions of the pronouns (14 & 15), and the comitative postposition enclitics (§8.3.1) can optionally occur with the full pronouns (16b & 17b) or the single syllable form (16a & 17a).

- | | |
|--|---|
| <p>(15a) <u>mimbenquiobi</u> <u>naoc</u>
 <u>mi-n-ben-quio-bi</u> <u>na-o-c</u>
 2-Erg-alone-Aug-Emph do-Past-1/2
 'You did it in vain.'</p> | <p>(15b) <u>mibembi</u> <u>nidoc</u>
 <u>mi-Ø-ben-bi</u> <u>nid-o-c</u>
 2-Abs-no.reason-Emph go-Past-1/2
 'You left for no reason.'
 (i.e., no one made you do it)</p> |
| <p>(16a) <u>a-bəd-bi</u> <u>cho-o-sh</u>
 3-Com:S-Emp come-Past-3
 'He came with him.'</p> | <p>(16b) <u>ubi-bəd</u> <u>cho-o-sh</u>
 1Abs-Com:S come-Past-3
 'He came with me.'</p> |
| <p>(17a) <u>mi-bətan-bi</u> <u>pe-onda-mbi</u>
 2-Com:A-Emph eat-Dist.Past-1A
 'I ate with you (a long time ago).'</p> | <p>(17b) <u>mibi-bətan</u> <u>pe-onda-mbi</u>
 2Abs-Com:A eat-Dist.Past-1A
 'I ate with you (a long time ago).'</p> |
| <p>(17c) *<u>mi-n-bətan</u> <u>pe-onda-mbi</u></p> | <p>(17d) *<u>mimbi-bətan</u> (17e) *<u>mimbi-bəd</u></p> |

The single syllable form with comitative postposition is preferred by older speakers, suggesting a diachronic move away from single syllable pronouns. The forms u, mi, and a, however, cannot occur as independent words synchronically, and their occurrence in

the language is restricted to co-occurrence with -ben or comitative postpositions, and so here are treated as grammatically conditioned allomorphs of the full pronouns.

The last feature to point out about personal pronouns is ergative case marking. Personal pronouns, as with all noun phrases, are differentiated for the ergative vs. the absolutive cases. The exceptions are the plural personal pronouns, nuqui, miqui, and mitso, which exhibit no distinct ergative forms (but exhibit genitive forms). Matses has a nominative-accusative verbal person agreement system and other accusative-aligned morpho-syntactic patterns (§11.2.7), but case-marking is strictly ergative, with no splits of any type—the plural pronouns would then represent the only exceptions in that they are undifferentiated for A, S, and O (but exhibit neither an ergative-absolutive nor a nominative-accusative pattern). The ergative case-marking enclitic that occurs on full pronouns, -n, is polysemous with the genitive, instrumental, and locative/temporal postpositions. One might argue that -n is a single morpheme with a single generalized meaning, but the distinct genitive pronominal forms show us that the genitive and ergative/instrumental are distinct (this will be an important tool for determining the case of nominal subjects of nominalizations and other subordinate clauses). But there is no formal distinction between the Ergative and Instrumental pronouns: the distinction between these two cases is a syntactic one, with the Ergative marking core participants and the Instrumental case marking peripheral participants (see §11.2.1). And there is a semantic distinction: Instrumentals participants are not generally animate, and Ergative participants cannot be inanimate.

We note that all the ergative, instrumental, and genitive pronouns contain a nasal, hence the temptation to segment them. Table 4.8 lists all the arguments for and against a valid synchronic segmentation of the personal pronouns.

Table 4.8. Arguments for and against segmenting personal pronouns.

For Segmenting	Against Segmenting
1) ability to assign a meaning to <u>n</u> (- <u>n</u> = 'Erg/Inst/Gen')	1) irregular phonological alternation
2) forms <u>u</u> , <u>mi</u> , and <u>a</u> with <u>-ben</u> and comitative postpositions	2) <u>u</u> , <u>mi</u> , and <u>a</u> cannot occur as words
	3) irregular enclitic ordering (e.g., <u>ubi-mpi</u>)
	4) iterative use of <u>-bi</u> (e.g., <u>ubi-bi</u>)
	5) semantic bleaching of <u>-bi</u>
	7) loss of <u>u</u> in pronominal enclitics
	6) lack of ergative marking on <u>nuqui</u> , <u>miqui</u> , <u>mitso</u>
	8) suppletive genitive forms (e.g., <u>aton</u>)
	9) double-marked interrogative forms

The arguments *for* segmenting personal pronoun, discussed in the preceding two paragraphs, are fewer, but still very strong ones. The arguments against segmenting them are more numerous, and while some are less compelling, others are very strong. In what follows, I will elaborate and illustrate these nine properties. As I lay these arguments out in detail, the reader may feel like I am beating a dead horse, but it is important to be explicit here since other researchers have segmented these in their analyses (e.g., Fields 1973; Kneeland, 1982, 1996). Also, their cognates have been segmented for other Panoan languages, like Matis (Ferreira 2001) and Shipibo-Konibo, Wariapano, and Yaminawa (Valenzuela 2000). Furthermore, this discussion will serve as an illustration to make explicit the types of evidence I use for determining what forms in Matses are synchronically segmentable vs. lexicalized.

First, the phonological properties. The labialization of /n/ preceding /b/ is a regular morphophonological process (§2.6.1.3), so the [m] in forms like umbi do not represent phonological evidence for or against lexicalization. However, there is a rule in Matses that monosyllabic roots (sans a subset of verb roots) keep their stress when suffixed/cliticized (§2.6.5), as in (18). Odd-stressed (trochaic) words, however, are not

the preferred intonation type, and we find that lexicalized words, especially ones with open syllables, tend to conform over time to the even-stressed (iambic) pattern (§2.7.1), as have all the pronouns, as shown in (19).

- | | | | |
|-----------------------|---------------------|----------------|----------|
| (18a) [í-bi] | (18b) [á.bi] | (19a) [a.bi] | '4/3Abs' |
| <u>i</u> -bi | <u>a</u> -bi | (19b) [am.bi] | '4/3Erg' |
| stingray-Emph | there-Emph | (19c) [u.bi] | '1Abs' |
| 'the stingray itself' | 'right there/still' | (19d) [mim.bi] | '2Erg' |

The next sign of lexicalization is morphological. As will be seen in section 4.6, some of the noun phrase enclitics exhibit a strict relative ordering on the noun phrase. For example, size markers (-mpi 'small' and -dapa 'large') always come before the Emphatic enclitic -bi (20). But with the personal pronouns, no morphological material can be inserted preceding -bi (21)

- | | | |
|-------------------------|---------------------------|----------------------|
| (20a) <u>opa-mpi-bi</u> | (20b) * <u>opa-bi-mpi</u> | (21b) <u>ubi-mpi</u> |
| dog-small-Emph | | 1Abs-small |
| 'the little dog itself' | (21a) * <u>u-mpi-bi</u> | 'little ol' me' |

Also, enclitics generally do not occur iteratively (only -mbo/-quio can occur more than once on a word, but not adjacently), while -bi can occur with all the personal pronouns:

- (22) ad-quin-bi ambi-bi pe-e-c
do.thus-while:S/A>A-Emph **3Erg-Emph** eat-Npast-Indic
quen-en-shun abentséc-bi
get.used.to.-after:S/A>A alone-Emph
'Like that, it itself [the young puma] hunts, after getting used to being alone.'
A-IV 037 bēdi piu 17
- (23) ubi-bi-c cania-mbo cania-mbo ic-onda-bi
1Abs-Emph-Separ young.man-Aug young.man-Aug be-Dist.Past-1S
'But I [as opposed to the old men he was with] was truly a young man...'
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The next evidence of lexicalization is semantic: there is no emphatic meaning associated with /bi/ in the pronouns. With first-person pronouns this is harder to show because the use of full pronouns is itself associated with an emphatic discourse use (contrasting with the less marked pronominal enclitics). Similarly, -bi in fourth-person forms could be said to be associated with the co-referential meaning. But, where third person co-referential forms are obligatory, they have no co-referential meaning, and in the few positions where full first-person pronouns are obligatory, these are not associated with emphasis. More compelling are the second-person personal pronouns, which are almost always required overtly (imperatives and some question types being the exception), are not associated with any emphatic meaning. This is confirmed by the need to add an additional -bi to express emphasis, as in (22) and (23) above. This is borne out as well by the forms of the first-person pronominal enclitics: it would be odd that if only u (rather umbi and ubi) carried the first person meanings, that the segment u would be missing from the pronominal enclitics (-mbi, -bi, -i, -ni). Furthermore, it is not quite possible to assign the meanings ‘Ergative’ and ‘Absolutive’ to the n in -mbi ‘1A’ or the “-Ø” in -bi ‘1S’ and ‘-i’ ‘1O’ pronominal enclitics don’t quite follow an ergative-absolutive pattern like the full pronouns do (Table 4.7).

The last type of motivation for not segmenting these forms is unexpected behavior of a productive process. If case-marking of personal pronouns were a productive process, it would be hard to explain why nuqui ‘1+2’ should be consistently overlooked (agentiveness hierarchies would not predict it). While if the pronouns were set lexicalized forms, this would be easier to understand. Similarly, if case-marking of personal pronouns was a productive process, two suppletive forms would have to be simply listed for the genitive paradigm: cun ‘1 Genitive’ and aton ‘3 Genitive.’ And also,

interrogative and indefinite pronouns would appear to be case-marked twice by the same process (e.g., tsuda 'who: Absolutive' vs. tsundan 'who: Ergative').

In summary, description of these as lexicalized forms has two purposes. One is a practical one: simplicity of description. The second is to attempt to choose the analysis that appears to represent how speakers deal with these forms: as words to be built up and analyzable as composite forms, or as single units to be memorized. It is possible that speakers can have both analyses in their brains, or that both exist in the speech community, but even so, it is unlikely that both versions have identical status. As such, the evidence seems to suggest, at least as treated by the grammar, that these forms function as unitary elements. Nevertheless, linguists, and perhaps Matses at some level, recognize sub-morphemic quasi-segmentable elements in these forms that undoubtedly are a vestige of historical productive processes, just as in English we can identify *m* in *him*, *them*, and *whom* as associated with non-subject participants.

4.4.2 *Genitive and possessed pronouns*

Genitive pronouns can be considered personal pronouns in the genitive case, and as such, a subclass of personal pronouns. Genitive pronouns are not adjective-like, since adjectives always occur following nouns in noun phrases, while genitive pronouns always replace the genitive case-marked nouns (possessor) as the first element in a possessive noun phrase (§10.3). Genitive pronouns also share with the other personal pronouns the same patterns with respect to number (Table 4.9), but cannot be cliticized with -ben or be objects of quantitative postpositions. Although they all end in n, genitive pronouns cannot be readily segmented, as there is no correlate in the language for cu, and the form ato occurs elsewhere only as a quasi-segmentable element in non-human interrogative and indefinite pronouns (atoda, atotsi, atodabi, atotsibi). Note that while the ergative

inclusive first-person pronoun (nuqui) was unexpectedly not differentiated from the absolutive by a nasal, the genitive form is (Table 4.9) (the archaic second-person plural forms are excluded from this table due to lack of data).

Table 4.9. Genitive pronouns and genitive-possessee pronoun pairs.

Genitive pronouns			Genitive-possessed pronoun pairs	
<u>cun</u>	'my/our'	= 1 (+3Sg/Pl)	<u>cun-a</u>	'mine, ours'
<u>nuquin</u>	'our'	= 1+2Sg/Pl (+3Sg/Pl)	<u>nuquin-a</u>	'ours'
<u>min</u>	'your'	= 2Sg/Pl	<u>mitsana</u>	'yours'
<u>aton</u>	'his/her/its/their'	= 3Sg/Pl	<u>aton-a</u>	'his/hers/its/theirs'

To express notions similar to English *mine* or *yours* or Spanish *mio* or *tuyo*, a genitive pronoun is followed by the third-person possessee pronoun, -a, as shown on the right side of Table 4.9 (note that the second-person form is suppletive). The form -a is easily relatable to the third person form in a-bëd and a-ben (15a above), as well as the quasi-segmentable third-person pronouns (abi, ambi, aton, etc.), but this form is special in that it only occurs phonetically bound to genitive pronouns or to -n-marked genitive noun phrases. The examples in (24) illustrate how genitive pronouns replace -n-marked genitive noun phrases (the possessors; 24b), how -a replaces the second (unmarked) noun in the possessive noun phrase (the possessee; 24c), and how the whole phrase can be replaced by a combination of a genitive pronoun and the possessee pronoun (24d).

(24a) debi-n _____ chështe bed-tan-Ø
 Davy-Gen machete get-go-Imper
 'Go get Davy's machete!'

(24b) aton chështe bed-tan-Ø
 3Gen machete get-go-Imper
 'Go get his machete!'

(24c) debi-n-a _____ bed-tan-Ø
 Davy-Gen-3Poss get-go-Imper
 'Go get Davy's!'

(24d) aton-a _____ bed-tan-Ø
 3Gen-3Poss get-go-Imper
 'Go get his!'

In addition to genitive personal pronouns, there are also genitive interrogative pronouns (next section). More on possessive noun phrases can be found in section 10.3.1.

4.4.3 Interrogative and indefinite pronouns

Interrogative words in Matses do not compose a separate lexical class, but rather they can easily be assigned to the noun and adverb classes. They share a few unique grammatical features, like a tendency to occur first in interrogative sentences and co-occurrence with interrogative-inflected verbs, but otherwise interrogative nouns and interrogative adverbs behave quite differently from each other, and similarly to other roots in their respective lexical classes. For example, interrogative pronouns, like most nouns, take size (25a) and plural (Table 4.10) enclitics, can be modified by an adjective (25b), and occur with the copula *ne* (25a & 25b), while interrogative adverbs cannot (26).

- | | |
|--|---|
| <p>(25a) <u>atoda-mpi</u> <u>ne-e-c</u>
 what:Abs-small be-Npast-Indic
 ‘What is this little thing?’</p> | <p>(25b) <u>tsuda</u> <u>icsa</u> <u>ne-o-sh</u>
 who:Abs bad be-Past-3
 ‘What awful person was that?’</p> |
| <p>(26a) <u>mida</u> <u>ic-e-c</u>
 where be-Npast-Indic
 ‘Where is it?’</p> | <p>(26b) *<u>mida</u> <u>ne-e-c</u>
 (26c) *<u>mida-mpi</u> <u>ic-e-c</u>
 (26d) *<u>mida</u> <u>icsa</u> <u>ic-e-c</u></p> |

Interrogative adverbs differ from interrogative pronouns in that the former cannot be case-marked, and some interrogative adverbs can take adverbial transitivity agreement enclitics (27).

- (27) mitsi-shun-quio bë-o-Ø ‘Where did you bring it from?’
 where-Ev.Init:Tr-Aug bring-Past-Interr:1/2

For the most part, those morpho-syntactic properties that distinguish interrogative pronouns from most noun roots (e.g., inability to be prefixed or adjectivalized) are common to all the different pronouns.

Indefinite pronouns (e.g., ‘whoever,’ ‘whatever,’ ‘anything’) and indefinite adverbs (e.g., ‘however,’ ‘wherever’) are mostly derived from interrogative pronouns and interrogative adverbs with the enclitic *-bi*, which has a very general emphatic meaning (§4.6.8), including sometimes indefiniteness, comparably to the English ending *-ever* (28 & 29).

- | | | | |
|------|----------------------------------|------|--|
| (28) | <u>atoda-bi</u> <u>bed-tan-Ø</u> | (29) | <u>utsi-bo-bi</u> <u>chui-tan-Ø</u> |
| | what-Emph get-go-Imper | | other-Pl-Emph tell-go-Imper |
| | ‘Go get whatever/anything.’ | | ‘Got tell anyone/whomever (plural).’
[e.g., all those who might come] |

All the interrogative and indefinite nouns and adverbs are summarized in Table 7.9 in section 7.3.10; here, in Table 4.10, I list only the nominal ones, showing the different case-marking and number-making possibilities.

Table 4.10. Interrogative and indefinite pronouns in Matses.

	Absolutive		Ergative/Instrumental/Genitive ^a	
	Sg/Pl	Plural	Sg/Pl	Plural
human (‘who’):	<u>tsuda</u>	<u>tsuda-bo</u>	<u>tsundan</u>	<u>tsundan-bo</u>
	<u>tsutsi</u>	<u>tsutsi-bo</u>	<u>tsuntsin</u>	<u>tsuntsin-bo</u>
non-human (‘what’):	<u>atoda</u>	<u>atoda-bo</u>	<u>atondan</u>	<u>atondan-bo</u>
	<u>atotsi</u>	<u>atotsi-bo</u>	<u>atotsin</u>	<u>atotsin-bo</u>
definite (‘which one’):	<u>midacquid</u>	<u>midacquid-o</u>	<u>midacquid-n</u>	<u>midacquid-o-n</u>
	<u>mitsicquid</u>	<u>mitsicquid-o</u>	<u>mitsicquid-n</u>	<u>mitsicquid-o-n</u>
‘whoever/anything’:	<u>utsi-bi</u>	<u>utsi-bo-bi</u>	<u>utsi-n-bi</u>	<u>utsi-bo-n-bi</u>
‘whatever/anything’:	<u>atoda-bi</u>	<u>atoda-bo-bi</u>	<u>atondan-bi</u>	<u>atondan-bo-bi</u>
	<u>atotsi-bi</u>	<u>atotsi-bo-bi</u>	<u>atotsin-bi</u>	<u>atotsin-bo-bi</u>

^a Genitive indefinite pronouns do not seem to exist.

We note in Table 4.10 that interrogative and indefinite pronouns differ from personal pronouns in being able to take the plural marker -bo/-o (-o is a grammatically conditioned allomorph occurring on nominalizations ending in /d/). The enclitic -bo represents one of the first position classes on the noun phrase (see Table 4.17 in §4.6 below), so in segmentable nouns it occurs preceding the case markers and the emphatic -bi, and therefore it is useful for determining whether the terms in Table 4.10 have been lexicalized or not. The first thing we note from the location of -bo is that the Ergative/Instrumental/Genitive interrogative roots are not segmentable; this is supported by the fact that they contrast with the absolutive form in having not one but two nasals, appearing as if double case-marked. The indefinite pronouns, however, show no morphological signs of lexicalization with -bi, though there are some semantic motivations pointing toward partial lexicalization, which is, specifically, that the enclitic -bi ‘Emphatic’ imparts an indefinite meaning on only a limited number of nouns, adverbs and phrase types.⁹ However, unlike with the personal pronouns, the meaning of -bi is not bleached and if we consider something like ‘any’ to be an extended part of its meaning, there is little impediment to segmenting -bi in indefinite pronouns. Note that there are no genitive versions of the indefinite pronouns. This is evidently because the indefinite marker is preferred at the end of the noun phrase, as in (30), and genitive elements never occur at the end of a noun phrase.

- (30) utsi-n chompian-bi bed-Ø ‘Borrow anyone’s shotgun’
 other-Gen shotgun-Emph get-Imper

⁹ Looking at Table 4.10, one might have expected the human indefinite forms to have been tsuda-bi and tsutsi-bi, but these do not have an indefinite reading, but rather mean ‘who exactly’ or ‘who really.’

The definite (human or non-human) interrogative pronouns, midacquid/misticquid ‘which one,’ can be analyzed as the interrogative adverbs mida/mitsi ‘where,’ the contracted verb ic ‘be’ and the agent nominalizer -quid, meaning literally, ‘the one who is where.’ While this is the likely historical source, we note that one phonological sign of lexicalized contractions with ic is that they cannot be rephrased as phonologically independent words; i.e., mida ic-quid has only the literal locative meaning (‘where’) and not the ‘which one’ meaning. Additionally, morphological material cannot be inserted between the recognizable elements in the words, so midacquid and misticquid are best represented as single lexemes, despite the fact that they are composed of otherwise productive morphemes.

Another thing that demands elaboration in Table 4.10 is the pattern that many of the interrogative and indefinite pronouns come in pairs, one ending in da and another in tsi. This is the case as well for interrogative adverbs, and the status of tsi and da as productive morphemes vs. unproductive formatives is discussed in chapter 7 (§7.5.1). Here, suffice it to say that these forms were probably historically used in question word formation, but are presently neither synchronically segmentable nor consistently associated with any difference in meaning between the pairs. One might expect that these pairs would have different meanings, usages or socio-linguistic distributions. However, I have found no general patterns. Some speakers claim that the forms ending in tsi are older, others say the ones in da are, and yet other say this has nothing to do with it. I have not been able to resolve this with the data. Differences in usage or meaning are attested, but these are associated with particular forms in particular contexts, not as consistent patterns associated across forms with da vs. tsi. For example, when someone calls out your name to get your attention, or when you didn’t understand what someone

said, you answer back atoda ‘What?’; atotsi is not appropriate as a single-word utterance. Also, in some contexts, some speakers suggest atotsi requests more exact information than atoda, or expresses impatience, but in most situations, speakers say atoda and atotsi are completely interchangeable, have the same meaning and are equally appropriate. It is not inconceivable that in the future these will take on distinct meaning and functions, but at present the differences are few, minor, and idiosyncratic.

Interrogative syntax, along with non-question uses of interrogative pronouns, is discussed in section 11.9. Here, I conclude this section with one usage of interrogative pronouns that struck me initially as odd: the use of either the human interrogative form or the non-human form to ask someone their name:

- | | | | |
|-------|-----------------------------------|-------|------------------------------------|
| (31a) | <u>tsuda</u> <u>cuëmëd-e-Ø</u> | (31b) | <u>atoda</u> <u>cuëmëd-e-Ø</u> |
| | who:Abs be.named-Npast-Interr:1/2 | | what:Abs be.named-Npast-Interr:1/2 |
| | lit. ‘Who are you called?’ | | ‘What are you called?’ |

4.4.4 Demonstrative pronouns

Demonstrative pronouns can be considered a type of third-person pronoun, but while the Matses third person personal pronoun (-Ø) has an anaphoric function of simply standing in for an established participant (or can be used as an impersonal pronoun), demonstrative pronouns establish their referent by drawing attention to its spatial location in relation to the speech act. They also have discourse functions (back-reference and presentational), also with the speech act as the deictic reference point. Matses demonstrative pronouns, listed in Table 4.11, form a “person oriented three-term system” for expressing spatial deixis (as opposed to a *distance* oriented three-term system, like Spanish *este*, *ese* and *aquel*; Anderson and Keenan 1985:282).

Table 4.11. Demonstrative pronouns.^a

Pn	Spatial deictic meaning	Discourse meaning
<u>nēid</u>	this one/these ones (near 1 st person)	this one/these ones I'm about to mention
<u>aid</u>	that one/those ones (near 2 nd person)	that one/those ones just mentioned
<u>uid</u>	that one/those ones (not near 1 st or 2 nd person)	

^a These are all ambiguously singular/plural, but the enclitic -o (allomorph of -bo 'Plural') can be attached to specify plurality.

The demonstrative pronouns are clearly historically derived from the (unproductive) formative ed 'Nominalizer' (§4.7.8) and the (productive) demonstrative adverbs (described in §7.3.3; Table 7.3 is reproduced here as Table 4.12 for ease of comparison). There is also clearly a relationship between demonstrative pronouns/adverbs and manner adverbs (Table 4.13), but the historical process and direction of derivation are unclear to me at the present.

Table 4.12. The three demonstrative adverb roots and their polysemous meanings.

Root	Demonstrative spatial meanings	Non-demonstrative spatial meanings	Temporal meanings
<u>nē</u>	'here (near 1 st person)'	'near'	'now, today, soon'
<u>a</u>	'there (near 2 nd person)'	—	'presently, then'
<u>u</u>	'there (not near 1 st or 2 nd person)'	'far'	—

Table 4.13. Demonstrative functions of pro-adverbs.

Adverb	Spatial	Temporal	Discourse	
<u>nad</u>	'like this'	near speaker	after speech act	about to be mentioned
<u>ad</u>	'like that'	far from speaker	before speech act	previously mentioned

Table 4.14. Comparison of basic meanings of demonstratives and personal pronouns.

Demonstrative adverbs		Personal pronoun historical elements	
<u>n</u> ë	'here (near 1 st person)'	ë	'1 st person' (now pronounced <u>u</u>)
<u>a</u>	'there (near 2 nd person)'	<u>mi</u>	'2 nd person'
<u>u</u>	'there (not near 1 st or 2 nd person)'	<u>a</u>	'3 rd person'

Another worthwhile comparison is between these forms and the personal pronouns (Table 4.14). The first thing to note in Table 4.14 is that there are two a forms, but one might have expected the proximal-to-second-person adverb to match the second-person personal pronoun instead of the third-person one. If they are historically related, it is unclear how. I do note that there is a link between the back-reference (third-person) meaning of the adverb a, and the anaphoric function of the pronoun a. The other identical formal match, that between the two u forms, is probably coincidence, since the first-person element was historically ë, not u. However, the vowel shared between në 'Proximal to 1' and ë '1' suggests a more likely connection.

The basic meaning of these demonstrative pronouns seems to be spatial, with their use generally accompanied by pointing with a hand, chin, direct gaze, or some more subtle means, such as simply timing in response to a person or entity entering the scene. Note that these forms can simply stand in as a noun phrase (32) or a nominal element in a noun phrase (34), or they occur as an apposed noun modifying another noun (33 & 35), and thus do not have to occur adjacent to the noun (35), as in adjective-noun noun phrases or typical noun-noun noun phrases (see §10.3 on noun phrases). Matses does not have definite articles (like English *the*), so demonstrative pronouns as used in (33) are the closest overt markers of definiteness of a full noun.

- (32) beccho-Ø aid
give.me-Imper **that.one**
'Give me that one (by you).'
- (33) uid chështe bed-tan-Ø
that.one machete get-go-Imper
'Go get that machete (over there).'
- (34) nëidën bënë iso
nëid-n bënë is-o-Ø
this.one-Gen husband see-Past-Imper
'Have you seen this one's husband?'
[pointing to an old woman sitting in the
room, question made while telling story]
+ K-XXII 003 chema 030
- (35) ma min champi nëid
how.about 2Gen daughter this.one
'How about your daughter, this
one here?' (I asked).'
+ K-XXII 006 chema 055

Unlike their adverb counterparts, the demonstrative pronouns do not seem to have a clear temporal function, but they do have discourse functions. The pronoun aid has a back-reference function: it is used to refer back to a recently-mentioned person or entity, usually in the preceding sentence (36), but also has a sort of rhetorical function of mentioning a person or entity, pausing (thereby relegating it to the sentence margin), and then heading the sentence with aid (37).

- (36a) padnuen chëshëid utsi ania-tsëc-quo tsad-quid
by.contrast spider.monkey other small-Dim-Aug sit-Hab
'By contrast, another type of spider monkey is very small.'
+ A-I 053 chëshëid 10
- (36b) aid matses-n tsidu ca-e-c
that.one Matses-Erg small.spider.monks call-Npast-Indic
'Matses call those (the small type of spider monkey mentioned in 36a) "tsidu".'
+ A-I 053 chëshëid 11
- (37) cuesban piu aid intac chish-quid ne-e-c cuesban piu
bat red **that.one** blood suck-Agt.Nzr be-Npast-Indic bat red
'A red bat... that one is one that sucks blood... a red bat.'
C-V 016 cuesban 17

The pronoun nëid has a presentational function, as in English, *It happened like this*: (38).

(38a) dunu nibəd-o-sh nēid ted ic-o-sh que-onda-sh
 man's.name not.be-Past-3 this.one as.many.as be-Past-3 say-Dist.Past-3
 "‘There isn't a Dunu (among my people), these (the following) are all there are:’
 he (the Dēmushbo) said.’"

+ K-XXII 005 chema 046

(38b) tudu ic-e-c mēo ic-e-c
 man's.name be-Npast-Indic man's.name be-Npast-Indic
 'There is a Tudu, there is a Mēo... [lists several more names].'

+ K-XXII 005 chema 047

4.4.5 Morphological possibilities of pronouns

Pronouns have most of the morphological possibilities of full nouns. A significant exception is the inability to be reduplicated. Noun adjectivalization is accomplished by reduplication, so this means pronouns cannot be adjectivalized. Pronouns cannot be prefixed. Except for the interrogative and indefinite pronouns, pronouns cannot take the plural enclitic -bo (§4.6.1.1). Otherwise, all the noun phrase enclitics are fair game. Note, however, that because the personal and interrogative pronouns are already case-marked, they will not take additional case-making enclitics (in the expected position or elsewhere). As mentioned above, for personal pronouns the bi ending is simply ignored and the enclitic -bi can be attached additionally at the expected spot. As mentioned above, the third-person zero pronouns cannot take any enclitic. Similarly, the first-person pronominal enclitics (-mbi, etc.) cannot take any of noun-phrase enclitics, so if one wishes to modify a first-person pronoun, the full pronoun must be used instead or in addition to the first person pronominal enclitic.

4.4.5.1 -ben 'alone, in vain, for no reason'

There is one pronoun-specific enclitic, -ben, which only occurs with personal pronouns, sans nuqui and the archaic second-person plural pronouns. It never occurs

without another enclitic following it, and depending on which of the three enclitics follows it, it takes on different, but related meanings:

Table 4.15. The different meanings of -ben.

Suffix Combination	Meaning	Gloss of second suffix
<u>-ben-tsēc(-bi)</u>	‘alone’	<u>-tsēc</u> ‘Diminutive’
<u>-ben-bi</u>	‘for no good reason’	<u>-bi</u> ‘Emphatic’
<u>-ben-quio(-bi)</u>	‘in vain’	<u>-quio</u> ‘Augmentative’

The examples in (39) contrast the use of these meanings along with the similar meaning imparted by simply adding -bi, which can usually be translated into English as *-self* with pronouns, but in the emphatic sense, not the reflexive sense.¹⁰

- | | |
|--|---|
| (39a) <u>mi-ben-tsēc</u> cho-ac
2-alone-Dim come-Infer
‘You came by yourself.’
(i.e., alone) | (39b) <u>mi-ben-quio-bi</u> cho-ac
2-alone-Aug-Emph come-Infer
‘You came in vain.’ (e.g, the person
you were going to hunt with didn’t wait) |
| (39c) <u>mi-ben-bi</u> cho-ac
2-alone-Emph come-Infer
‘You came for the hell of it.’
(i.e., without a real purpose) | (39d) <u>mibi-bi</u> cho-ac
2Abs-Emph come-Infer
‘You came yourself.’ (i.e., by your own
will, so don’t act like I asked you to) |

As mentioned above, these take ergative marking preceding -ben:

¹⁰ I.e., it works for English sentences like *I cut it myself* but not *I cut myself*. Reflexive constructions are accomplished by the verbal derivational suffix -ad (§§5.3.1.1, 11.6) and the absolutive personal pronouns are used in these valence-decrease clauses, since there are no special reflexive pronominal forms.

- (40) a-n-ben-bi daësh-quid bëchun ushu ne-e-c
 3-Erg-alone-Emph eat.gnawing-Agt.Nzr capuchin.monkey white be-Npast-Indic
 ‘The white-fronted capuchin is one that gnaws [cobisan palm fruits] for no particular reason (i.e., it is not very good food, but it gnaws it anyway because it is mischievous).’

A-IV 046 bëchun ushu 25

For the third person, these take on lexicalized or semi-lexicalized adverb or adverb-like forms. For example, ambembi in (40) does not really take the place of the third-person participant, this is even more apparent in (41a; an optional variant of 41b, I’m not sure if there is any difference), but the word is still analyzable and does not take on any adverbial morphological properties.

- (41a) a-n-ben-bi mimbi na-o-c (41b) mi-n-ben-bi na-o-c
 3-Erg-alone-Emph 2Erg do-Past-3 2-Erg-alone-Emph come-Past-3
 ‘You did it for no good reason.’ ‘You did it for no good reason.’

The form abentsëc, however, is completely lexicalized as a quantitative adverb meaning ‘one’ or ‘only one’ (§7.3.7), and even takes adverbial transitivity agreement enclitics (42a). Note, however, that it co-exists with its unlexicalized counterpart (42b).

- (42a) abentsëc-shun pe-o-sh (42b) a-n-ben-tsëc-bi pe-o-sh
 one-Ev.Init:Tr eat-Past-3 3-Erg-alone-Dim-Emph eat-Past-3
 ‘Only one ate.’ ‘He ate alone.’

The common pattern is for forms with -ben to take -bi word-finally, especially forms with -tsëc and -quio to (43).

- (43a) në-mbo-bi-da mi-ben-tsëc-bi ush-e-Ø
 here-Aug-Emph-Uncert 2-alone-Dim-Emph sleep-Npast-Interr:1/2
que-onda-sh
 say-Dist.Past-3
 ‘“Are you going to sleep here alone?” he asked me.’

+ K-XXII 010 chema 099

- (43b) ai u-ben-tsēc-bi ush-e-bi ca-onda-mbi
 yes 1-alone-Dim-Emph sleep-Npast-Emph say-Dist.Past-1A
 “‘Yes, I’m going to sleep alone,” I said.’

+ K-XXII 010 chema 100

4.4.5.2 *-a* ‘first’

The suffix *-a* is just a grammatically-conditioned allomorph of *-ba* ‘first’ (§4.6.7)

that is used with personal pronouns:

- (44) ubia mene ‘Give one to me first!’

ubi-ba mene-Ø
 1Abs-first give-Imper

- (45) adnubien tsutsi ne tsutsi ne mimbia

adnubien tsutsi ne-e-Ø tsutsi ne-e-Ø mimbi-ba

then who be-Npast-Interr:1/2 who be-Npast-Interr:1/2 2Erg-first

chui mimbia chui quiondash tsutsi ne

chui-Ø mimbi-ba chui-Ø que-onda-sh tsutsi ne-e-Ø

tell-Imper 2Erg-first tell-Imper say-Dist.Past-3 who be-Npast-Interr:1/2

‘Then, “Who are you? Who are you? You tell first! You tell first!” they (the

Dēmushbo) said...”Who are you?’’

+ K-XXII 003 chema 029

4.5 Prefixes

Matses nouns can take prefixes. These prefixes can be divided into two categories. The first is a closed set of 28 body-part or locative orientational prefixes. The other category is composed of only two prefixes, which modify the noun meaning ‘nearly’ and ‘false’.

4.5.1 *Body-part prefixes*

Body-part prefixes are used very productively and commonly with verbs and adjectives (especially color adjectives). With nouns, they are used to a more limited

extent, and many of the examples I have could be considered lexicalized terms. With verbs, prefixes appear to form a type of compounding or noun incorporation, but it can be clearly shown that this is not the case, and that they rather act as adverbial locative orienting prefixes (§§5.4.1, 11.5.4). With adjectives, they modify the adjective (the adjective's lexical class is unchanged, as in English *red-headed*; §6.5.1). With nouns, prefixation is more compound-like than with verbs, but the prefixes still should not be considered allomorphs of their corresponding body-part terms. This is because prefixes do not always have a corresponding cognate body-part term: i) body-part terms generally have a more restricted meaning and/or different meanings than their corresponding prefixes (e.g., ana 'tongue, mouth, palm (of hand), sole (of foot)' vs. an- 'mouth, inside, underside, concave surface,' or dada 'body, torso, man, trunk/stem, large stream' vs. da- 'torso, trunk/stem, arrow shaft, outer surface, perimeter, side' or bē- 'eye, forehead, face' vs. bētante 'forehead, face, *eye'); ii) some body-part nouns do not have corresponding formally-related prefixes (e.g., ēshē 'eye,' dēshbi 'finger/toe,' shui 'penis'); iii) some prefixes do not have corresponding body-part nouns (e.g., sha- 'crotch'); iv) the form of the prefix cannot always be predicted from their corresponding full nouns (e.g., cui- 'jaw, edge' from quiate 'jaw,' or pē- from podu 'arm, wing, leaf, frond'; and v) comparative evidence with Matis (from Ferreira 2001; orthography adapted to match Matses orthography), which has essentially the same set of prefixes but often different full terms, suggests that the prefixes are older than some of these full terms (Table 4.16).

Table 4.16. Prefixes, including formally similar Matses and Matis full nouns (n = 28).

Prefix	Gloss	Matses noun	Matis noun
<u>an-</u>	mouth, inside, underside, concave surface	<u>ana</u>	<u>ana</u>
<u>bē-</u>	face, eyes, front, surface	<u>bētantete</u> ‘face’	<u>bēdu</u> ‘eye’
<u>da-</u>	torso, trunk/stem, arrow shaft, outer surface, perimeter, side	<u>dada</u>	
<u>dan-</u>	knee	<u>danësh</u>	<u>danbēdu</u>
<u>dē-</u>	nose, front, tip, prow, beak, bill	<u>dēbiate</u>	<u>dēshan</u>
<u>ēc-</u>	lips, labia, edge of round thing or opening	<u>ēcbid</u>	<u>ecuit</u>
<u>ësh-</u>	seed	<u>ëshē</u>	
<u>in-</u>	tail, penis	<u>incuenta</u>	<u>ina</u>
<u>ca-</u>	back, roof, convex surface, keel, bow back	<u>cacho</u>	<u>cashoco</u>
<u>cui-</u>	jaw, edge, gunwale	<u>quiate</u>	
<u>cuis-</u>	thigh	<u>cuishchipa</u>	
<u>ma-</u>	head, fruit, top, blunt end of single bit ax head, ground surface, apex of roof	<u>mapi</u>	<u>masho</u>
<u>mē-</u>	hand, forearm, branch	<u>médante</u>	<u>mèkèn</u>
<u>nac-</u>	abdomen, half	—	
<u>nē-</u>	in water, in fire	—	
<u>pa-</u>	ear, antler, edge of swidden, pot handle	<u>pabiate</u>	<u>paushan</u>
<u>pan-</u>	temple	<u>pampara</u>	
<u>pē-</u>	upper arm, front leg, wing, branch, leaf, frond	<u>podo</u>	<u>podo</u>
<u>po-</u>	belly, trunk swelling, middle of tree trunk	<u>pobid</u>	<u>pobid</u>
<u>sha-</u>	crotch, crown, ^a crownshaft ^b	—	
<u>shēc-/shē-</u>	teeth, arrowhead, spearhead, (crab) pincer	<u>shēta</u>	<u>shita</u>
<u>shic-</u>	ribs, house rafters	<u>shictodo</u>	
<u>ta-</u>	foot or ankle, root, base	<u>taë</u>	<u>taë</u>
<u>tac-</u>	underside (of four-legged animal), bow belly	<u>tacbid</u>	
<u>tan-</u>	cheek	<u>tanshucu</u>	
<u>tē-</u>	neck, foreshaft, ^c leaf sheath, ^d peduncle ^e	<u>tēnidte</u>	
<u>tsi-/chi-</u>	butt, arrow notch, end, stern, vulva	<u>tsitsu/tsien</u>	<u>tsitsu</u>
<u>ui-</u>	shin/calf, buttress root, base of tree trunk	<u>uipu</u>	

^a In dicot trees, where branches begin to branch off; in palms, where the fronds emerge.

^b A cylindrical section at the top of the trunk of some palms composed of closed sheaths.

^c Matses arrows have a short hardwood section joining the head and the main shaft.

^d The proximal part of a palm frond by which the frond is attached to the trunk.

^e The “branch” to which fruits/flowers or flowering branches are attached in all palms.

The noun root that I most frequently encounter with prefixes is bu ‘hair’ (46), but prefixes occur with plenty of other nouns (e.g., 47 & 48).

- (46a) cui-bu (46b) sha-bu (46c) shic-bu (46d) podo an-bu
 jaw-hair crotch-hair chest-hair arm under-hair
 ‘beard’ ‘pubic hair’ ‘chest hair’ ‘armpit hair’

- (47) aid shapesh-bi pisid daëdca-quid chido-n shubu
 that.one unopened.fronde-Emph woven.mat plait-Hab woman-Erg house
an-quënë-ua-nun
 inside-enclosure-Vzr:make-Purp:S/A>A
 ‘Women weave that same one’s unopened fronds [into mats] in order to make the
 inner house enclosures.’

A-I 012 budëd 10

- (48) tambisëmpi yama niste ta-shëcuë-n ic-quid ne-e-c
 small.rodent climbing.rat palm.species root-hole-Loc be-Agt.Nzr be-Npast-Indic
 ‘The climbing rat is one that is found in niste palm root cavities.’

1-p43-B yama 01

4.5.2 Human-modifying suffixes: pash- ‘nearly’ and bësh- ‘false’

In addition to the body-part/location prefixes, there are two other prefixes that occur on nouns, but much more restrictedly. As mentioned in section 4.3.1, kinship terms are unique grammatically in several ways, and we find that the only roots in the language that can occur with the prefix pash- ‘nearly’ are kinship cross-relative terms, which happen to also refer to affines (in-laws). The prefix pash- is attached to an in-law term when a person expected to be married to someone and for some reason it did not work out. Those people who would have been in-laws can then optionally refer to each other as in(49) and (50). I hear it used mostly among men, usually in a joking manner.

- (49) pash-dauës ‘Hey, almost older bother-in-law!’
 nearly-older.brother.in.law

- (50) cun pash-caniua ne-e-c
 1Gen nearly-younger.brother.in.law be-Npast-Indic
 ‘He is my would-have-been younger brother-in-law.’

The prefix bësh-¹¹ is mostly used as a de-intensifier with verbs and adjectives (§§5.4.2, 6.5.2). Some speakers do not allow it to be used with nouns at all, but other speakers do, usually also in joking manner, but sometimes as a criticism (51 & 52).

- (51) bësh-dauës ‘Hey, false brother-in-law!’
 false-older.brother-in-law [i.e., doesn’t follow kinship-based obligations.]
- (52) bësh-edmanu ne-e-c ‘He is a false Christian’ [i.e., carries a bible,
 false-Christian be-Npast-Indic but is greedy, dishonest, etc.]

Not all speakers use bësh- and pash- with nouns.

4.6 Noun Phrase Enclitics

Post-root nominal morphology is composed solely of enclitics, since these forms occur at the end of the last element of the noun phrase (regardless of which word in the noun phrase is the head), be it a noun, adjective, particle, etc. (53 & 54; relevant noun phrases in square brackets).

- (53) dadpen cuesban ic-e-c [cuesban chëshë]-mpi cuesban ushu
 many bat be-Npast-Indic bat black-small bat white
 ‘There are many bats: little black bats, light-colored bats.’
 E-XI 049 cuesban 18
- (54) aid [matsu utsi]-mpi-n-bi tëchu-mpi-n ac-beded-quid
 that.one pot other-small-Inst-Emph water.jar-small-Inst drink-Coll:A-Hab
 ‘They drink from another type of small pot, from little water jars.’
 A-IX 013 tëchu 12

¹¹ The historical origin of these prefixes is unknown to me. A highly speculative guess is that they are related to the nouns pashu ‘deaf (partly or complete)’ and bëshu ‘blind (partly or completely.’

But note that lexicalized terms involving enclitics cannot have the enclitic moved to the end of the noun phrase when modified by a post-nominal element like an adjective:

- | | | | |
|-------|---|-------|---|
| (55a) | <u>bēdimpi</u> <u>icsa</u>
ocelot bad
‘awful ocelot (small spotted feline)’ | (55b) | <u>bēdi</u> <u>icsa-mpi</u>
jaguar bad-small
‘awful small jaguar’ |
|-------|---|-------|---|

Barring these lexicalized instances, Table 4.17 shows the relative order of the noun phrase enclitics. We can talk about two subcategories of morphemes: “entity-modifying enclitics” and “clausal/discourse enclitics.” Roughly speaking, the entity modifiers are the ones closer to the verb (position classes 1, 2 and sometimes 6 and 7), which have in common that they function like adjectives, modifying the referent of the noun phrase. Most of these entity-modifying enclitics (specifically -mpi, -dapa, -bo, -ado and the non-nominalizing usage of -sio) are restricted to nouns and noun phrases, and thus help distinguish nouns from other lexical classes. These also differ in that they are more often involved in lexicalizations (like the one in 55a). The case markers in position class 5, which have a grammatical function, are likewise also restricted to nominal elements. The rest, the clausal/discourse enclitics, which are functionally similar to clausal or phrasal adverbs, can all occur on adjectives, adverbs, and postpositions. Therefore, those who wish to understand any one of the enclitics presented here in more detail should consider as well the corresponding descriptions in the adjective, adverb, and postposition chapters.

Table 4.17. Relative positions of noun phrase morphology.

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	10	11	12	13	14
- <u>bo</u>	- <u>mpi</u>	<u>chedo</u>	- <u>n</u>	- <u>uid</u>	- <u>mbo/-quio</u>	- <u>shē</u>	- <u>ba</u>	- <u>bi</u>	- <u>di</u>	- <u>en</u>	- <u>penquio</u>	- <u>da</u>	- <u>mbi</u>
- <u>ado</u>	- <u>dapa</u>		- <u>∅</u>		- <u>tsēc</u>		- <u>tseu</u>	- <u>c</u>	- <u>shenda</u>				- <u>bi</u>
- <u>sio</u>	- <u>pa</u>				- <u>pambo</u>								

1. Plural, dear/
Characterizer

2. size

3. et cetera/too

4. case, postpositions

5. only (followed by 6 or 9)

6. Augmentatives, Diminutive

7. Augmentative (follows 6)

8. Sequential

9. Emphatic

10. Same, Separate (follow 9)

11. Contrast, Mirative

12. Negative

13. Uncertainty

14. 1st Person pronouns (with 13)

Note: the particle chedo (and sometimes -penquio) is not phonologically attached to the root or enclitic that it follows, but is attached to the enclitics it precedes.

Despite the large number of position classes, nouns generally only carry 1-3 enclitics, very seldom more than five, the arrangement in Table 4.17 should not be seen as describing the structure of a typical noun, but of the general order in which the different enclitics occur when they do occur together on a word. The particle chedo ‘et cetera/too’ (and occasionally -penquio ‘Negative’) is not phonologically attached to preceding material, and therefore is not really nominal morphology, but it occurs among the enclitics, so it is important to list it in Table 4.17. But its full description is to be found in chapter 9. The relative order of the enclitics in Table 4.17 is not completely fixed. In most cases, the relative order of the enclitics is somewhat flexible, but often particular orders are nevertheless preferred. Table 4.17 reflects these preferred orders. Numbers in parentheses indicate position classes that exhibit flexible relative order. Enclitics listed in the same column occur in paradigmatic contrast, and cannot co-occur. The enclitic -mbo/-quio is the only enclitic that may occur more than once in the word (but never adjacently). The order of some pairs of enclitics (e.g., -bi and -di) cannot be reversed; otherwise the general trend is that the further apart two enclitics are in Table

4.17, the less likely speakers are to approve a noun phrase or word with those two enclitics' relative order reversed. Some enclitics only occur with an enclitic(s) from another position class—this is specified below the table as, for example, “(follows 9),” meaning that this enclitic only occurs with enclitics in position class 9. The subsections of the present section discuss each of these position classes in turn.

4.6.1 *Plural markers and -sio 'dear'/'Characterizer'*

The three enclitics in this position class, -bo 'Plural,' -ado 'Plural: Category extension,' and -sio 'dear'/'Characterizer' are mutually exclusive (-sio may not directly code singularity, but it is one of the few enclitics that requires singular referents). The enclitics in this position class are either exclusive to nouns with human referents (-ado), or they have different meanings with human referents than with non-human referents. The position of -sio and -ado as the first enclitic in a noun phrase is fixed, but -bo may occur before or after the size enclitics (-mpi and -dapa) without any change in meaning or strong preference for relative order.

4.6.1.1 *-bo 'Plural'*

The enclitic -bo may be optionally attached to any noun that refers to humans (excluding personal pronouns) to specify that the referent involves a homogenous category (56). It also occurs (less commonly) with non-human referent to specify a heterogeneous category (57 & 58).

- (56) abitedi-mbo uënës-bud-ne-ac mëdin-bo aid
 all-Aug die-Dur-Distr-Narr.Past deceased.person-Pl that.one
 'All of them have died off, the now-deceased ones... those ones.'

+ K-XXII 014 chema 134

- (57a) chompian-bo 'different types of shotguns'/'shotguns, etc.'
 shotgun-Pl

- (57b) poshto-bo 'woolly monkeys and other types of monkeys'
woolly.monkey-PI
- (58) padnuen sinnad utsi-bo mannan-n-quo cani-quid
by.contrast palm.genus other-PI hill-Loc-Aug grow-Hab
'By contrast, other kinds of sinnad palms grow deep in the hills [upland forest].'
A-I 009 sinnad 12

The use with non-human referents is essentially equal to using the 'et cetera' particle chedo (§§4.6.3; 9.3.1), and speakers generally prefer to use chedo instead of -bo in these cases.

With human referents, -bo simply species plurality, and may indicate either a set of people in a group (59a), a category of people in general (59a & 60), or multiple people acting separately (59a & 61). To specify collective semantics, the verbal suffixes -cueded or -beded are used, optionally with or without -bo (59b).

- | | |
|---|--|
| <p>(59a) <u>chido-bo cho-e-c</u>
woman-PI come-Npast-Indic
'A group of women are coming.'
'Women (always) come.'
'Women are coming (one by one).'</p> | <p>(59b) <u>chido(-bo) cho-cueded-e-c</u>
woman(-PI) come-Coll:S/A-Npast-Indic
'A group of women are coming'</p> |
|---|--|

- (60) tsësio-bo-n-uid-quo sedudi pe-quid
old.man-PI-Erg-only-Aug nine.banded.armadillo eat-Hab
'Only old men eat nine-banded armadillos.'

A-I 048 sedudi 16

- (61) cun papa pado-bo-n cain-e-c
1Gen father deceased-PI-Erg wait-Npast-Indic
'My late father and my uncles wait for them [historical present].'

K-XXI 010 dëmushbo 35

In most cases, it is usual to simply leave -bo out and let the speaker figure it out from context, and if number is important, usually the speaker would use a quantitative adverb (daëd 'two,' tëma 'few,' dadpen 'many') instead to be more specific. In (61), note that

papa can refer to father’s brother as well, but this reference probably also includes other old men who were in other kinship categories, so this is an example of the plural marker being used to designate a group that could not be referred to with just the uncliticized root.

The enclitic -bo also occurs as part of clan names and the names of other Panoan groups (62). However, in these cases, the terms are lexicalized and can be used to refer to a single person (63). There is also the term tēbo, which means generically ‘clan,’ but I do not know of any root *tē.

- | | |
|--|---|
| (62a) <u>bēdi-bo</u>
jaguar-Pl
‘jaguar clan’
*’jaguars’ | (62b) <u>chancuēsh-bo</u>
toucan-Pl
‘toucan people’ (related group)
*’toucans’ |
| (63) <u>bēdi-bo ne-e-bi</u>
jaguar-Pl be-Npast-1S | ‘I am <u>bēdibo</u> ’ (i.e., of the jaguar clan) |

The enclitic -bo has a grammatically-conditioned allomorph, -o, that occurs only on nominalizations (lexicalized or not) that end in /d/ (64).

- (64) utsi-bo acate-n se-ad-e-c chodque-nushe
 other-Pl tree.toad.poison-Inst pierce-Pass-while:S/A>A rot-Fut:Poten:3
que-ash nes-en-quio ic-quid acate-n
 say-after:S/A>S bathe-Neg-Aug Aux-Hab tree.toad.poison-Inst
siadcuededquido matses
se-ad-cueded-quid-bo matses
 pierce-Pass-Coll:S/A-Agt.Nzr-Pl Matses
 ‘Others, when they have themselves pierced with tree toad poison say, “It might get infected,” so Matses that have been pierced (as a group) don’t bathe.’

4.6.1.2 -ado 'Plural: Category Extension'

The suffix -ado is used, to my knowledge, only with kinship terms to designate a category that includes the whole extended category. So, for example, while -bo might refer to just a subset of a kinship category, -ado specifies that all the members are being included, sometimes even including members in other similar categories.

- | | | | |
|-------|--|-------|---|
| (65a) | <u>cun</u> <u>chibi-bo</u>
1Gen younger.sister-Pl
'my younger sisters'
'my younger female parallel cousins' | (65b) | <u>cun</u> <u>chibi-ado</u>
1Gen younger.sister-Pl:Cat.Ex
'my younger sisters and younger female
parallel cousins (and others sisters, and
female cousins)' |
|-------|--|-------|---|

In this sense, -ado contrasts with the enclitic -mbo/-quio 'Prototype/Augmentative' and the particle icbo 'close (relative)' (see example 4 above for a paradigm). The marginal exception to the restriction to the used of -ado with kinship terms is with matses 'Matses/people/kinsmen/distant uncle' but only as it refers to one's kin in general:

- (66) ad-shun utsi chësh-shun aton matses-ado mene-quid
do.thus-after:S/A>A other carve-after:S/A>A 3Gen kin-Pl:Ex.Cat give-Hab
'After carving another one, he gives it to his fellow kinsmen.'

A-XIII 035 canti 13

4.6.1.3 -sio 'dear' or 'Characterizer'

The enclitic -sio has two disparate meanings. One is restricted to kinship terms and personal names as a term of endearment (67).

- | | | | | | |
|-------|--|-------|--|-------|--|
| (67a) | <u>mado-sio</u>
son-dear
'Dear (fat) son!' | (67b) | <u>baba-sio</u>
grandchild-dear
'Dear (fat) grandchild!' | (67c) | <u>debi-sio</u>
Davy-dear
'Dear (fat) Davy!' |
|-------|--|-------|--|-------|--|

Matses say that in addition to expressing affection, it means ‘fat,’ which is a complement in Matses, yet I have heard it used for even the skinniest people. It is way to be nice, if not accurate. The enclitic -sio can be used with any relation, for adopted or blood relatives, for people of any age or relative age, yet it seems to be more common for males. But in the vocative use, it is almost exclusively used for males (68) (baba ‘grandchild,’ which is not gender-specific, can be used in the vocative to refer to females, but it appears to be the only exception).

- | | |
|---|--|
| (68a) * <u>chuchu-sio</u> <u>cho-Ø</u>
older.sister-dear come-Imper
(‘Come, dear older sister!’) | (68b) <u>cun chuchu-sio</u> <u>cho-o-sh</u>
1Gen older.sister-dear come-Past-3
(‘My dear older sister came.’) |
|---|--|

While this use of -sio described above has a positive connotation, the other use of -sio can be a bit negative, meaning ‘someone who has/does X characteristically or too much.’ In this sense, it can be used with noun roots (69), nominalizations (70) and verbs (71). With nouns it creates a new type of word, rather than just modify the word.¹² With verbs, it functions as nominalizer.

- | | |
|---|---|
| (69a) <u>chësh-sio</u>
birth.mark-Charzr
(‘someone with many birthmarks’) | (69b) <u>quiud-sio</u>
lip.ornament-Chrarzr
(‘woman who always wears a lip ornament’) |
| (70a) <u>chui-quid-sio</u>
tell-Agt.Nzr-Charzr
(‘tattle tale’) | (70b) <u>chu que-quid-sio</u>
hot say-Agt.Nzr-Chrazr
(‘someone who always complains that it’s too hot’) |
| (71a) <u>shad-sio</u>
yawn-Charzr.Nzr
(‘someone who always yawns’) | (71b) <u>isun isun-sio</u>
redup urinate-Charzr.Nzr
(‘someone who pees all the time’) |

¹² The root tsusio ‘old man’ may have originated this way, but there is no synchronic form *tsu.

Only a subset of speakers allows nominalizations with -sio to be created as in (71); this is discussed later in the chapter in the section on nominalization (§4.7.4.2).

4.6.2 Size Markers

Small size can be marked with the noun phrase enclitic -mpi (allomorph -ëmpi following consonants) ‘small,’ as in (72a) and (73). The antonym of -mpi is -dapa (allomorph -tapa following voiceless consonants and /d/), ‘large’ (72b & 74).

(72a) dada-mpi ‘little man’ (72b) dada-dapa ‘big man’
man-small man-large

(73) canti-mpi chedo titado chësh-quid
bow-small etc/too peach.palm carve-Hab
‘They carve peach palm wood into **kids**’ bows, too.’

A-I 008 titado 06

(74) aid aton mëntsis-dapa uinsad-pambo-shë ic-e-c
that.one 3Gen claw-large frightening-Aug-Aug be-Npast-Indic
nua-mbo-shë
large-Aug-Aug
‘That one, its **big** front claws are very frightening, very, very big.’

A-I 049 tsauesamë 09

With body-part terms, the form -pa can be used to mean ‘one with a big X’ (75 & 76).

(75a) mapi-pa (75b) dada pucu-pa (75c) *dada pucu-dapa
head-large.Charzr man belly-large.Charzr
‘big headed one’ ‘big-bellied man’

(76a) aton pucu-dapa se-o-sh (76b) *aton pucu-pa se-o-sh
3Gen belly-large.Charzr strike-Past-3
‘He hit him on his big belly.’

Body-part prefixes (§4.5.1) can be attached to adjectives, modifying them (77a; §6.5.1), but despite the adjective-like semantics of -mpi and -dapa, prefixes cannot be used with

them (78), which is reasonable considering that the forms in (78) would be missing a root, and all Matses words must contain a root.

- | | | |
|---------------------|-----------------------|-----------------------|
| (77a) <u>ma-piu</u> | (77b) <u>mapi piu</u> | (78a) * <u>madapa</u> |
| head-red | head red | (78b) * <u>mapa</u> |
| 'red-headed' (adj) | 'red head' (NP) | (78c) * <u>mampi</u> |

The enclitics -mpi and -dapa are typically used only with full nouns. Use with pronouns is acceptable, but considered somewhat unusual or only appropriate for joking:

- (79) mibi-mpi bun-en-quoio ic-tsia-sh ubi-dapa-en
 2Abs-small want-Neg-Aug Aux-Npast.Cond-3 1Abs-large-Contr
bun-tsia-sh
 want-Npast.Cond-3
 'She wouldn't want little you. Rather, she would want big me.'

Also, its use with a few quantitative adverbs, which are the most noun-/pronoun-like of the adverbs, is marginally acceptable, -mpi more marginally so than -dapa (80 & 81).

- (80) abichobi-dapa debi-n na ne-e-c
 whole-large Davy-Gen thing be-Npast-Indic
 'The whole big thing (e.g., a swidden) is Davy's.'
- | | |
|-----------------------------------|-----------------------------|
| (81a) <u>abentsëc-dapa</u> | (81b) ? <u>abentsëc-mpi</u> |
| one/alone-large | one/alone-small |
| 'one big one' / 'a big one alone' | 'one little ol' one' |

Also, a special construction type results when attached to postpositions (§8.6.13).

Perhaps the reader might have expected that I might have glossed these enclitics 'Diminutive' and 'Augmentative' instead of 'small' and 'large.' I have simply refrained from doing so to contrast them with other forms with less restricted semantics, such as -tsëc 'Diminutive' which can mean 'few,' 'Politeness' and/or 'Derogatory' in addition to 'small size' or -pambo 'Augmentative' which can refer to large size, as well as meaning

‘more’ or ‘more so.’ The enclitics -mpi and -dapa do have some non-size semantics: -mpi can be used as a term of endearment (‘dear’), and -dapa can be used to express respect or admiration (‘great’), without any implication about size (82 & 83).

(82) ada ubi abentséc mene-tsia-Ø buchi-mpi
 Uncert 1Abs one give-Npast.Cond-Interr: 1/2 older.brother-small
 ‘Would you please give me one, dear big brother?’

(83) adashic mëdin-bo-n tsésio-dapa-bo-n
 then:Intr deceased.person-Pl-Erg old.man-large-Pl-Erg
 ‘Then, after doing that, the now-deceased ones, the (great) old men...’
 + K-XXII 004 chema 037

Another way to express large size morphologically is with the form -amë ‘large.’

The form amë also exists as a noun root meaning ‘father’ (§4.3.1) and as an adverb meaning ‘large’ (84; §7.3.6). The adverb has become bound in some lexicalized forms (85), but not others (86). With productive usages, it is never bound to the noun it modifies (87). Therefore, we cannot really consider it a productive enclitic.

(84) quidiquidi amë-patséc achu camun ic-e-c
 house.cat large-Dim howler.monkey cat/dog be-Npast-Indic
 ‘Bush dogs [lit. howler monkey dogs] are a little bit larger than domestic cats.’
 1-p64-B achu camun 03

(85a)	[ʃiʔ.té.na.mí] <u>shëcten-amë</u> collared.peccary-large ‘white-lipped peccary’	(85b)	[níj.ʃa.mí] <u>nëish-amë</u> animal-large ‘tapir’	(85c)	[aʔ.tjá.mí] <u>acte-amë</u> river/stream-large ‘large river’
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(86)	[tʃa.wés a.mí] <u>tʃaues amë</u> armadillo large ‘giant armadillo’	(87)	[ʃiʔ.tén a.míʔ.kid] <u>shëcten amë ic-quid</u> collared peccary large be-Agt.Nzr ‘collared peccary that is large.’
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4.6.3 chedo 'et cetera/too'

The particle chedo can mean 'et cetera,' 'too,' or both at once to refer to some type of heterogeneous category (88 & 89). Note that chedo is not incompatible with -bo (90).

- (88) [mécueste chedo][tsatsin chedo][tambis chedo] pe-quid bédimpi
 agouti too acouchi too paca too/etc eat-Agt.Nzr ocelot
ne-e-c
 be-Npast-Indic
 'Ocelots are ones that eat agoutis, acouchis, pacas, and animals like that.'

A-IV 038 bédimpi 06

- (89) bacuê-bo chedo-n unca-quid uncate-n
 child-Pl etc/too-Erg paddle-Hab paddle-Inst
 'Children as well [i.e., in addition to adults] paddle with paddles.'

A-XIII 028 uncate 15

It is described in detail the particle chapter (§9.3.1), as well as in the phrasal syntax chapter (§10.9.1), so I will not say more about chedo here, other than to note that it occurs among the noun phrase enclitics in a relatively fixed relative position.

4.6.4 Case markers and Postpositions

At this position in the noun phrase, case markers or postposition enclitics can be attached to the noun root. These are listed in Table 4.18.

Table 4.18. Case markers and (phonologically-bound) postposition enclitics.

Enclitic	Meaning	Function	Participant type marked
-Ø	Absolutive	case marker	core argument
- <u>n</u>	Ergative	case marker	core argument
- <u>n</u>	Instrumental	case marker	peripheral participant
- <u>n</u>	Genitive	case marker	peripheral participant
- <u>bēd</u>	S Comitative	postposition	peripheral participant
- <u>bēta</u>	O Comitative	postposition	peripheral participant
- <u>bētan</u>	A Comitative	postposition	peripheral participant
- <u>bētan</u>	Instrumental Comitative	postposition	peripheral participant
- <u>n</u>	Locative/Temporal	postposition	oblique
- <u>no</u>	Locative/Directional (General)	postposition	oblique
- <u>mi</u>	Locative/Directional (Specific)	postposition	oblique
- <u>bi</u>	Comparative ('like')	postposition	oblique

Phonologically independent postposition roots also occur at this spot in the noun phrase.

The topics of case-marking, case-marking vs. postpositions, core arguments vs. peripheral participants, and postposition enclitics are discussed in detail elsewhere (§11.2.3, chapter 8). The issue is a bit complex, but I will try to sum it up here.

Essentially, case-marking enclitics specify a noun's syntactic relation to a predicate or construction type, which not only requires the noun, but imposes the type of case-marking that occurs on the noun (either -n or -Ø). The rest of the enclitics that occur in paradigmatic contrast with the case markers change the noun into a word that patterns grammatically like Matses adverbs. In other words, case markers categorize the noun syntactically, while postpositions essentially change the noun into an adverb. The postposition roots function essentially identically to the postpositional enclitics, with the exception that the roots are not phonologically attached to the noun (the postpositional object). Therefore, any enclitics that follow postpositions but not case markers (e.g., transitivity agreement suffixes) are not treated in this section.

One point that should be made here is that I consider postpositions (enclitics or free roots) to occur with nouns *instead* of the case marking¹³, not in addition to it. Therefore, it should be kept in mind that not every bare noun is by default in the absolutive case:

- (90a) shëcuë ëquëduc pueded-o-sh (90b) shëcuë-Ø is-o-mbi
 hole inside enter-Past-3 hole-Abs see-Past-1A
 ‘It went inside the hole’ ‘I saw the/a hole.’

4.6.5 -uid ‘only’

The enclitic -uid can mean ‘only’ in the sense of ‘excluding all other possible entities’ (91) or with a looser application of the ‘exclusion’ meaning, to mean ‘to an impressive extent’ (92a).

- (91) dada-n-uid-quo codoca-quid buid ‘Only men cook pitch.’
 man-Erg-**only**-Aug boil-Hab pitch
A-XIII 001 buid 20
- (92a) maues-uid-quo pe-quid ne-e-c
 army.ant-**only**-Aug eat-Agt.Nzr be-Npast-Indic
 ‘They (giant anteaters) are ones that eat a huge number of army ants.’ [literally:
 ‘only army ants,’ but note that they eat may other types of ants as well.]
A-IV 027 shaë 15
- (92b) *maues-uid pe-quid ne-e-c

This enclitic must always be followed by -quo ‘Augmentative’ -tsëc ‘Diminutive’ or -bi ‘Emphatic’ (92b). The differences in meaning of the different enclitic combinations can be subtle and varied, and since they cannot be compared with -uid alone, it is harder to elucidate the meaning. One meaning associated with -uid-bi, for example is ‘Contrast,’

¹³ Exception: some locative postpositions require human postpositional objects to be in the genitive case (§10.4.3).

one of the usual meanings associated with -bi (§4.6.9). This can be seen in series of sentences from a text about penis strings, cords that Matses used to tie their foreskins and then tie around their waists (93).

- (93a) nē-bi chotac ic-ac-no ic-cuēdēd-quid-n nē-bi
 now-Emph non-Indian be-Act.Nzr-Loc be-Coll:S/A-Agt.Nzr-Erg now-Emph
pisin tsiu-en-quio ic-e-c
 penis.string wear.on.waist-Neg-Aug Aux-Npast-Indic
 ‘Now, those that have been where the non-Indians are, now don’t wear penis strings.’

A-XIII 016 pisin 14

- (93b) dashcute-uid-bi tsiu-e-c
 clothes-**only**-Emph wear.on.waist-Npast-Indic
 ‘They wear only clothes, anymore.’

A-XIII 016 pisin 15

4.6.6 *Augmentatives and Diminutives*

The enclitic -mbo/-quio (these are allomorphs: -mbo follows vowels, and -quio consonants) indicates that the referent is a prototype of a category or that the referent is a true member of the category specified by the noun/noun phrase as opposed to a false, inferior or metaphorical member. As such, it can have a restricting effect (94 & 95) or an emphatic effect (96 & 97).

- (94a) shanu ‘male’s female cross cousin, male’s sister in law, sweetheart’
 (94b) shunu-mbo ‘male’s female **first** cross cousin’/‘**not-adopted** female cross cousin’/‘sweetheart one is **serious** about’

- (95a) matses ‘Matses, Matses-like Indians, Indians, humans’
 (95b) matses-quio ‘Matses’

- (96) bēchun cuididi-mbo ne-e-c
 capuchin.monkey naughty.one-Aug be-Npast-Indic
 ‘Capuchin monkeys are truly naughty ones.’

A-IV 001 bēchun 05

- (97) bacuë-mbo ic-onda-bi 'I was really a child back then.'
 child-Aug be-Dist.Past-1S

K-XXI 010 dëmushbo 40

The enclitic -mbo/-quio is one of the most frequently encountered morphemes in the language: it occurs even more frequently with adjectives (§6.6.2.1), adverbs (§7.6.4.1) and postpositions (§8.6.4.1). It occurs on reduplicated (= adjectivalized) nouns (§6.8.1), and functions to adjectivalize verbs by replacing verbal inflectional suffixes (§6.8.2).

While -mbo/-quio is common enough with noun phrases, the enclitics -tsēc and -pambo occur in a more restricted manner. Either can occur following the enclitic -uid 'only' (98); -pambo occurs only after -uid on nouns.¹⁴

- (98) chido-n-uid-tsēc-bi aid daëdca-quad
 woman-Erg-only-Dim-Emph that.one weave-Hab
 'Only women weave those [baby carrying straps].'

A-XIII 042 tote 12

The other places the enclitic -tsēc occurs is with interrogative pronouns (26 & 27 in §4.4.3) and with the pronoun-specific enclitic -ben 'alone' (§4.4.5.1).

The enclitic -shë is common with adjectives and adverbs, and, to a lesser extent, with postpositions to express a second level of augmentation (99a). With nouns, however, -shë is never encountered in texts, and even those speakers who allow it say it sounds unusual in most cases, but say they can understand perfectly well what it is supposed to mean (99b). Therefore, -shë is only marginally part of the repertoire of noun phrase enclitics.

¹⁴ -tsēc and -pambo are enclitics that are quite common with adverbials, so this restricted use on nouns leads one to speculate that a historical form uid may have been an independent adverb root that became bound over time to noun phrases, along with part of its repertoire of modifying morphology.

- (99a) ēnapen-quio-shĕ ic-e-c (99b) */?dada-mbo-shĕ ne-e-bi
 long-Aug-Aug be-Npast-Indic man-Aug-Aug be-Npast-Indic
 ‘It is very, very long.’ ‘I’m a real, real man.’

4.6.7 *Sequential order markers*

There are two enclitics which, when attached to a noun phrase, indicate the relative order in a series of repeated similar events in which the noun phrase participates. Specifically, -ba denotes ‘first’ (recall the grammatically-conditioned allomorph -a that occurs only on personal pronouns; §4.4.5.2) and -tsen ‘next’ (100 & 101).

- (100) aid-ba chui-nu dēmushbo
 that.one-first tell-Intent:1 Dēmushbo.Indians
 ‘I’m going to tell about that first, about the Dēmushbo.’

K-XXI 009 dēmushbo 16

- (101) ado-shun cacchish-tsen dectan-quad
 thus-after:S/A>A keel-next attach-Hab
 ‘After doing that [putting in the canoe’s seats], they attach the keel next.’

A-IX 014 cano 11

4.6.8 -bi/-i ‘*Emphatic*’

The suffix -bi and its phonetically-conditioned allomorph -i (-i follows consonants, -bi vowels) is one of the most commonly encountered and semantically and functionally complex morphemes in the language. It marks emphasis and two related meanings that could be considered subtypes of emphasis: identity (‘same’) and contrast/separateness. In (102), -bi has an emphatic meaning translatable as *even*.

- (102) matses-n aton tsien chedo-bi chompish pe-shun-quad
 Matses-Erg 3Gen vulva too-Emph small.two.toed.sloth eat-Appl-Hab
 ‘Matses eat **even** the vulva of the small two-toed sloth.’

A-IV 024 chompish 23

It can have an emphatic/identity meaning referring back to the preceding sentence (103), or simply an emphatic meaning translatable into English as *-self* (104). Note that first-person pronominal enclitics occur preferably *instead* of the full pronoun, but with the emphatic-marked pronouns (104b), double pronouns are the norm (cf. English translation). These pronominal forms were compared to those formed with -ben in section 4.4.5.1.

(103) aid ëshë-bi capa-n pe-quid
 that.one seed-**Emph** squirrel-Erg eat-Hab
 ‘Squirrels eat that **very same one**’s seed [palm Matses make penis string from].’
 A-I 006 shuccate pinchuc 06

(104a) debi-n-bi aton tied dëd-o-sh
 Davy-Erg-**Emph** 3Gen swidden cut.with.ax-Past-3
 ‘Davy felled his swidden **himself**.’ (rather than paying someone to do it for him)

(104b) umbi-bi cun tied dëd-o-mbi ‘I felled my swidden **myself**.’
 1Erg-**Emph** 1Gen swidden fell-Past-1A

In (105b), -bi expresses a contrast/separateness meaning, referring back to the preceding sentence (105a), emphasizing that the hind foot is like a Matses’, but the front ones are a very different story.

(105a) matses-n taë-bi-tsëc-ec taë ic-quid shaë-n taë
 Matses-Gen foot-like-Dim-Manr:Intr foot be-Agt.Nzr giant.anteater-Gen foot
 ‘The giant anteater’s hind feet are like a little person’s feet.’

A-IV 027 shaë 05

(105b) shaë-n mëdante-bi mëntsis ënapen ic-e-c
 giant.anteater-Gen hand-**Emph** claws long be-Npast-Indic
 ‘The front feet (by contrast) have long claws.’

A-IV 027 shaë 06

4.6.9 Second-level emphasis: -di 'Same' & -c 'Separate'

The 'Same' and 'Separate' meanings of -bi can be augmented by the enclitics -di and -c, respectively. These can only occur following -bi. The combination -bi-di implies sameness when there is repetition or duplicate actions or states, suggesting that, for example, an action is not only repeated, but repeated by the same person or with the same material, as in (106).

- (106) titado-bi-di cadquēd-ac-sho matses-n
 peach.palm-**Emph-Same** break-Infer-when:S/A/O>O Matses-Erg
chuca-ua-quin chësh-quid
 new-Vzr:make-while:S/A>A carve-Hab
 'When they break, Matses make new ones with that same peach palm wood.'
 A-XIII 035 canti 12

With the combination -bi-c, it is emphasized that the person/entity in question is to be considered separately. For example, in (107), the narrator, being a small boy at the time, hung back, while his older relatives interacted with a newly-encountered group of Indians. While there is always a 'Separate' meaning, there is not necessarily a sense of contrast with -c (108), but there often is, as with English *meanwhile*.

- (107) ubi-bi-c uanno tsiuec 'I (separately) further back behind them.'
 1Abs-**Emph-Separ** apart last
 K-XXI 010 dēmushbo 36
- (108) mimbi ayash tēs-ta debi-n-bi-c ayash-bi-di
 2Erg vine yank-Imper Davy-Erg-**Emph-Separ** vine-**Emph-Same**
 'You, collect ayash vines! **Meanwhile**, Davy will **likewise** (collect) ayash vines.'

The following series of examples illustrate the use of these forms further:

- (109a) cun shanu bēda-patsēc ic-quid ne-e-c
 1Gen sweetheart good-Dim be-Agt.Nzr be-Npast-Indic
 'My girlfriend is pretty.'

(109b) aton chibi-bi-c icsa-patsēc ic-e-c
 2Gen younger.sister-**Emph-Separ** bad-Dim be-Npast-Indic
 ‘Meanwhile, her younger sister is ugly.’

(109c) aton chuchu-bi-di icsa-patsēc ic-e-c
 2Gen older.sister-**Emph-Same** bad-Dim be-Npast-Indic
 ‘And her older sister is likewise ugly.’

4.6.10 Contrast and Mirative

The two enclitics that compose this position class are related semantically in that the mirative could be considered a sort of contrast, expressing a sudden finding that was counter to the speaker’s expectations. Both also have the syntactic property that the constituent on which they occur must come first in a clause. They are in the same position class because they occur in the same slot among the other enclitics and particles, and never co-occur.

4.6.10.1 *-en* ‘Contrast’

When the suffix *-en* occurs with a past-tense-inflected verb (that does not contain an uncertainty marker), two possible meanings can be ascribed to the sentence (110).

(110a) cachita-n-bi-en min opa ac-o-sh
 caiman-Erg-**Emph-Contr** 2Gen dog kill-Past-3
 ‘It was a caiman that killed your dog (not, e.g., an anaconda).’
 ‘It must have been a caiman that killed your dog (but I can’t be completely sure).’

(110b) cachita-n min opa ac-o-sh
 caiman-Erg 2Gen dog kill-Past-3
 ‘A caiman killed your dog.’ (the speaker saw it clearly as it happened)

In the first interpretation of (110a), as with (110b), the speaker clearly saw that it was a caiman (alligator-like crocodilian) that killed the dog, but in (110a) the speaker is

correcting another speaker's report. In the second interpretation of (110a), the speaker saw the dog being pulled underwater as it crossed the river at a spot where a large caiman is known to live. But since he did not actually see the caiman, he cannot report that that part of the event is observed fact. Both senses in (110a) express a sense of contrast; in the first interpretation, the contrast is with the other speaker's report, and the contrast in the second interpretation is with other imaginable possibilities. But only the second sense expresses uncertainty.

The enclitic -en usually occurs with the emphatic enclitic -bi. We further note that -bi occurs obligatorily with -en on ergative noun phrases (110c; §2.6.4).¹⁵ However, it is evident that the contrast in meaning associated with -en does not emanate from -bi, as -bi expresses a different sort of contrast than -en (110d, second interpretation).

(110c) *cachita-n-en min opa ac-o-sh

(110d) cachita-n-bi min opa ac-o-sh
 caiman-Erg-**Emph** 2:Gen dog kill-Past-3
 'A caiman killed your dog (without being provoked by the dog).'
 'A caiman killed your dog (unbelievable as it may seem).'

In the non-past and present tenses, the meaning associated with -en is contingent upon the verb inflection, but it always carries a sense of contrast (111). For example, with the present habitual tense-aspect inflection, -quid, there is no sense of uncertainty associated with any interpretation of the utterance (111a). Sentences like (111a) are most frequently used when one is sure about a habitual trait of some entity and wants to claim in an emphatic manner that the person, animal or entity in question is the opposite of that entity (111a).

¹⁵ Older speakers tend to pronounce -bi-en as [ben], while younger speaker pronounce it as [bjen].

- (111a) chotac-n-bi-en ampe-quid
 non.Indian-Erg-Emph-Contr steal-Hab
 ‘Non-Indians steal (as opposed to me, who does not steal, so I didn’t do it).’
- (111b) chotac-n-bi-en ampe-e-c
 non.Indian-Erg-Emph-Contr steal-Npast-Indic
 ‘No, it is the non-Indians who are stealing.’
 ‘(Now that there are not just Indians here,) the non-Indians that are going to steal.’
 ‘Non-Indians, on the other hand, most likely steal.’

The most common use of -en is with verbs carrying the suffix -chit ‘Uncertainty’ (§5.5.10), in which case -en marks the constituent that there is uncertainty about (112 & 113).

- (112) cuëte shëcuë-shun-bi-en tish-chit-e-c
 dicot.tree hole-Ev.Init-Emph-Contr give.birth.to-Uncert-Npast-Indic
isa-n
 porcupine-Erg
 ‘Possibly it is in holes that the porcupine gives birth.’

A-IV 041 isa 14

- (113a) cho-boed-bi-en chotac ne-chit-o-sh
 come-Past.Nzr-Emph-Contr non-Indian be-Uncert-Past-3
 ‘The ones who have arrived **may** be the non-Matses.’
- (113b) cho-boed-bi-en chotac ne-o-sh
 come-Past.Nzr-Emph-Contr non-Indian be-Past-3
 ‘The ones who have arrived **must** be the non-Matses.’

4.6.10.2 -shenda ‘Mirative’

The enclitic -shenda codes mirative modality—it expresses an element of surprise upon discovery of some unexpected fact by the speaker. I have heard it most frequently with the second-person pronoun (114), but it can also occur with full nouns (115), participant nominalization (116) and action nominalizations (117) (as well as other parts

of speech). Note that the Comment marker *-pa* (§5.5.9) is strongly preferred with this sentence type.

- (114) mimbi-mbo-shenda ampe-an-ne-pa-o-c
 2Erg-Aug-Mirat steal-Antpass-Distr-Comment-Past-Indic
 ‘So you are the one who always steals!’
- (115) debi-n-shenda na-pa-o-sh ‘So it was Davy who did it!’
 Davy-Erg-Mirat do-Comment-Past-3
- (116) [nēnē-n dēniad]-quid-quo-shenda debi ne-pa-e-c
 tobacco-Inst blow.snuff-Agt.Nzr-Aug-Mirat Davy be-Comment-Npast-Indic
 ‘So it turns out that Davy is a big tobacco snuffer!’
- (117) [mimbi chui]-ac-shenda ne-pa-o-sh
 2Erg tell-Infer.Act.Nzr-Mirat be-Comment-Past-3
 ‘So it was your telling him [that made him not believe me]!’

4.6.11 *-penquo* ‘Negative’

This enclitic simply negates the entire noun phrase that it follows:

- (118) cun matses-penquo ne-e-c “‘They are not my (tribe’s) people....”
 1Gen person-Neg be-Npast-Indic
 + K-XXII 013 chema 123

It seems to only recently have become a bound morpheme, as some speakers sometimes pronounce it as a phonologically free form (§9.3.3), particularly when there are a lot of intervening enclitics between it and the root.

4.6.12 *-da* ‘Uncertainty’

The enclitic *-da*, when used, is always the last morpheme to be phonologically bound to a noun phrase (as well as most other phrase types), except for the first-person pronoun enclitics (which occur on nouns only following *-da*; next section). It is a

second-position enclitic, attached to the first constituent in a clause. The enclitic -da is clearly an allomorph of the first-position particle, ada, which is described in detail in section 9.4.1 (along with -da). It occurs mostly in yes/no questions (119), but can be used in other sentence types as well.

- (119) pia-n-da se-quin taua-tiad
 arrow-Inst-Uncert pierce-while:S/A>A begin-Abil
 “... should we start by shooting them with arrows?”’

K-XXI 009 dëmushbo 25

4.6.13 First-person pronominal enclitics

Pronominal enclitics normally cannot follow nouns/noun phrases at all, but they can follow the particle ada (§9.4.1), and therefore it is not surprising that they can follow its allomorph -da (120a), which, as mentioned in the preceding section, can bind to nouns.

- (120a) min bacuë utsi-da-bi ne-e-Ø que-onda-sh
 2Gen child other-Uncert-1S be-Npast-Interr:1/2 say-Dist.Past-3
 “Do you think I’m your age-mate, or something?” she said.’
 [lit., “Am I your other-child?” she said.’]

+ K-XXII 015 chema 151

4.7 Nominalization

Nominalization is ubiquitous in Matses. There are 27 different productive nominalizing suffixes that code such diverse notions as participant, tense, aspect, evidentiality, negation and causation. Nominalization is the most productive grammatical source of new lexical items, and it is a principal means of clause subordination with a variety of different functions, such as formation of relative, complement and adverbial clauses. Nominalization can be described as the process whereby a non-nominal element

(in Matses, only verbs) is changed into an element that functions morpho-syntactically like nouns do in the language in question. In Comrie and Thompson's (1985:349) words: "The term 'nominalization' means in essence 'turning something into a noun'." In Matses, this process is exclusively suffixation: there are no cases of "zero-nominalization" or a pattern where roots can generally serve as either nouns or verbs without any overt marking.¹⁶ The resulting noun-like, class-changed element can be a single verb that becomes a noun word (= "verbal noun"), or the nominalizing suffix can nominalize whole clauses, including the verb's core arguments and any obliques/adverbials associated with the verb. These nominalized clauses are the topic of section 12.2, where syntactic aspects of nominalizations, including their positions in a sentences and their clause-internal syntax ("case-recoverability," etc.) are discussed in detail, so I will say little about that in the present section. Rather, here I will focus on describing the different nominalizing suffixes, and, as much as possible, will restrict the description to nominalizations involving single words.

Two main types of nominalization occur, **action nominalization**, where the nominal element refers to an event, state or activity, and **participant nominalization**, where the nominal element refers to some entity that was involved in the event or state. Participant nominalizations, be they nominalized words or nominalized clauses, can be substituted into any noun syntactic position and can take all nominal morphology (with a few qualifications to described below and in §12.2). We can recognize three different sorts of referents associated with participant nominalization: i) a specific participant of one particular event (e.g., *Who was the loser?* in reference to a boxing match); ii) a

¹⁶ There are a handful of roots that are polysemous nouns and verbs: ampe 'thief/steal,' mua 'liar/lie,' isun 'urine/urinate,' chimu 'feces/defecate,' pien 'diarrhea, have diarrhea,' and tsipis 'fart/to fart.' See also section 5.10 for "zero-verbalization" of nouns, and section 6.8.1 for adjectivalization of nouns via reduplication.

generic participant of a type of action (e.g., *Losers always have a ready excuse*, in reference to anyone who loses any competition); and iii) lexicalized (= endocentric) terms that, while the verb root reveals the source of the word, refers more to a type of person/entity without necessary association with a particular event or an event type (e.g., *Edward is a loser*) or the term may no longer be synchronically segmentable on phonetic grounds (e.g., *bowyer*), or because the meaning of word is no longer be predictable from its component parts (e.g., *archer*), or because the original root has become a “cranberry morpheme” (i.e., no longer an independent morpheme; e.g., *barber*). While the distinction between type (i) and type (ii) referents is generally easy to make, there is clearly a continuum between referents of types (ii) and (iii), with terms like *baker* standing in between. Yet in Matses it is nevertheless relevant to make all three of these distinctions. For example, most past-tense nominalizers only create nominalizations with type (i) referents; multi-word nominalized clauses only exist for types (i) and (ii); and while all participant nominalizations behave grammatically essentially as noun roots in most ways, only those of type (iii) behave identically to noun roots. Action nominalizations, by contrast, have referents parallel to only the first two types of participant nominalization referents: i) a particular state or event (e.g., *His incessant whining annoyed me*); or ii) a state or action type (e.g., *I can't stand whining*). While participant nominalizations are nouns as far as Matses syntax is concerned, action nominalization are restricted in the range of nominal syntactic slots they can occur in and the nominal morphology they can take, but action nominalizations should be considered defective nouns rather noun-verb hybrids, since they give up all their verbal grammatical properties upon becoming nouns.

This section is organized as follows. First I describe the semantics and uses of all the nominalizing suffixes (§§4.7.1-4.7.5), and then I show how they all fit together as a

comprehensive system (§4.7.6). An interesting aspect of Matses nominalizers is that some are formally identical to verb inflectional suffixes, and distinguishable from these only by syntax; subsection 4.7.7 compares these suffixes. Most of the nominalizing suffixes contain easily identifiable sub-morphemic elements, warranting some attempt to analyze them further; the final subsection shows the possible analyses of these suffixes into smaller units (§4.7.8). For the sake of convenience, I have classified Matses nominalizers into 5 categories based on the type of information that the suffix principally codes. The first four categories are types of participant nominalizers: i) “semantic participant nominalizers,” nominalizers that refer to a participant based primarily on the semantic role of the participants (§4.7.1); ii) “tense-and-evidentiality-coding participant nominalizers,” nominalizers that refer to any participant of an event in a particular tense-evidentiality combination (§4.7.2); iii) “negative participant nominalizers,” nominalizers that point to a participant of an unrealized event based on its syntactic relationship to the verb and on aspect (§4.7.3); and iv) “specialized participant nominalizers” (§4.7.4), which includes *-anmēs* ‘Causer Nominalizer’ and *-sio* ‘Characterizer Nominalizer’ and some unproductive nominalizers. The fifth category includes the action or activity nominalizers (§4.7.5).

4.7.1 Semantically-oriented participant Nominalizers

This category includes four participant nominalizers, *-quid* ‘Agent Nominalizer,’ *-aid* ‘Patient Nominalizer,’ *-te* ‘Instrument Nominalizer,’ and *-tequid* ‘Instrument Nominalizer.’ These four suffixes are all extremely common in Matses discourse, while the rest of the suffixes are encountered less frequently. The first three of these are all found in lexicalized nominalizations in Matses, while the rest of the suffixes (with the exception of *-anmēs* ‘Causer Nominalizer’) are not found in any lexicalized words that I

know of. Adjective nominalization is at best marginal in Matses, but most plausible cases involve two of the suffixes in this group, -quid and -te (this will be the topic of the last subsection of the present section).

Suffixes in this category are interesting in that they refer to a different set of grammatical arguments and/or peripheral participants in different tenses (Table 4.19).

Table 4.19. Distribution of -quid, -aid, -te, and -tequid among the categories of tense and participant reference.

	Recent Past Inferential	Present (or Generic)	Future
A	<u>-quid</u>	<u>-quid</u>	<u>-quid</u>
S	<u>-aid</u>	<u>-quid</u>	<u>-quid</u>
O	<u>-aid</u>	<u>-aid</u>	<u>-te/-tequid</u>
Instrument	<u>-aid</u>	<u>-te/-tequid</u>	<u>-te/-tequid</u>
APP ^a	<u>-aid</u>	<u>-aid</u>	<u>-te/-tequid</u>

^a APP = “affected peripheral participant”

Two related problems in description are presented by the patterns in Table 4.19. The first problem involves trying to understand why these refer to the different arguments/participants in different tenses. The second is determining their basic vs. extended meanings (the answer to which has the practical consequence of determining how to best gloss these). For example, if we called the suffix -quid a nominative (S/A) nominalizer, its failure to code S in the recent past would not be accounted for. Similarly, if we called it an Agent nominalizer, we would have to take into account that semantic Agentiveness of the referent does not directly affect whether it is coded by -quid or not, but rather whether -quid codes the S or not is a broad, automatic response to tense. Nevertheless, it can be argued that there is a semantic basis for this split, and I will label -quid ‘Agent Nominalizer’ with the caveat mentioned above in mind. Association with

semantic roles is even more compelling for -aid, -te, and -tequid. Nevertheless, the solution is not obvious, and so after briefly describing each of these four suffixes in turn, I will return to the issue of these suffixes' apparent idiosyncratic referent selection patterns.

4.7.1.1 -quid 'Agent Nominalizer'

The suffix -quid can be attached to any verb stem to create a noun that refers to the A argument of a nonpast (perfective, progressive, or habitual/generic) or past event (121 & 124), or the S of a non-past event (122 & 123).

- | | | | |
|-------|---|-------|--|
| (121) | <u>cues-quid</u> <u>cho-o-sh</u>
hit/kill-Agt.Nzr come-Past-3
'The hitter/killer came.'
'The one who is hitting/killing came.'
'The one who will hit/kill came.'
'The one that hit/killed came.' | (122) | <u>sodque-quid</u> <u>cho-o-sh</u>
snore-Agt.Nzr come-Past-3
'The snorer came.'
'The one who is snoring came.'
'The one who will snore came.'
'*The one who snored came.' |
|-------|---|-------|--|

- (123) achu yoque-quid ne-e-c
howler.monkey howl-Agt.Nzr be-Npast-Indic
'The howler monkey is one that howls.'

A-I 054 achu 10

- (124) itia daesh-quid achu ne-e-c
swamp.palm eat.gnawing-Agt.Nzr howler.monkey be-Npast-Indic
'Howler monkeys are swamp palm fruit eaters.'

A-I 054 achu 17

The referent of the nominalization can be definite or indefinite, singular or plural, the participant of a particular event or of a habitually performed event (125).

- (125) mua-quid icsa-mbo ic-e-c
lie-Agt.Nzr bad-Emph be-Npast-Indic
'The one(s) that lied is/are bad.' / 'The liar(s) is/are bad.' / 'Liars are bad.'

Table 4.20 lists some lexicalized nominalizations with -quid. Note that some of these terms involve phonetic irregularity and/or semantic shift. Most are descriptive, possibly coined while a dead person's name (and phonetically similar words) were tabooed (see §1.4.6 for a description of word taboos).

Table 4.20. Some lexicalized nominalizations with -quid 'Agent Nominalizer'

Source verb		Lexicalized nominalization	
<u>dayun</u>	'hug'	<u>dayumenquid</u>	'anaconda' (lit. 'hugger?')
<u>shon</u>	'tinamou call'	<u>shonquid</u>	'tinamou species (bird)'
<u>cuichic que</u>	'say "cuichic"'	<u>cuichicquequid</u>	'kinkajou' (onomatopoeia)
<u>cunque</u>	'blow'	<u>cunquequid</u>	'wind'
<u>quiusud</u>	'rise above'	<u>quiusudquid</u>	'non-flooding forest next to a river'
<u>sedque</u>	'shine'	<u>sedquequid</u>	'2° forest' (sun shines through canopy)
<u>shic-diad</u>	'ribs-hang/be'	<u>shicdiadquid</u>	'chest'

4.7.1.2 -aid 'Patient nominalizer'

The suffix -aid can be attached to a verb stem to create a noun that refers to the O or an affected peripheral participant (henceforth "APP") of a present event (any aspect, specific or generic), or the O, S, Instrument, or APP of a recent past (less than a month ago) unobserved event (126-128).

- (126) ancues-aid is-o-mbi
 fish.with.poison-Pat.Nzr see-Past-1A
 'I saw the kind of fish that is always killed with poison.' (present habitual O)
 'I saw the stream where they always fish with poison.' (present habitual APP)
 'I saw the dead fish that they killed with fish poison.' (past O)
 'I saw the murky stream where they fished with fish poison.' (past APP)
 'I saw the mashed poison vine that they used to fish with.' (past Instrument)
 'I saw the club that they used to mash the fishing poison with.' (past Instrument)

- (127) datan-aid cues-o-sh que-onda-sh
 pass.by-Pat.Nzr kill-Past-3 say-Dist.Past-3
 ‘‘They killed the ones whom he passed by...’’ they told me.’
 + K-XXII 013 chema 128
- (128) mani sin-aid is-ash dadpen cuesban cho-quid nuntan
 plantain ripe-Pat.Nzr see-after:S/A>S many bat come-Hab inside
 ‘After seeing ripened plantains, many bats come inside the house.’
 D-X 057 cuesban 03

When -aid refers to a participant in the present tense, it is only required that the referent be the O of the verb, or else that it be a peripheral patient-like participant in that it is somehow affected by the event. When -aid is used to refer to a participant of a recent *past* event, by contrast, inferential evidentiality is assumed. Inferential evidentiality can be complex, and is discussed in detail in section 5.6.1.2. Here suffice it to say that evidentiality entails that the speaker did not experience the event directly (by seeing it, hearing it, etc.), but came to know about it from detectable (usually visible), resulting evidence. As such, to refer to a participant (except the A) with -aid, there must be conclusive tangible evidence physically on the participant or at least nearby (hearsay does not count as evidence). If the recent past action was observed or otherwise directly experienced, then the recent past experiential nominalizer, -boed, is used instead (to refer to any participant at all, including an A). Therefore, in (129a), speakers reject the runner (the S, in this case), because running does not visibly affect a person in a tell-tale way (i.e., we could speculate that a person is breathing hard because he ran, but it could just as easily have been some other activity). More on inferential vs. experiential nominalizers can be found in the section 4.7.2.

(129a) <u>titique-aid</u> run-Pat.Nzr *‘person/animal that ran’ ‘footprints’ ‘path (where speaker found footprints)’	(129b) <u>titique-boed</u> run-Past.Nzr ‘person/animal who ran’ ‘footprints’ ‘path (where speaker saw S running)’
--	---

As with -quid, there are multiple lexicalized nominalizations with -aid (Table 4.21). Note that there are no nominalizations with -boed, evidently not because it refers to directly experienced events, but rather because it does not have the ability to refer to generic (present habitual) events, but only to specific past events.

Table 4.21. Some lexicalized verb nominalizations with -aid ‘Patient Nominalizer’

Source verb	Lexicalized nominalization
<u>dadaua</u> ‘draw, write’	<u>dadauaid</u> ‘book’
<u>onque</u> ‘talk’	<u>onquaid</u> ‘word’
<u>nësh</u> ‘tie, knit’	<u>nëshaid</u> ‘knitted purse, knitted fishing net’
<u>te</u> ‘cut’	<u>tied</u> ‘swidden’
<u>mane</u> ‘step on’	<u>manied</u> ‘ground, dirt.’
<u>nid</u> ‘go, stand’	<u>nidaid</u> ‘ground, dirt, clay, homeland’
<u>sica</u> ‘strain’	<u>sicaid</u> ‘strained drink’ (made from bananas, manioc, or peach palm fruits)

4.7.1.3 -te and -tequid ‘Instrument Nominalizer’

The suffixes -te and -tequid can be attached to any verb stem to create a noun that refers to the Instrument of a present event (specific or generic), or the O, Instrument, or APP of a future event (130-133). These suffixes are sensitive to grammatical relations (as opposed to semantic roles) only to the extent that they never refer to core arguments (A, S, or O) in the present tense, or to nominative arguments (A or S) in the future tense.

- (130) besca-te/-tequid
 sweep-Inst.Nzr
 ‘broom’ (generic Instrument)
 ‘material set aside for making a broom’ (future Instrument)
 ‘floor to be swept’ (future O)
 ‘dust that will be swept away’ (future O)¹⁷
- (131) nes-te/-tequid
 bathe-Inst.Nzr
 ‘soap’ (generic Instrument)
 ‘water brought up for a sick person to bathe with (future Instrument).’
 ‘puddle where an armadillo bathes/is likely to bathe’ (generic/future APP)
- (132) ad-shun-bi tsicate-te te-quin cueste
 do.thus-after:S/A>A-Emph close.off-Inst.Nzr cut-while:S/A>A stick
ania-tsēc ic-quid-mpi te-quid
 small-Dim be-Agt.Nzr-small cut-Hab
 ‘After that, while **cutting sticks for closing off the cage**, they cut a small, thin
 stick for killing it.’
- A-I 047 tsaues 14
- (133) isan nado-tequid ne-e-c
 palm.species do.like.this-Inst.Nzr be-Npast-Indic
 ‘Isan palms are for doing the following things.’
- E-XI 001 isan 10

Actually, the notion of a *future* affected participant is not very common (illustrated in the last reading of 131), and, accordingly, this type of reference is hard to find in texts, unlike APPs in the past tense.

The suffix -tequid functions grammatically in the exact same way as -te, but some very subtle semantic differences exist, at least sometimes. In (134a), -te simply signifies that the shells are instruments for killing bats, while in (134b), the implication is that they are for killing **only** bats.

¹⁷ Like all verbs in Matses, valence is fixed, but like many transitive verbs, besca can code two different types of O arguments, similar to English *sweep the floor & sweep (up) this dust*.

(134a) nëid cuesban cues-te ne-e-c
 this bat kill-Inst.Nzr be-Npast-Indic
 ‘These [22 cal. shells] are for killing bats (so when you shoot bats use these).’

(134b) nëid cuesban cues-tequid ne-e-c
 this bat kill-Inst.Nzr be-Npast-Indic
 ‘These are specifically for killing bats (so don’t be wasting them on birds, etc.).’

Another difference between the two nominalizers is that -te is very productive for forming new lexical items, while -tequid is not encountered in any clear Matses lexemes (Table 4.22). Therefore, one advantage to using a longer instrument nominalizer is lack of ambiguity between the lexicalized term and an *ad hoc* one.

Table 4.22. Lexicalized nominalizations with -te ‘Instrument Nominalizer’

Source verb	Lexicalized nominalization
<u>cues</u> ‘hit, kill’	<u>cueste</u> ‘stick’
<u>ancues</u> ‘fish w/ poison’	<u>ancueste</u> ‘species of vine used as fish poison’
<u>chebud</u> ‘swallow’	<u>chebudte</u> ‘throat’
<u>tabo</u> ‘light a fire’	<u>tabote</u> ‘torch, species of tree (with flammable resin)’
<u>nis</u> ‘grate’	<u>niste</u> ‘species of palm (with roots for grating manioc)’
<u>pe</u> ‘eat’	<u>pete</u> ‘food’
<u>ac</u> ‘drink’	<u>acte</u> ‘water, beverage, river, stream’
<u>nes</u> ‘bathe’	<u>neste</u> ‘medicinal plants applied as infusions’
<u>cuenu</u> ‘sharpen’	<u>cuenote</u> ‘stone’

4.7.1.4 Adjective and adverb nominalization

Adjective nominalization may not exist in Matses as a productive process. The way to turn an adjective or an adverb root into a noun is to nominalize it within a clause headed with the copular verb ic, which is usually contracted to c (/k/[?]) (135-137).

With -quid it creates a noun meaning ‘one that has the property X.’

- (135a) nuacquid (135b) *nuaquid (136) bēdapatsēcquid
nua ic-quid bēda-patsēc ic-quid
 large be-Agt.Nzr good-Dim be-Agt.Nzr
 ‘big one’ ‘good-looking one’

- (137) isan abitedi iquec tsasimbocquid
isan abitedi ic-e-c tsasi-mbo ic-quid
 palm.species every be-Npast-Indic hard-Aug be-Agt.Nzr
pachimbocquid
pachi-mbo ic-quid
 soft-Aug be-Agt.Nzr

‘There are all kinds of isan palms, hard ones and soft ones [in ref. to the fruits].’

E-XI 001 isan 07

If the adjective or adverb stem to be nominalized ends in -tsēc or -patsēc, the allomorphs of these, -tsē and -patsē will obtain, thereby appearing to be a direct nominalization of the adjective without the copular verb, as in (136). However, all these can be rephrased as two-word nominalizations. Adjectives and some adverbs can be nominalized by first being verbalized with the suffix -ua ‘Verbalizer: make’ (138).

- (138a) [pju.wajd] (138b) [u.şu.wa.té] (138c) *[u.şu.te]
piu-ua-aid ushu-ua-te
 red-Vzr:make-Pat.Nzr white-Vzrmake-Inst.Nzr
 ‘something painted/dyed red’ ‘e.g., bleach, white paint’

There are only two clear cases where nominalized adjectives show no signs of any verbs or verbalization, and both of these are lexicalized words, so diachronic phonological reduction of the glottal stop would not be surprising:

- (139a) piu ‘red’ piute ‘annatto’ (tree producing a red body dye)¹⁸
 (139b) chëshē ‘black’ chëshēte ‘genipap’ (tree producing a bluish-black dye)¹⁹

¹⁸ *Bixa orellana*, called *achote* in Peru and *urucu* in Brazil

¹⁹ *Genipa americana*, called *huito* in Peru and *genipapo* in Brazil

One caveat that should be mentioned is that adjectives can easily be “zero-verbalized,” a process that is described in detail in section 5.10. Briefly, adjectives, nouns, and (to a lesser extent) adverbs and postpositions, can be used as verbs by simply attaching verbal morphology to the root/stem. The zero-verbalized stem is always an intransitive verb, and it always has an inchoative meaning, allowing us to recognize verbalized stems in most cases. This is the case as well with apparent adjective nominalizations that mean ‘one that becomes X’ rather than ‘one that is X,’ as would be expected (140a & 140b).

(140a) <u>piuesa</u> piu-esa red-Neg. Agt. Nzr ‘one that doesn’t redden’ *‘one that is not red’	(140b) <u>piuquid</u> piu-quid red-Agt. Nzr ‘one that reddens’ *‘one that is red’	(140c) <u>piucquid</u> piu ic-quid red be-Agt. Nzr ‘one that is red’ *‘one that reddens’
---	---	--

4.7.2 TAM-coding participant nominalizers.

The nominalizing suffixes that are the topic of this section can refer to *any* participant that is associated with the nominalized verb. But, unlike the nominalizers discussed in the preceding sections, these are quite specific with respect to tense and evidentiality, including three different past tenses (recent past, distant past and remote past) and two types of evidentiality (experiential vs. inferential). To talk about these distinctions, we must include -aid for contrast, but only in its recent past (inferential) meaning, and keeping in mind that it differs from the others in not selecting A’s as referents.

Despite the fact that I do not consider this category (or any category) of nominalizers synchronically segmentable, they are easily associated with the past-tense finite verbal inflections. The tense and evidentiality meanings of these finite inflections

are intact in the quasi-segmentable nominalizers, and so rather than describe twice the details of the tense and evidentiality distinctions made by these forms, I refer the reader to sections 5.6.1. Jumping ahead a bit, I note that action nominalizations referring to past actions similarly parallel these forms. Table 4.23 shows how the nominalizing suffixes make evidential and tense distinctions that parallel the inferential distinctions made by finite past-tense morphology.

Table 4.23. List of nominalizing suffixes in Matses and the (often formally similar) inflectional suffixes that correspond to the same evidentiality and tense parameters.

Inflection	Participant Nominalizer	Action Nominalizer	Tense/Aspect	Evidentiality
Generic participant nominalizers; activity or state nominalizers:				
<u>-e(-c)/-quid</u>	<u>-quid/-aid/-te</u>	<u>-ac</u>	General	General
TAM-coding participant nominalizers; proposition nominalizers:				
<u>-ac</u>	<u>-aid</u>	<u>-ac</u>	Recent Past	Inferential
<u>-nēdac</u>	<u>-nēdaid</u>	<u>-nēdac</u>	Distant Past	Inferential
<u>-ampic</u>	<u>-ampid</u>	<u>-ampic</u>	Remote Past	Inferential
<u>-nēdampic</u>	<u>-nēdampid</u>	<u>-nēdampic</u>	Remote Past	Inferential
<u>-o(-c/-sh)</u>	<u>-boed</u>	<u>-boc</u>	Recent Past	Experiential
<u>-onda(-c/-sh)</u>	<u>-ondaid</u>	<u>-ondac</u>	Distant Past	Experiential
<u>-denne(-c)</u>	<u>-denned</u>	<u>-denne</u>	Remote Past	Experiential
Negative nominalizers:				
<u>-en</u>	<u>-esa/-temaid</u>	<u>-tema</u>	Habitual/Generic	N/A
<u>-a</u>	<u>-acmaid</u>	<u>-acma</u>	Perfect	N/A
	<u>-nēdacmaid</u>	<u>-nēdacma</u>	Distant Past Perfect	N/A

The function of all these nominalizing suffixes (i.e., the meaning associated with the formative ed; see below in §4.7.8) is to refer to any participant associated with the event denoted by the verb, be it a core argument (A, S, or O),²⁰ a potential peripheral participant (e.g., an Instrument), or an implied participant associated with the event, such

²⁰ -aid being the sole exception, in that it cannot refer to an A argument.

as a blood stain or a bullet in a killing. The difference between the experiential nominalizers and the inferential nominalizers is that in nominalizations using experiential nominalizers, the participant being referred to was involved in an event that the speaker witnessed, while with the inferential nominalizations, the speaker did not witness the event directly (141-143). For the experiential nominalizations, the referent of the nominalization may be tangible or intangible, and witnessed with any of the five senses (141a). With the inferential nominalizers, there is a further restriction that the participant being referred to must be or have some persisting, detectable, resulting mark that allows the speaker to infer the event without having seen the actual event. This condition excludes some entities as potential referents of inferential nominalizations, such as visibly unaffected participants (141b, 142b & 143b) and non-persistent entities, such as sounds (142b).

<p>(141a) <u>cues-boed</u> hit/kill-Past.Nzr 'person/animal who did the hitting/killing' 'dead person/animal' 'wounded or unwounded person/animal' 'wound' 'weapon used'</p>	<p>(141b) <u>cues-aid</u> hit/kill-Infer.Nzr *'person/animal who did the killing' 'dead person/animal' 'wounded person/animal' 'wound' 'bloody weapon'</p>
<p>(142a) <u>tonca-boed</u> fire.gun-Past.Nzr 'firearm report' 'person who did the shooting' 'shotgun' 'empty shotgun shell' 'smell of gun powder'</p>	<p>(142b) <u>tonca-aid</u> fire.gun-Infer.Nzr *'firearm report' *'person who did the shooting' 'dirty shotgun' 'empty shotgun shell' 'smell of gun powder'</p>
<p>(143a) <u>titique-ondaid</u> run-Dist.Past.Nzr 'person/animal who ran' 'old footprints' 'path (where speaker saw S running)'</p>	<p>(143b) <u>titique-nédaid</u> run-Dist.Past.Infer.Nzr *'person/animal that ran' 'old footprints' 'path (with old footprints)'</p>

It is possible to use the inferential inflectional suffixes -ac and -nēdac (and more marginally -ampic and -nēdampic) with -boed, -onda, or -denne to change some aspects of how the event was inferred (144). This type of suffix complication is actually more common with finite inflections (-o, -onda, and -denne), and this complex topic of tense/aspect suffix combinations will be the subject of section 5.6.1.2.

(144a) deibi-n uncate cuēsh-aid ne-e-c
 Davy-Erg paddle remove.from.tree-Past:Infer.Nzr be-Npast-Indic
 ‘It’s (the tree) from which Davy removed [a buttress root to make] a paddle.’
 [speaker is seeing the cut tree for the **first** time]

(144b) deibi-n uncate cuēsh-ac-boed ne-e-c
 Davy-Erg paddle remove.from.tree-Past:Infer-Past.Nzr be-Npast-Indic
 ‘It’s (the tree) from which Davy removed [a buttress root to make] a paddle.’
 [speaker is seeing the cut tree for the **second** time]

4.7.3 Negative participant nominalizers

Three nominalizing suffixes specifically refer to participants of unrealized events. They differ with respect to the arguments to which they refer and to aspect (Table 4.24).

Table 4.24. Negative participant nominalizers.

Suffix	Referent	Tense/Aspect	Free translation
Negative participant nominalizers			
<u>-esa</u>	S/A	Habitual	‘one who does not V’
<u>-temaid</u>	O/Inst	Habitual	‘one that can’t be V-ed/is not for V-ing’
<u>-acmaid</u>	O/Inst	Perfect	‘one that has never been V-ed.’
<u>-nēdacmaid</u>	O/Inst	Distant Past Perfect	‘one that has never been V-ed (despite having wanted to for a long time.’
Negative action nominalizers:			
<u>-tema</u>	Action	Habitual/Future	‘something that is not done/will not be done’
<u>-acma</u>	Action	Perfect	‘something that has not been done’
<u>-nēdacma</u>	Action	Perfect (Never)	‘something that has never been done’

(The negative action nominalizers are included in Table 4.24 for comparison; they are discussed below in §4.7.5.) These negative participant nominalizers differ from -quid, -aid, -te, and -tequid in that they consistently target particular arguments and peripheral participants as referents, as shown in Table 4.24. These always refer to generic events (e.g., *He does not work*, *Toadstools can't be eaten*, *He has never been beat*) as opposed to referring to specific expected events that were not realized (e.g., *He is not working*, *They will not eat the toadstools*, *He did not get beat*). The nominalizer -esa seems to always have an habitual reading (145 & 146). For a corresponding perfect nominalization, a more complex nominalization would be required (147), but usually this type of information is conveyed with active sentences.

- (145) isan pe-esa shaë ne-e-c
 palm.species eat-Neg.S/A.Nzr giant.anteater be-Npast-Indic
 'Giant anteaters are ones that do not eat isan palm fruits.'

A-IV 027 shaë 14

- (146) abuc cani-esa mio ne-e-c
 high grow-Neg.S/A.Nzr palm.species be-Npast-Indic
 'The mio palm is one that does not grow tall.'

A-I 016 mio 03

- (147) tanete che-a-mbo ic-quid ne-e-bi
 electric.eel eat.unchewed-Neg:Perf-Aug be-Agt.Nzr be-Npast-1S
 'I am one who has not eaten electric eel yet.'

The nominalizers that refer to the O or Instrument do make an aspect distinction.

Sentences (148) - (150) provide examples where the nominalization refers to the O, and (151) where they refer to an Instrument.

- (148) pe-temaid ne-e-c tambisbiecquid
 eat-Neg.O/Inst.Nzr:Hab be-Npast-Indic pacarana
 'Pacaranas are ones that are never eaten [by Matses; i.e., are inedible].'

IV-011 joaquin tambisbiecquid 5

- (149) matses-n pe-acmaid pictsa ne-e-c
 Matses-Erg eat-Neg.O/Inst.Nzr:Perf pizza be-Npast-Indic
 ‘Pizza is something that Matses have not eaten yet.’
- (150) chud-acmaid ‘virgin’
 copulate.with-Neg.O/Inst.Nzr:Perf
- (151a) ush-temaid ne-e-c
 sleep-Neg.O/Inst.Nzr:Hab be-Npast-Indic
 ‘It is not good for sleeping [e.g., a latrine or a bad mattress].’
- (151b) ush-acmaid ne-e-c
 sleep-Neg.O.Nzr:Perf be-Npast-Indic
 ‘It is one that has not been slept in yet [e.g., a brand new mattress].’

The nominalizing suffix -nēdacmaid is rare (absent in my texts) and often rejected during elicitation, but in some situations it is considered very good grammar. The distinction between -nēdacmaid and -acmaid is often very subtle:

- (152a) mencudu debi-n is-acmaid ne-e-c
 naked.tailed.armadillo Davy-Erg see-Neg.O/Inst.Nzr:Perf be-Npast-Indic
 ‘The naked tailed armadillo is something Davy has not seen.’
- (152b) mencudu debi-n is-nēdacmaid ne-e-c
 naked.tailed.armadillo Davy-Erg see-Neg.O/Inst.Nzr:Dist.Past be-Npast-Indic
 ‘The naked tailed armadillo is something Davy (**has been wanting to see for a long time** but) has not seen yet.’

4.7.4 Specialized participant nominalizers

4.7.4.1 -anmēs ‘Causer Nominalizer’

The nominalizer -anmēs was the topic of Fleck (2001), and I refer the reader to that article rather than reproduce it here. The function of -anmēs can be summarized as specifying that: “the referent of the nominalization is an entity that non-volitionally,

invisibly and often mysteriously causes helpless victims to enter some undesirable, enduring state” (Fleck 2001:177). An updated version of Figure 1 from the article is reproduced here as Table 4.25 to illustrate how the nominalizer is used.

Table 4.25. Nominalizations with -anmës

Nominalization	Analysis	Gloss: ‘one that causes ____
Lexemes that are names or parts of names of plants, animals or illnesses:		
<u>shëc-maocud-anmës</u>	tooth-fall.out -Causer.Nzr	teeth to fall out’ (palm)
<u>dachi-anmës</u>	curse.to.die -Causer.Nzr	a future death’ (palm tree)
<u>iquen-anmës</u>	feel.cold -Causer.Nzr	chills’ (fish)
<u>pocca-anmës</u>	inflate -Causer.Nzr	one’s belly to swell’ (fish)
<u>dësbu-anmës</u>	get.pimples -Causer.Nzr	pimples’ (fish)
<u>basen-anmës</u>	have.pain -Causer.Nzr	abdominal pains’ (disease)
<u>occasad-anmës</u>	have.nausea -Causer.Nzr	nausea’ (plant)
<u>bëshu-anmës</u>	become.blind -Causer.Nzr	bad vision’ (plant)
<u>tachoad-anmës</u>	?-Causer.Nzr	stomach pains’ (planarian)
Nominalizations that are lexicalized words, but not names:		
<u>nën-anmës</u>	hurt -Causer.Nzr	one’s X to hurt’
<u>casen-anmës</u>	get.thin -Causer.Nzr	one to get thin’
<u>cuid-anmës</u>	enchant -Causer.Nzr	one get to sick’
<u>maocud-anmës</u>	fall.out -Causer.Nzr	hair to fall out’
<u>tsipis-anmës</u>	fart -Causer.Nzr	flatulence’
<u>uënës-anmës</u>	die -Causer.Nzr	death’
<u>ma-sed-anmës</u>	head.white -Causer.Nzr	one’s hair to turn gray’
<u>uspu-anmës</u>	become.lazy -Causer.Nzr	one to become lazy’
Nominalizations that are grammatically acceptable, but not lexemes:		
<u>bëun-anmës</u>	tear -Causer.Nzr	one’s eyes to tear up’
<u>pien-anmës</u>	diarrhea -Causer.Nzr	diarrhea’
<u>isun-anmës</u>	urinate -Causer.Nzr	uncontrollable urination’
<u>bishuccud-anmës</u>	peel -Causer.Nzr	one’s skin to peel’
<u>ushcas-anmës</u>	feel.sleepy -Causer.Nzr	sleepiness’

4.7.4.2 -sio 'Characterizer Nominalizer'

This is a continuation of the discussion of the nominalizing function of -sio from section 4.6.1.3, where the endearment function of -sio, along with its characterizer function as a nominal enclitic, was introduced. Here I point out that there is socio-linguistic variation in how -sio is used as a verb nominalizer. In (142a), two possible interpretations are listed: one group of people (let's call them Group A, a category relevant only for this discussion) would accept both, but the first interpretation comes to mind first, while the other group (Group B) only accepts the second interpretation. Group B would express the meaning in the first interpretation of (153a) using the Agent nominalizer -quid (153b), which Group A also accepts. Group A would find (153c) perfectly fine, while Group B would have trouble with it because you cannot order someone to feel sleepy.

- | | | |
|--------|---|---|
| (153a) | <u>ush-sio</u>
sleep-Charzr.Nzr | 'one who is always sleeping'
'one who is always saying "Sleep!"' (e.g., to the kids) |
| (153b) | <u>ush-quid-sio</u>
sleep-Agt.Nzr-Charzr.Nzr | 'one who is always sleeping'
* 'one who is always saying "Sleep!"' |
| (153c) | ? <u>ushcas-sio</u>
be.sleepy-Charzr.Nzr | 'one who is always sleepy'
? 'someone who is always saying "Be sleepy"' |

The other issue to address with the nominalizing function of -sio is that in nominalizations like the one in (154), it appears that -sio can function as an adjective nominalizer. However, as with other apparent adjective nominalizations, these forms tend to take on an inchoative meaning, which suggests that these are verb nominalizations of zero-verbalized adjectives. I confess, however, that I have not done enough work yet

with -sio to be certain that a non-inchoative reading can't obtain with other adjectives, but at present, there is still no clear case of adjective nominalization in Matses.

- (154) padish-sio 'someone who gets tired fast'
weak-Charzr.Nzr

4.7.4.3 Unproductive nominalizers

The segment ë seem to be identifiable as a nominalizer that refers to a piece of something that results from an actual or potential "breaking up" type action. So far, I have only found it associated with two verb roots, and therefore it cannot be considered a productive morpheme (155 & 156). It is best considered a formative.

- (155a) cuësh 'split (e.g., wood), break up (e.g., hardened resin)

- (155b) cuëshë 'palm plank, piece of resin, etc.'

- (156a) tësh 'rip off (e.g., cooked meat, cloth)

- (156b) tëshë 'piece of meat, piece of cloth'

Unlike other participant nominalizers like -aid, -boed and other past tense nominalizers, the formative ë has no tense or evidentiality semantics.

A cranberry morpheme, tadun, is identifiable a meaning "one that never does V," essentially the same semantically as -esa 'Negative S/A Nominalizer,' but tadun apparently occurs only with the verb nes 'bathe' (157).

- (157a) nestadun 'someone who never bathes' (157b) nes-esa 'one that does not bathe'

4.7.5 Action nominalizers

There are 11 action nominalizing suffixes in Matses (12, if we count the polysemous -ac twice), which were listed in section 4.7.2 in Table 4.23 above. Noonan

(1985:108) recognizes two types of action nominalizations: **activity or state nominalizations**, action nominalizations referring to a generic state or event type, and **nominalized propositions**, action nominalizations referring to a specific event that can occur as subject complements of copular clauses (see Noonan 1985:108 for this terminology). Under this classification, there is one nominalizer that functions clearly as an “activity or state nominalizer,” -ac, since it is the only one that produces nouns that can refer to generic actions or states. (The negative action nominalizers could be considered “activity or state nominalizers” since they refer to the generic events that do no or have not happened, rather than an expected specific event that did not occur, but the negative semantics makes them troublesome to consider in Noonan’s classification.) The other nominalizers (including the other polysemous sense of -ac) are best recognized as “proposition nominalizers,” since they always refer to some specific (past) event. The 6 proposition nominalizers differ from one another only with respect to tense and evidentiality of the event to which they refer (Table 4.23). Activity or state nominalizations can occur without any implied participants at all (158a, first interpretation). Even if an object and/or subject is specified (158b, first interpretation), nominalizations with -ac can still refer to a generic action type, albeit less general.

- (158a) cues-ac icsa-mbo ic-e-c
 hit-Act.Nzr bad-Aug be-Npast-Indic
 ‘It is bad to hit.’ activity nominalization
 ‘It is bad that he hit him.’ nominalized proposition
- (158b) [chido-Ø cues]-ac icsa-mbo ic-e-c
 woman-Abs hit-Act.Nzr bad-Aug be-Npast-Indic
 ‘It is bad to hit women/wife-beating is bad.’ activity nominalization
 ‘It is bad that he hit the woman.’ nominalized proposition

Nominalized propositions, by contrast, always contain the core arguments, whether these are mentioned overtly or covertly (158; second interpretations; see §§12.2.4 & 12.2.5 for more on action nominalized clauses).

Aspect, path, number and other information that is coded by derivational verbal suffixes can also easily be coded on the derived verb, but the inflectional morphology itself (which codes tense and, for some tenses, evidentiality, certainty and/or person) is replaced by the nominalizing suffixes. Nevertheless, as can be seen in Table 4.22, the six proposition nominalizers vary for tense and evidentiality, coding the same set of tense and evidentiality distinctions available for finite *past* tense inflection (there is no proposition nominalization for present or future tenses) and for the past nominalizers (§4.7.2), as can be seen in (159).

(159a) nid-boc icsa-mbo ic-o-sh
 go-Past.Act.Nzr bad-Aug be-Past-3
 ‘It is bad that he left.’ (speaker saw person leave a short time ago)

(159b) ta-dēd-nēdac icsa-mbo ic-o-sh
 foot-chop-Dist.Past.Infer bad-Aug be-Past-3
 ‘It was bad that he cut himself on the foot with an ax.’ (referring to someone with a limp)

The activity and state nominalizer (i.e., the general event nominalizer), -ac (in one of its polysemous senses), however, is neutral in terms of tense and evidentiality, and so these inflectional categories are lost in this clause type.

There are no nominalizers that refer to location. In Matses, action nominalizations occurring as objects of locative postpositions are the functional equivalents of place nominalizations:

- (160) ado-shun-bi-c matses-n nënë chococa-quid
do.like.that-after:S/A>A-Emph-Separ Matses-Erg tobacco plant-Hab
nëdënque-ac-no
burn-Act.Nzr-Loc
'After doing that, Matses plant the tobacco **where they have burned** [branches].'
+ A-XIII 022 nënë 06
- (161) [debi-n cuête dëd]-te-no cun shubu-ua-e-mpi
Davy-Erg tree fell-Fut:Act.Nzr-Loc 1Gen house-Vzr:make-Npast-1A
'I'm going to make my house where Davy is going to fell trees.'

Action nominalizations (except -te) can also be objects of comparative postpositions

(162) and comparative pro-verbs (163). See section 12.2.5 for more examples and further discussion.

- (162) piu piu-pambo bë-maucud-ac-bi-mbo-ec
(redup=Deintens) red-Aug face-go.bald-Act.Nzr-like-Adjzr-Advzr:Intr
senta ic-e-c
red.uakari.monkey be-Npast-Indic
'The uakari monkey has a red forehead, as if it went bald in the front of its head.'
A-I 057 senta 14
- (163) umbi na-ac pado-Ø
1Erg do:Tr-Act.Nzr do.like.X:Tr-Imper
'Do like I do!'

Negative action nominalizers are even more restricted syntactically than positive action nominalizers. Evidently, they are restricted to being postpositional objects of -no 'Locative/Directional (precise location/direction)' and -mi 'Locative/Directional (general location/direction)':

- (164a) cuête dëd-acma-no cun shubu-ua-e-mpi
tree fell-Neg.Act.Nzr.Perf 1Gen house-Vzr:make-Npast-1A
'I'm going to make my house where they have not felled trees.'
- (164b) cuête dëd-nëdacma-no cun shubu-ua-e-mpi
tree fell-Neg.Act.Nzr.Dist.Past 1Gen house-Vzr:make-Npast-1A

'I'm going to make my house where trees have **never** been felled.'

- (165) nid-tema-no nid-enda
 go-Neg.Act.Nzr go-Neg.Imper
 'Don't go where people should not/can not/may not go.'

4.7.6 Matses nominalizers at a glance.

Table 4.26. Paradigm of all 27 of the Matses nominalizing suffixes, organized with respect to the participants and TAM constellations to which they refer.

	Remote Past		Distant Past		Recent Past		Present (or Generic)	Future
	Observ.	Inferen.	Observ.	Inferen.	Obs.	Infer.		
A	<u>-ampid</u> ^a	<u>-denned</u>	<u>-nēdaid</u>	<u>-ondaid</u>	<u>-boed</u>	<u>-quid</u>	<u>-quid</u>	<u>-quid</u>
S	<u>-ampid</u>	<u>-denned</u>	<u>-nēdaid</u>	<u>-ondaid</u>	<u>-boed</u>	<u>-aid</u>	<u>-quid</u>	<u>-quid</u>
O	<u>-ampid</u>	<u>-denned</u>	<u>-nēdaid</u>	<u>-ondaid</u>	<u>-boed</u>	<u>-aid</u>	<u>-aid</u>	<u>-te</u> ^b
Inst	<u>-ampid</u>	<u>-denned</u>	<u>-nēdaid</u>	<u>-ondaid</u>	<u>-boed</u>	<u>-aid</u>	<u>-te</u>	<u>-te</u>
APP ^c	<u>-ampid</u>	<u>-denned</u>	<u>-nēdaid</u>	<u>-ondaid</u>	<u>-boed</u>	<u>-aid</u>	<u>-aid</u>	<u>-te</u>
Action	<u>-ampic</u> ^d	<u>-denne</u>	<u>-nēdaic</u>	<u>-ondaic</u>	<u>-boc</u>	<u>-ac</u>	<u>-ac</u>	<u>-te</u>
Neg A/S							<u>-esa</u>	
Neg O/Inst ^e			<u>-nēdacmaid</u>		<u>-acmaid</u>		<u>-temaid</u>	
Neg Action ^e			<u>-nēdacma</u>		<u>-acma</u>		<u>-tema</u>	<u>-tema</u>
Causer							<u>-anmēs</u>	
Characterizer							<u>-sio</u>	

^a where -ampid occurs, the similar form -nēdampid also occurs

^b where -te occurs as a participant nominalizer the similar form -tequid also occurs

^c APP = "affected peripheral participant"

^d where -ampic occurs, the similar form -nēdampic also occurs

^e Negative nominalizer do not make evidentiality distinctions.

Table 4.26 is essentially just a summary of the preceding five sections. When described in prose, the information that these suffixes code may have appeared idiosyncratic, but looking at them together in Table 4.26 suggests that the set of referents and tenses/evidentiality coded by some nominalizers are at least in part reactions to what

the other nominalizing suffixes are coding. This is supported by the observation that there seem to be no holes or overlap in (at least the top half of) Table 4.26.

A couple of interesting patterns are worth pointing out. The first is that the referent-coding pattern of -quid can be described as an instance of tense-based split ergativity. Consistent with the (almost) universal pattern that tense/aspect-based split systems occur with the ergative pattern in the past/perfective and the nominative pattern in the nonpast/imperfective (Delancey 1981), we find the ergative referent coding pattern in the recent past tense. There are other factors that contribute to this split, however. One is that the requirement of inferential evidentiality that there be *resulting* evidence creates (or stems from) an association with past tense and perfect aspect. Additionally, the requirement of persistent evidence generally involves a change of state or affectedness of the referent, properties associated with Patients, and which are more prominent in past events.

The other pattern that stands out is that the instrument nominalizer is used for future O's instead of -aid. Again, it seems that -aid's association with Patient has something to do with it, since future patients are much less Patient-like, than past or generic patients. Thus, one hypothesis is that the semantic properties of -aid (particularly affectedness), at least in part account for the pattern: it is not appropriate for non-past S's or future O's (or any future referent) because their affectedness is unrealized at the time of the utterance, and would seem to contradict its meaning. The nominalizers -quid and -te/-tequid, would then be filling in the gaps for the slots inappropriate for -aid.

Table 4.26 also highlights the formal similarities that exist among the nominalizing suffixes, which compel one to analyze them into smaller units. And I shall do so below in section 4.7.8, but first it is relevant to briefly compare nominalizers with the Matses verb inflections.

4.7.7 Nominalizers and verb inflections

Almost all the Matses nominalizers are either formally identical to verb inflectional suffixes (Table 4.27),²¹ or can be analyzed as having parts that are formally identical to verb inflectional suffixes (Table 4.28; see also Table 4.20).

Table 4.27. Suffixes that function as either nominalizers or verb inflections.

Suffix	Nominalizing Function	Inflectional Function
- <u>quid</u>	Agent Nominalizer	Present Habitual
- <u>esa</u>	Negative S/A Nominalizer	Negative Habitual
- <u>ac</u>	Recent Past Inferential Nominalizer	Recent Past Inferential
- <u>nēdac</u>	Distant Past Inferential Nominalizer	Distant Past Inferential
- <u>ampic</u>	Remote Past Inferential Nominalizer	Remote Past Inferential
- <u>nēdampic</u>	Remote Past Inferential Nominalizer	Remote Past Inferential

Table 4.28. Comparison of participant nominalizers ending in ed/id and their corresponding inflectional suffixes that don't end in ed/id.

Participant nominalizers	Corresponding inflectional suffix	TAM coded by these forms
- <u>boed</u>	- <u>o(-c/-sh)</u>	Recent Past Experiential
- <u>ondaid</u>	- <u>onda(-c/-sh)</u>	Distant Past Experiential
- <u>denned</u>	- <u>denne(-c)</u>	Remote Past Experiential
- <u>aid</u>	- <u>ac</u>	Recent Past Inferential
- <u>nēdaid</u>	- <u>nēdac</u>	Distant Past Inferential
- <u>ampid</u>	- <u>ampic</u>	Remote Past Inferential
- <u>nēdampid</u>	- <u>nēdampic</u>	Remote Past Inferential
- <u>temaid</u>	—	Negative Present Habitual
- <u>acmaid</u>	—	Negative Present (Generic) Perfect
- <u>quid</u>	—	Past/Nonpast (any aspect)

²¹ It is easy to distinguish nominalized verbs from active verbs syntactically (see §12.2.2)

4.7.8 Analyzability of nominalizers

The strongest patterns in Tables 4.27 and 4.28 lead us to posit at least the two forms: -ed ‘Patient Nominalizer’ and -c ‘Action Nominalizer.’²² And recall the demonstrative pronouns, which can also be seen as participant nominalizers containing the form -ed (§4.4.4; Table 4.11, cf. Table 4.12), and also note the particle chued ‘Characterizer’ (§9.3.2) which is probably analyzable as cho ‘have’ + -ed = lit. ‘one who has X.’

There are multiple reasons for not considering -ed a synchronically segmentable form. One problem is that -ed as a generic participant nominalizer is no longer productive: it cannot be attached to other verb inflectional suffixes, such as -tsia ‘Nonpast Conditional’ and -enda ‘Nonpast,’ that otherwise behave identically to -onda and -denne. Also, it can no longer be used as a nominalizer in the way it presumably was with choed (i.e., without an intervening tense marker), or to nominalize adverbs, as presumably occurred with the demonstrative pronouns. Furthermore, while it would function as a general participant nominalizer (the presumed original productive function), it presently exhibits restricted, nominalizer-specific sets of referents in several instances: i) -aid excludes reference to A; ii) the negative participant nominalizers, -temaid, -acmaid, and -nēdacmaid only refer to O or Instrument, iii) -quid never refers to O, instruments, or APP; and iv) -tequid (never refers to S or A). Another reason for not wanting to analyze -ed synchronically is that it would result in too many suppletive forms: while the productive morpho-phonological rule, $/a/ + /e/ \rightarrow /ai/$ and $/e/ + /e/ \rightarrow /e/$, would account for some of the endings, the forms -boed, -aid, -nēdaid, -ampid, and -nēdampid cannot be accounted for by any regular morpho-phonological rules (the forms $*-oed$, $*-aqued$,

²² The form -ma also stands out as associated with a negative meaning, but it is quite clearly not a productive form. See section 5.3.3 for some discussion.

*-nēdaqued, *-ampiqued and *-nēdampiqued would be expected); to account for these forms phonologically, a special morpho-phonological rule specific to -ed would have to be posited: $c + ed \rightarrow d$, and -boed would still have to be considered a suppletive form. A grammatical solution would be to try to segment out the /c/ from the finite inferential inflections -ac, nēdac, and -ampic and -nēdampic, and say that the -ed attaches to the first part of the root (e.g., nēda-ed), but this would still result in the unattested forms *-ampied and *-nēdampied (so we would have to additionally propose /i/ + /e/ \rightarrow /i/ as something that only happens with participant nominalizers). Additionally, if we tried to analyze -quid as containing ed, we come up with the problem that there is no morpheme -qui.

The case for analyzing -c as a productive action nominalizer poses the same set of problems and additionally that analysis of the negative nominalizers leads to the conclusions that either negative action nominalizer do not take -c, or the negative participant nominalizers take -c in addition to -ed. Therefore, despite the strong patterns, I find it best to consider c and ed formatives, quasi-segmentable sub-morphemic elements associated with a meaning, but not in a regular or productive fashion. Someone intent on segmenting out these forms might posit the hybrid analysis of calling the present, future, recent past, and negative nominalizers lexicalized or suppletive forms, and then segment the rest of the past tense nominalizers. This solution is much less objectionable to segmenting -ed and -c in all cases, but I point out that even though these past tense forms have evidently not undergone phonological and semantic shifts and are therefore still transparently segmentable, we still cannot call -ed and -c productive morphemes because, as mentioned in the preceding paragraph, they cannot occur with all the possible inflections. Thus, I feel the only proper segmentation of these forms is as an internal reconstruction, rather than as a synchronic analysis. Table 4.29 shows one possible

internal reconstruction identifying -ed 'Participant Nominalizer' and -c 'Action Nominalizer,' along with some other recognizable sub-morphemic elements that that can tentatively be assigned a meaning.

Table 4.29. Internal reconstruction of nominalizers.

Participant Nominalizers		Action Nominalizers		Reconstructed formatives
<u>-quid</u>	<u>-qui-ed</u>			<u>-ed</u> 'Participant Nominalizer'
<u>-tequid</u>	<u>-te-qui-ed</u>			<u>-c</u> 'Action Nominalizer'
<u>-aid</u>	<u>-a-ed</u>	<u>-ac</u>	<u>-a-c</u>	<u>-a</u> 'Past'
<u>-boed</u>	<u>-bo-ed</u>	<u>-boc</u>	<u>-bo-c</u>	<u>-nēd</u> 'Distant (Past)'
<u>-ondaid</u>	<u>-ond-a-ed</u>	<u>-ondac</u>	<u>-ond-a-c</u>	<u>-ond</u> 'Distant (Past)'
<u>-denned</u>	<u>-denne-ed</u>	<u>-denne-c</u>	<u>-denne-c</u>	<u>-mpi</u> 'Remote (Past)'
<u>-nēdaid</u>	<u>-nēd-a-ed</u>	<u>-nēdac</u>	<u>-nēd-a-c</u>	<u>-te</u> 'Inst Nzr'/'Act.Nzr'
<u>-ampid</u>	<u>-a-mpi-ed</u>	<u>-ampic</u>	<u>-ampi-c</u>	<u>-qui</u> 'Nonpast'
<u>-nēdampid</u>	<u>-nēd-a-mpi-ed</u>	<u>-nēdampic</u>	<u>-nēd-a-mpi-c</u>	<u>-ma</u> 'Negative'
<u>-temaid</u>	<u>-te-ma-ed</u>	<u>-tema</u>	<u>-te-ma</u>	<u>-bo</u> 'Allomorph of -o'
<u>-acmaid</u>	<u>-a-c-ma-ed</u>	<u>-acma</u>	<u>-a-c-ma</u>	
<u>-nēdacmaid</u>	<u>-nēd-a-c-ma-ed</u>	<u>-nēdacma</u>	<u>-nēd-a-c-ma</u>	

While internal reconstructions do not really tell us how a synchronic grammar functions, it would not be unlikely that these patterns are recognized by at least some speakers and that, whatever their cognitive status may be, may serve minimally as mnemonic aids for learning the language and communicating more effectively.

CHAPTER 5

VERBS

5.1 Introduction

A large number of Matses clauses consists solely of a single verb word. This is in part due to covert third-person pronouns (§§4.4.1, 11.2.4), but it also has to do with the very large number of notions that are coded morphologically on the verb, rather than by separate adverb or auxiliary/modal words, or by morphological marking on nouns. A brief comparison of Matses and English will illustrate what I mean. Matses codes causative, applicative, reflexive, reciprocal and passive notions with verbal suffixes, while English codes these by complex constructions (e.g., *make eat*), postpositional phrases (e.g., *for him, to his detriment*), reflexive pronouns (e.g., *himself*), reciprocal phrases (e.g., *each other*), and auxiliary verbs (e.g., *has eaten*). Matses codes aspectual notions like *repetitively, continually*, and related notions like *again, almost* and *incompletely* with verbal suffixes, while English uses adverbs. Matses codes English notions like *go, come, upon arrival* (i.e., in *go eat, eat upon arrival*) using an intricate system of directional spatial suffixes. Plurality can be marked on Matses verbs, while this is strictly a nominal category in English. Epistemic modality (e.g., *-chit* ‘Uncertainty’) and evidentiality (e.g., *-nēdac* ‘Distant Past: Inferential,’ *-ash* ‘Recent Past: Conjecture’ and *-denne* ‘Remote Past: Experiential’) are coded in Matses by derivational suffixes or as part of the meaning of inflectional suffixes, while English uses adverbs and modals like *perhaps, evidently, really, must*, etc. And the complex system of Matses tense distinctions diminishes the need for temporal adverbs (though temporal adverbs do exist). This is just a brief preview, but it gives some indication of the multiple and varied

functions of verbal morphology in Matses, and gives some idea how one-word utterances in Matses can compose semantically elaborate utterances.

This chapter is organized as follows. Distinguishing verbs from other lexical classes is the topic of section 5.2. Section 5.3 presents the different subclasses of Matses verbs, particularly describing transitive-intransitive verb pairs. Section 5.4 describes prefixation (30 prefixes). Section 5.5 describes the derivational morphology (40 suffixes), including valence-changing suffixes (§5.5.1), aspect suffixes (§5.5.2), directional suffixes (§5.5.3), the distributive suffix (§5.5.4), the collective suffixes (§5.5.5), and other derivational suffixes marking ‘Intensity,’ ‘almost,’ ‘Diminutive,’ ‘Comment/Irrealis,’ ‘Uncertainty,’ and ‘Prior’ (§§5.5.5-5.5.11). Then, in section 5.6, I discuss the inflectional morphology (25 suffixes), which is very complex, sometimes involving up to three segmentable inflectional suffixes on one verb. All inflectional suffixes are portmanteau morphemes, coding tense (obligatory), evidentiality (obligatory for past tense inflection), mode (indicative/declarative vs. interrogative), epistemic modality (uncertainty), and/or person subject agreement. First-person pronominal enclitics may replace person subject agreement with some inflections (§5.6.5). One suffixes can follow verbal inflection (§5.7), the conjunction *-que* ‘so/because.’ Non-finite verbal suffixes (e.g., infinitive, nominalizers, etc.) can occur on a verb instead of the inflectional suffixes; this topic is introduced in section 5.8, but a full description of these is reserved for the other morphology chapters (e.g., nominalization in the noun chapter), and chapter 12 on complex sentences. Section 5.9 describes verb reduplication, and, finally, section 5.10 describes verb-forming, class-changing processes, including “zero-verbalization.”

5.2 Distinguishing Verbs from Other Lexical Classes

Notionally, verb roots refer prototypically to time-unstable concepts (actions and events), justifying calling roots in this category “verbs,” but, as usual, category membership is based on morpho-syntactic properties. Verbs are most markedly different from the other lexical classes in their occurrence with verbal suffixes, which, except for -quio ‘Intensifier,’ -quimbo ‘Intensifier’ and -tsēc ‘Diminutive,’ never occur on other stems. And verbs are obligatorily inflected with at least one of these suffixes (except imperatives). However, this distinction is obscured by the process of “zero-verbalization,” whereby roots from other lexical classes can become intransitive inchoative verbs (i.e., meaning ‘to become X’) simply by suffixation with verbal morphology (1).

- | | |
|--|---|
| <p>(1a) <u>icsa-o-sh</u>
bad-Past-3
‘He became bad/insane.’
‘It got ruined (e.g., a shotgun that jams).’</p> | <p>(1b) <u>chotac-ac</u>
nonIndian-Infer
‘He turned into a non-Indian.’</p> |
|--|---|

Zero-verbalization and the reason why this is not a case of inter-class polysemy is discussed in detail in section 5.10, so here suffice it to say that despite the lack of overt class-changing markers, zero-verbalized roots can be identified by their intransitive status and inchoative semantics. For verbs to take nominal or adverbial enclitics, they must first take overt class-changing suffixes, namely nominalizing (§4.7) and adverbializing (§§7.8.2, 12.4.2) suffixes. Verbs cannot occur in attributive position (as in, *bad man*) under any circumstances, but they can occur to a limited extent in adjective predicative positions (as in, *He is bad*), by taking a set of adjectival enclitics that adjectives also require to occur in predicative position (e.g., -pambo ‘Augmentative’), which in this context function as adjectivalizers (§6.8.2)

Prefixes can occur on nouns, adjectives, and verbs, but not on adverbs, postpositions or particles. The enclitic -mbo/-quio occurs as an augmentative/emphatic enclitic on nouns, adjectives, adverbs, and postpositions, with the allomorph -mbo following vowels and -quio following consonants (§§2.6.8, 4.6.6). But with verbs, it occurs as an intensifying suffix, but only the form -quio occurs, after either consonants or vowels (2).

- | | |
|---|--|
| <p>(2a) <u>cuesquiosh</u>
 <u>cues-quio-o-sh</u>
 hit-Aug-Past-3
 ‘He hit him really hard.’</p> | <p>(2b) <u>sequiosh/*sembosh</u>
 <u>se-quio-o-sh</u>
 pierce-Aug-Past-3
 ‘He really shot it (with an arrow) hard/well.’</p> |
|---|--|

The most practical syntactic property for distinguishing verbs from the other lexical classes is their ability to regularly make up one-word clauses and sentences (i.e., not counting one-word answers to questions, interjections, exclamations, etc., which are appropriate only in some special contexts), as in (2). There exist pro-verbs like na ‘do (Transitive)’ and nad ‘(be/do) like this (Intransitive)’ (see §5.3.4 for all six) which can stand in for verbs, adjectives, or adverbs, but not nouns, postpositions or particles. And pronouns cannot stand in for verbs. Also, unlike any other lexical class, verbs are always associated with core arguments. Other morpho-syntactic distinguishing characteristics can be found in Table 3.3 (§3.3.2).

5.3 Subclasses of Verb Roots

The most important subclassification of Matses verbs is with respect to transitivity. All Matses verbs very strictly specify the number and the types of core arguments that must be present in the clause; i.e., there are no “ambitransitive or “labile” verbs in Matses. Table 5.1 lists the different Matses transitivity classes.

Table 5.1. Transitivity classes of verbs in Matses.

Verb type	Core functions specified	Distribution
intransitive		
(simple) intransitive	S	48%
double-absolutive	S, S	<1%
transitive		
(mono)transitive	A, O	48%
ditransitive	A, O, O	3%

Note: Distribution values are estimates.

A discussion of simple intransitive, double-absolutive, monotransitive and ditransitive clauses can be found in section 11.4. The first subsection of the present section will deal with transitive-intransitive verb pairs in Matses. A minor semantically-defined subclass of verbs are those that specify plural absolutive participants (§5.3.2). Section 5.3.4 introduces the copulas, quotative verbs, pro-verbs, and the few complement-taking verbs.

5.3.1 Transitive-intransitive verb pairs

Multiple patterns can be found between transitive and intransitive verb pairs. Many verbs in Matses can be analyzed as lexical causatives, i.e., transitive verbs that commit the speaker to the belief that a caused event has been realized after, and is wholly dependent on, the causing event expressed by the verb (Shibatani 1976). This can be illustrated with similar verbs like English *deceive* and Matses muaua ‘lie about/to,’ where the English (causative) verb entails that a caused event was brought about, while the Matses (non-causative) verb expresses only an intention to do so. Here I call verbs like muaua, where the O is not a patient but an affected participant (usually a beneficiary or a maleficiary) “lexical applicatives” to contrast them with lexical causatives. Lexical causatives and lexical applicatives, as I define them, are identified based on the transitive verb’s own semantics, rather than their relationships to intransitive counterparts.

Many lexical causative and lexical applicative transitive verbs can be paired with intransitive counterparts. Lexical causatives and lexical applicatives occur with one of three syntactic relationships existing between the core arguments of the transitive verb and the single core argument of the intransitive verb (Tables 5.2 and 5.3).

Table 5.2. Types of relationships between causative verbs and their intransitive counterparts.

	Co-referent arguments	Relationship type	Sample English intransitive/transitive pairs
i)	S = O	causative/anticausative relationship	<i>misapprehend/deceive</i>
ii)	S = A	applicative/antipassive relationship	<i>lie/deceive</i>
iii)	S = A=O	reflexive or reciprocal	<i>bathe/bathe (someone)</i>
iv)	S = Ø	no co-reference	<i>run (in race)/run(factory)</i>

Table 5.3. Lexical causative and lexical applicative verbs illustrating the different relationships from Table 5.2 with their formally-related transitive counterparts.

	intransitive	lexical causative intransitive	lexical applicative
i)	<u>poshque</u> 'break'	<u>poshca</u> 'break' <u>nibēd</u> 'be missing'	<u>nibēn</u> 'search for'
ii)	<u>besque</u> 'scratch in dirt (like a chicken)'	<u>besca</u> 'sweep' <u>mua</u> 'lie'	<u>muaua</u> 'lie about/to'
iii)	<u>taniad</u> 'tie oneself up'	<u>tane</u> 'tie' <u>shucque</u> 'fan oneself'	<u>shucca</u> 'fan (fire)'
iv)	no examples found yet	no examples found yet	

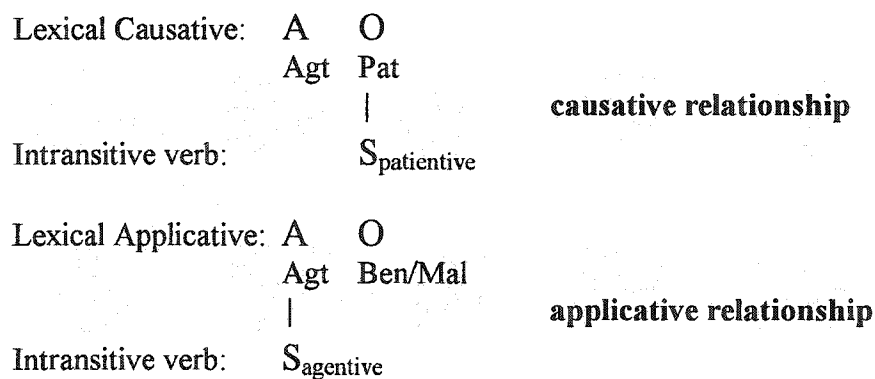


Figure 5.1. Syntactic relationship between the two most common types of verb pairs.

Thus, a causative relationship (i in Tables 5.2 & 5.3) is only one of several relationships that a lexical causative verb can have with an intransitive verb. As can be predicted from Shibatani and Pardeshi's (2002) observations, the most common transitive/intransitive verb pairs are lexical causatives with an intransitive counterpart in a causative relationship (i), and lexical applicatives with an intransitive counterpart in an applicative relationship (ii). These two most common types are illustrated in Figure 5.1, but it should be kept in mind that the other types of relationship do occur in the language (Table 5.3). There are no transitive-ditransitive root pairs in Matses.

Transitive-intransitive verb pairs vary in their formal association: they may be i) suppletive forms, i.e., semantically similar, but formally unrelated (3); ii) formally related, irregular, nonproductive forms with an obvious direction of derivation, be it a decrease (4) or increase (5)¹ in valence; or iii) pairs that are formally related, but lack a clear direction of derivation and synchronically segmentable roots (6 & 7).

	Intransitive		Transitive
(3a)	<u>uënës</u> 'die'		<u>ac</u> 'kill'
(3b)	<u>cho</u> 'come'		<u>bë</u> 'bring'
(3c)	<u>ue</u> 'lie'		<u>nan</u> 'lay'
(4a)	<u>naimëd</u> 'run out'		<u>nain</u> 'finish off'
(4b)	<u>bishucud</u> 'peel'		<u>bishuc</u> 'skin, peel'
(4c)	<u>cuëshëd</u> 'split with grain'		<u>cuësh</u> 'split with grain'
(5a)	<u>caid</u> 'proliferate'		<u>caidua</u> 'make proliferate (e.g., chickens)'
(5b)	<u>tsëcpen</u> 'open'		<u>tsëcpenua</u> 'open'
(5c)	<u>mais</u> 'fall and scatter'		<u>maisua</u> 'scatter throwing'

¹ There is a minor transitive-intransitive pattern involving two verbs, which I learned too late to fully integrate into this section:

(a)	<u>dacuëd</u> 'be afraid of'	<u>dacuëdën</u> 'fear (i.e., be afraid of)'
(b)	<u>chiësh</u> 'be bored/mad'	<u>chiëshën</u> 'hate/be mad at'

(6a)	<u>chiuid</u>	'spill (liquid)'	<u>chiuin</u>	'spill a liquid'
(6b)	<u>bincud</u>	'roll'	<u>bincun</u>	'turn over'
(6c)	<u>shoyod</u>	'stretch'	<u>shoyon</u>	'stretch'
(7a)	<u>didique</u>	'be hanging'	<u>didica</u>	'hang'
(7b)	<u>poshque</u>	'come to have a hole'	<u>poshca</u>	'bore, pierce'
(7c)	<u>shucque</u>	'fan oneself, sway'	<u>shucca</u>	'fan someone/fan a fire'

There are no “ambitransitive” verbs (Dixon 2000) in Matses, such as “labile” verbs (like English *break*, which exhibits a causative patterning, with transitive and *patientive* intransitive meanings; Payne 1997), or any other roots that can function as either transitive or intransitive (e.g., English *eat*, with transitive and *agentive* intransitive meanings, which exhibits a non-causative patterning; and English *cook*, with transitive and both agentive and patientive intransitive meanings). Yet, ergative case-marking, intra- and inter-clausal adverbial transitivity agreement, and an elaborate clause-chaining/switch reference system all require identification of the verb as transitive or intransitive (the formal patterns in 4-7 probably make it easier to memorize/recognize the transitivity of this set of verbs). So speakers must pay special attention that the syntactic valence of the clause matches the valence of the verb, and they accomplish this by intransitive vs. transitive verb selection or valence modification (by reflexive/anticausative/passive, reciprocal, antipassive, causative, and applicative valence-adjusting suffixes; §5.5.1). It appears, from looking at (4) - (7), that in the recent past there was a varied and productive system of valence-adjusting (some still productive for some roots) and/or transitive/intransitive verbal making. The result is a lexicon with many formally-related transitive/intransitive pairs, forming groups that exhibit somewhat different patterns. The different types of formally-related lexical-causative/intransitive verb pairs are discussed in the following subsections.

5.3.1.1 Anticausatives

Intransitive verbs that express an effect, which are derived from inherently causative simplex verbs, are sometimes called “anticausatives” (Comrie 1989:168). The term “middle” is often used to describe verbs that express this type of notion, but “middle” is used to refer to too large a variety of meanings (Dixon and Aikhenvald 2000), while the verbs described in this section have a more restricted distribution of meanings: the S of the “derived” verb (i.e., the longer one) is co-referent with the O of a transitive counterpart that has a causative meaning. Anticausative verbs tend to have inanimate subjects. Lexicalized verb pairs exhibiting the opposite relationship, an antipassive relation (where the S of the derived verb is co-referent with the A of its transitive counterpart), do not seem to exist in Matsigenka, but there is a productive antipassive marker, *-an* (§11.6.2.1). The intransitive verbs in (4) all fit the anticausative pattern, but they are lexicalized, rather than being products of a synchronic process. However, these forms are obviously related to productive usages of the detransitivizing suffix *-ad*, which derives intransitive reflexives and anticausative verbs from transitive verbs (not just from inherently causative verbs), and which is used to form *get*-passive type constructions (§11.6.1.1). The examples in (4) are all irregular forms, perhaps reflecting morphophonological rules (vowel harmony and nasal labialization) that are no longer associated with the detransitivizer marker, while those in (8) are regular (see §2.6.4.2 for a phonological description of these forms and more examples).

	Transitive	Intransitive: reflexive	anticausative	passive
(8a)	<u>tane</u> ‘tie’	<u>taniad</u> ‘tie oneself’	‘get tangled up’	‘get tied up’
(8b)	<u>tantia</u> ‘listen/understand’	<u>tantiad</u> ‘hear oneself’	‘be understood’	‘be understood’
(8c)	<u>se</u> ‘pierce’	<u>siad</u> ‘pierce oneself’		‘get pierced’

In addition to their irregular form, one can identify anticausative lexicalized verbs because they do not have three possible readings: middle, reflexive (where the S is co-referent with both the A and the O of the transitive verb), and passive (where the S is co-referent with the O of the transitive verb, and the Agent is peripheralized, but not missing altogether), while productively-derived stems can have all three meanings if they are logical for the verb in question. Thus, the forms in (4) are not prototypical instances of anticausatives because: i) the process is not restricted to deriving non-causative verbs from causative verbs; and ii) the process is not completely productive.

5.3.1.2 *The irregular, unproductive transitivizer -ua*

Another set of lexical causative verbs are those ending in ua [wa] (5 & 9).

	Intransitive		Transitive
(9a)	<u>uënës</u> ‘die’		<u>uënësua</u> ‘kill, make die, let die’
(9b)	<u>noad</u> ‘float’		<u>noadua</u> ‘make float’
(9c)	<u>uidën</u> ‘be securely in place’		<u>uidënua</u> ‘hold, fasten, immobilize’
(9d)	<u>ta</u> ‘start’		<u>taua</u> ‘start’

The etymology of -ua seems fairly transparent, as there is a productive verbalizing suffix, -ua ‘Verbalizer: make (out of)’, which creates transitive (or ditransitive) verbs from nouns (10) and adjectives (11), and most likely was historically an independent verb (§§5.10, 11.4.2.3).

- (10) aid-bi _____ chotac-n _____ shubu-ua-e-c
 that.one-Emph nonMatses-Erg house-Vzr:make-Npast-Indic
 ‘Non-Matses make houses out of those [fronds from a species of palm].’
- (11) aton bacuë-Ø chu-ua-shun _____ chocueshca-shun ac-quad
 3Gen fruit-Abs warm-Vzr:make-after:S/A>A mash-after:S/A>A drink-Hab
 ‘After warming its fruits, after mashing them, they [Matses] drink it.’

With verbs, however, -ua is no longer generally productive. The only productive use of -ua on verbs is in the process of borrowing verbs from Spanish, where it does not seem to impart any additional meaning to the meaning of the Spanish verb (e.g., bendeua ‘sell’ from Spanish *vender*).

Another significant observation is that the meaning of lexical causatives with ua can refer to direct or indirect causation. For example, the verb uidēnua ‘hold/fasten/immobilize’ (9c), can refer to a person directly holding something with his/her hands, as in (12), or to a more complex method of keeping something in place, as in (13). Similarly, the verb uēnēsua ‘kill, make/let die’ (9a) can refer to direct killing (that does not involve striking or shooting, e.g., choking) including blowing out a candle, or to remote and/or mysterious ways of making something or someone die, as in (14).

- (12) cain-shun bed-Ø se-me-enda pia uidēnua-ta
 wait-after:S/A>A grab-Imper pierce-Caus-Neg.Imper arrow hold-Imper
 “‘Grab them after waiting! Don’t let them shoot you! Hold (his) arrows!’”
 K-XXI 010 dēmushbo 30
- (13) ashumbic cueste-n uidēnua-e-c ayash tane-quin
 then stick-Inst hold-Npast-Indic vine tie-while:S/A>A
 ‘Then, they secure the ayash vine in place with a stick, tying it.’
 G-XV 001 shēcten 21
- (14) yama cuēte uēnēsua-bud-ne-quid ne-e-c
 climbing.rat dicot.tree kill-Dur-Distr-Agt.Nzr be-Npast-Indic
 ‘The climbing rat is one that makes trees die.’
 A-IV 020 yama 03

The range of indirect and direct meanings of ua forms, in light of the observation that indirect causation is generally associated with grammatical causatives, and direct causation with lexical causatives (Haiman 1983, Shibatani and Pardeshi 2002), seems to be consistent with the intermediate status of these verbs between suppletive lexical causatives and productive morphological causatives.

Finally, note that verbs ending in ua do not always express causation:

	Intransitive		Transitive
(15a)	<u>mua</u> 'lie'		<u>muaua</u> 'lie to or about someone'
(15b)	<u>shubi</u> 'cry'		<u>shubiua</u> 'cry for someone'

The forms in (15) do not entail that a caused event has transpired, and their relationship to the intransitive verbs is one of “lexical applicative”, with the S of the intransitive verb being co-referent with the A of the transitive counterpart. (Morphological causatives can be derived from mua, shubi and any verb presented in this section using -me; §§5.5.1.1, 11.5.1.) Therefore, we must conclude that ua was not specifically a causativizer, but a more general transitivizer. But it apparently did not transitivize randomly—there is a pattern: patientive intransitive verbs have causative counterparts (5 & 9) and agentive intransitive verbs have applicative counterparts (15). This is a pattern that has been recognized as a general one across languages (Shibatani and Pardeshi 2002).

5.3.1.3 Transitive-intransitive verb pairs ending in n/d

The verb pairs in (6) and (16) differ formally only in that the intransitive counterpart ends with d, and the transitive with n. However, these forms are not synchronically segmentable nor is there an obvious direction of derivation. The d is reminiscent of the detransitivizer -ad (§5.3.1.1), and n is a phonological segment that is associated with transitivity in Matses (e.g., -n is the Ergative case marker; adverbial agreement enclitics agreeing with transitive verbs end in /n/, etc.; see also footnote one of this chapter), but there is no synchronic process that would predict the forms in (6) and (16).

	Intransitive		Transitive
(16a)	<u>ishcud</u> ‘swing’		<u>ishcun</u> ‘swing (something)’
(16b)	<u>cuéd</u> ‘call out’		<u>cuèn</u> ‘call to’
(16c)	<u>nibéd</u> ‘be missing’		<u>nibèn</u> ‘search for’

The transitive verbs in (6) and (16a) are lexical causatives in that they express a causative event, and they are in a causative relationship with their formally-related intransitive verb: the O argument is co-referent with the S argument in the intransitive counterparts (i.e., $V_{tr} = \text{make } V_{intr}$). However, transitive counterparts can also be “lexical applicatives” in an applicative (S = A; 16b) or causative (S = O; 16c) relationship with the intransitive verb. Thus, as with the verb pairs described in sections 5.3.1.1 and 5.3.1.2, the relationship between the verb pairs is one of transitive/intransitive, rather than always causative/non-causative.

5.3.1.4 Verb pairs ending in ca/que; an instance of ablaut?

The verb pairs described here show a pattern similar to those in the preceding section in that they are formally similar and lack a clear direction of derivation: the intransitive counterparts end with que ([ke]), and the intransitive with ca ([ka]) (7 & 17).

	Intransitive		Transitive
(17a)	<u>nique</u> ‘run off (plural S)’		<u>nica</u> ‘chase off (plural O)’
(17b)	<u>tadanque</u> ‘slip’		<u>tadanca</u> ‘cause to slip’
(17c)	<u>pichique</u> ‘be on fire, burn oneself’		<u>pichica</u> ‘burn something’
(17d)	<u>besque</u> ‘scratch (as a chicken in dirt)’		<u>besca</u> ‘sweep (floor or rubbish)’

These forms are interesting in that the intransitive counterparts of the verb pairs (i.e., those that end in que) compose the only category of verbs that cannot be suffixed with the causative -me (18; cf. 19 & 20). (Recall from the phonology chapter that que/ca verbs also have anomalous phonological properties; §§2.7.1, 2.8.2, 2.9.)

- (18a) shēctenamē _____ nique-o-sh
white.lipped.peccary run.off:PI-Past-3
'White-lipped peccaries [pig-like game mammals] ran off.'
- (18b) *shēctenamē _____ nique-me-o-sh
white.lipped.peccary run.off:PI-Caus-Past-3
'(He made white-lipped peccaries run off.)'
- (19a) shēctenamē _____ nica-o-sh
white.lipped.peccary chase.off:PI-Past-3
'He made white-lipped peccaries run off.'
- (19b) shēctenamē _____ nica-me-o-sh
white.lipped.peccary chase.off:PI-Caus-Past-3
'He caused him to make the white-lipped peccaries run off.'
- (20a) shēctenamē _____ cuen-o-sh
white.lipped.peccary run.off:Sg-Past-3
'A white-lipped peccary ran off/passed by.'
- (20b) shēctenamē _____ cuen-me-o-sh
white.lipped.peccary run.off:Sg-Caus-Past-3
'He made a white-lipped peccary run off.'

As can be seen in (18a) and (19a), the transitive counterpart (the one ending in ca) can be the semantic causative of the que form. Nevertheless, the inability to suffix -me to verbs ending in que does not seem to be semantically motivated because other intransitive verbs that have transitive counterparts can be causativized with -me (21-24).

- | | | | |
|------------------------|----------------------------------|----------------------|--------------------|
| (21a) <u>uēnes-me</u> | 'let die/cause to die' | (21b) <u>cues</u> | 'kill' |
| (22a) <u>naimēd-me</u> | 'let/cause something to run out' | (22b) <u>nain</u> | 'finish off' |
| (23a) <u>uidēn-me</u> | 'let/cause to fall and scatter' | (23b) <u>uidēnua</u> | 'scatter throwing' |
| (24a) <u>chiuid-me</u> | 'let/cause some liquid to spill' | (24b) <u>chiuin</u> | 'spill a liquid' |

The restriction against using -me with verbs that end with que but not with other intransitive paired verbs does not seem to be based on a distinction between active vs. stative stems or agentive vs. patientive. This restriction appears to be associated with the wide range of direct and indirect meanings of verbs ending with ca, as opposed to other lexical causatives that we have looked at. Contrasting the meanings of lexical causatives and their -me-causativized intransitive counterparts in (21) - (24), it is evident that the meanings are partitioned in such a way that the lexical causatives code more direct causation, and morphological causatives code more indirect causation. The grammatical restriction of suffixing -me to verbs ending in que precludes such a partitioning of meanings with que/ca verb pairs.

It is difficult to show that this exception to the use of -me is not phonologically motivated, since all verbs ending with que have a counterpart that ends with ca, so one cannot test whether it is the fact that the verb ends with que that prohibits suffixation with -me, or whether it is the existence of the transitive counterpart ending with ca. It does seem highly unlikely, however, that the [k] is involved in conditioning this restriction, considering that roots ending in [e] (but not [ke]) *do* take -me.

One might suspect, as discussed in the phonology chapter (§2.6.6.4) that verbs ending with ca and que represent a derivational process where the vowel change from e to a (i.e., “ablaut”) is a grammatical means of deriving a transitive verb from an intransitive verb (or vice-versa: a change from a to e being a process for detransitivizing verbs). This analysis is discouraged by the observation that no other derivational process in Matses uses ablaut, and that it is only following [k] in the final syllable that this vowel alternation would be possible. One motivation for analyzing this as a productive process is that it would provide an explanation for why the que forms cannot be causativized with -me: because verbs are causativized by ablaut or by suffixation, but not by both (an

analysis similar to English past tense marking). But another objection to this analysis is that the alternation between que and ca cannot be called a synchronically productive means of **causativization**, because the transitive counterpart does not always have a causative meaning and its S of the intransitive counterpart is not always co-referent with the O of the transitive verb (25). Detransitivization via /a/ → /e/, would be a more likely scenario (see antipassives formed this way in §11.6.2.2), but it is still not a very appealing analysis.

Intransitive	Transitive
(25a) <u>sedenque</u> ‘weep’	<u>sedenca</u> ‘weep for someone’
(25b) <u>onque</u> ‘talk’	<u>onca</u> ‘tease verbally, flirt’
(25c) <u>que</u> ‘say’	<u>ca</u> ‘say to/tell’
(25d) <u>chushque</u> ‘complain, bark’	<u>chushca</u> ‘complain about someone, reprimand’

Unlike with the causative verbs ending in ua described in section 5.3.1.2, causative vs. applicative relationships are not predictable from agentive vs. patientive semantics of the intransitive verbs. The only pattern that seems to differentiate those intransitive verbs that have causative transitive counterparts with ca (7 & 17) and those that have applicative counterparts (25) is that those with applicative counterparts all refer to actions that are more naturally interpreted as communal or reciprocal human activities, and thus perhaps these intransitive verbs already suggest a notion of “sociative causation,” as described in Shibatani and Pardeshi (2002). Their transitive applicative counterparts then serve to separate agents and patients as participating in different roles in the activity, rather than doing something together. The verbs that have causative counterparts, by contrast, refer to intransitive actions that are reflexive, anticausative, or non-communal actions and states.

A possible diachronic explanation for why verbs ending in -que cannot be suffixed with -me is that perhaps -que was an intransitivity marker and -ca was a transitivity marker, and that -me was incompatible with the intransitivity marker since a causative would have to be at least bivalent. Another possibility is that -que and -ca were verbalizers, with the former creating intransitive verbs and the latter transitive verbs. I have not done Panoan comparative work yet, so I can only speculate about such possibilities, but nevertheless it does seem likely that the absence of -me on verbs that end with que represents a relic from a past time when que and ca were segmentable and -me was beginning to be used broadly in the language. Whatever the history of these verb pairs might have been, it is difficult not to imagine a possible connection to the quotative verbs, ca and que (§§5.3.4, 12.5.1)

5.3.2 Singular-plural verb pairs

As mentioned in the preceding chapter, number is not regularly marked on nouns in Matses, and in most situations, noun phrases are ambiguous with respect to number, which must be induced from the context. When plurality is marked on nouns (with enclitics or particles), it is usually to express other notions beyond simple plurality, such as generality, group composed of an extended, restricted, or heterogeneous category, and most of these distinctions are restricted to human subjects. This lack of number marking on nouns is made up for in part by number marking strategies associated with verbs. Two verbal suffixes, -cueded ‘Collective S/A’ and -beded ‘Collective A’ help determine if a noun phrase is plural, but these are infrequently used and restricted to entities acting as group (§5.5.5). Verb reduplication can also have a plural reading (§5.9), and several aspect markers (§§5.5.2, 5.5.4) and the diminutive suffix -tsēc can be used to express singularity or fewness in number. Additionally, quantitative adverbs (e.g., abentsēc ‘one,’ dadpen ‘many’) may be used to explicitly express number. The last strategy for

expressing number, the one addressed here, is verb selection. We find that several Matses verbs come in pairs that differ semantically only with respect to number. These include several motion verbs (26), posture verbs (27), and placement verbs (28).²

	Singular S	Plural S		Singular S	Plural S
(26a) 'locomote'	<u>capu</u>	<u>shayaque</u>	(27a) 'lie'	<u>ue</u>	<u>samëd</u>
(26b) 'run off'	<u>cuen</u>	<u>nique</u>	(27b) 'stand'	<u>nid</u>	<u>tabad</u>
(26c) 'fall'	<u>paëd</u>	<u>tididique</u>	(27c) 'hang'	<u>diad</u>	<u>didique</u>
		Singular O	Plural O		
(28a) 'put horizontally/general'		<u>nan</u>	<u>san</u>		
(28b) 'put in closed container'		<u>naued</u>	<u>saued</u>		
(28c) 'put in open container'		<u>nando</u>	<u>sando</u>		
(28d) 'put vertically'		<u>tsadun</u>	<u>tabëc</u>		
(28e) 'hang'		<u>dectan</u>	<u>didica</u>		
(28f) 'throw away or toss/scatter'		<u>ne</u>	<u>seca</u>		

Several patterns are worth pointing out. First, that it is the absolutive category whose number is specified, unlike the verbal suffixes -cueded 'Collective S/A' and -beded 'Collective: A' (but note that the plural roots do not require a collective interpretation). Another thing to keep in mind is that singular vs. plural verb selection is not strict. The plural verbs *must* refer to plural S or O, but the singular verbs are used less strictly, being the only choice for singular participants, acceptable for few participants, and less appropriate for large number of participants (a bit like the English *gallop* vs. *stampede*, though the semantics don't quite match up as exactly as with the Matses pairs).

² The pair of terms, cuessunne/cuesunne 'kill (one)' and cuessun seca 'kill (several),' would be added to this list, except for the fact that while cuessunne is a single phonological word, while cuessun seca is not. The two terms are evidently related to the terms in (28f), and could be analyzed as: cues-shun-ne/ seca (hit/kill-after:S/A>A-throw.away:Sg/Pl) 'throw aside/make fall after striking.' The word cues 'hit, kill striking' is ambiguous as to whether the O was killed or just struck, while these longer words make it clear the O died. The more common term, cuessunne, is lexicalized, and can be used for several types of killing, while cuessun seca specifies striking as the means of killing.

5.3.3 Negative verbs

A handful of verbs can be identified as containing negative semantics. These are listed in (29) - (32) along with related roots, if any.

- | | | | |
|-----------------------|-------------|---------------------|-----------------------------------|
| (29a) <u>ush</u> | 'sleep' | (30a) <u>pe</u> | 'eat' |
| (29b) <u>ushcas</u> | 'be sleepy' | (30b) <u>pias</u> | 'be hungry for meat' |
| (29c) <u>ushcasma</u> | 'not sleep' | (30c) <u>piasma</u> | 'not eat' |
| | | (30d) <u>piacma</u> | 'not eat due to lack of appetite' |
| (31a) <u>cues</u> | 'hit' | (32) <u>nibēd</u> | 'not be' |
| (31b) <u>cuesma</u> | 'not reach' | | |

As can be seen, most of these contain the **formative** (a synchronically unsegmentable sub-morphemic element) ma, which also occurs as a formative in negative nominalizers (§4.7.3),³ in an adverb (33a) and in several adjectives (33b-33e) that could be viewed as having negative semantics (though, as opposed to the verbs listed above, this is hard to show due to the absence of synchronic roots without the ma element).

- | | | | |
|--------------------|---------------------------------|---------------------|--------------------|
| (33a) <u>tema</u> | 'few' | (33d) <u>cuēdma</u> | 'dull (not sharp)' |
| (33b) <u>pema</u> | 'weak (e.g., poison potency)' | (33e) <u>uisma</u> | 'not wary' |
| (33c) <u>dēdma</u> | 'weak (e.g., tensile strength)' | | |

As a final note, it is worth mentioning that there is a verbal suffix *-ma* in the closely-related language, Matis, which Ferreira (2001) describes as being a productive past tense negative marker.

5.3.4 Grammatically extraordinary verbs

In this section, I point out some verbs that have anomalous morpho-syntactic properties. They are not prototypical, and therefore are excluded from many of the general statements made in this chapter. Two are the copular verbs ne 'be' and ic 'be.'

³ See section 3.2.5.4 for the form -cas/-as that occurs in (29b), (29c), (30b), and (30c).

Both have reduced verbal properties, like not being able to be prefixed, not taking spatial deictic suffixes, not being able to be reduplicated, and having some restrictions in word order. The copula ne is the more restricted in that it also cannot occur as the single constituent in a sentence or occur first in a sentence. And ic is unusual in that it can be contracted (to -c; §2.6.7) and serves as an auxiliary verb in some constructions (e.g., negative verb phrases; §12.3.2). The syntax of these verbs is discussed in detail in the section on copular clauses (§11.7).

The pro-verbs (34) also have reduced verbal properties, like not being able to be prefixed, reduplicated, or cliticized with pronominal enclitics (note that ne is homophonous as a copula and a pro-verb).

	Intransitive	Transitive		Intransitive	Transitive
(34a) 'do like this'	<u>nad</u>	<u>nado</u>	(34c) 'do'	<u>ne</u>	<u>na</u>
(34b) 'do like that'	<u>ad</u>	<u>ado</u>			

Next on the list are the quotative verbs que 'say (Intransitive),' ca 'tell to/about (Transitive),' and dan 'suppose incorrectly,' all of which cannot occur without a segment of quoted speech. Quotation is described in section 12.5. The "double absolutive" verbs (bun 'want' and bëshun 'forget'; §11.4.3) and the ditransitive roots (mene 'give,' mënchic 'take away from,' chësh 'carve into,' daëdca 'weave into,' etc.; §11.4.2) are unusual with respect to their transitivity, but otherwise are typical verbs, except for bun, which is the only true complement-taking verb in the language (§12.2.6).

5.4 Prefixes

The prefixes that can occur on Matses verbs can be divided into two classes. One is a closed set of 28 body-part or locative orientational prefixes, which can have clause-level effects; these were introduced in section 4.5.1 and are all listed in Table 4.16.

The other category is composed of two prefixes, bësh- ‘De-intensifier’ and pash- ‘De-intensifier’ which modify the meaning of the verb to mean ‘incompletely’ ‘halfway’ or ‘lightly.’ All of these also occur on nouns and adjectives (§§4.5, 6.5), though body-part prefixes are used more productively with verbs than with nouns. Only one suffix may occur in a verb, therefore, despite their distinct functions, the use of bësh- or pash- precludes using body-part prefixes.

5.4.1 Body-part prefixes

This category of prefixes codes real or metaphorical body parts, except for në- ‘in water/in fire.’ With verbs, body-part prefixes function as a stem modification process providing locative orientation with respect to a body-part of the S (35) or O (36 & 37) argument, or with respect to where the S (38) or O (39) argument is located.

- (35) pinchuc-n më-se-ad-esa capa ne-e-c
 thorn-Inst **hand**-pierce-Rflx-Neg.A.Nzr squirrel be-Npast-Indic
 ‘Amazon red squirrels are ones that don’t poke themselves on their paws with the
 thorns [of the pinchuc palm].’
 A-IV 008 capa 15
- (36) të-cues-shun shuinte
neck-hit-after:S/A>A two.toed.sloth
 ‘After striking the two-toed sloth on the neck...’
 A-IV 022 shuinte 25
- (37) cuëte da-daësh-tsēc-quid madu-n sipi-n
 dicot.tree **trunk**-eat.gnawing-Dim-Hab demon-Gen tamarin-Erg
 ‘Pygmy marmosets gnaw the trunks of dicot trees.’ [da- ‘body/trunk/perimeter.’]
 A-IV 006 madun sipi 05
- (38) nua tëon të-usud-e-c
 large larynx **neck**-be.in.a.hole-Npast-Indic
 ‘The larynx sits large inside [the howler monkey’s] neck.’
 A-I 054 achu 04

- (39) chiuish bacuë bed-anec cho-quin shubu ca-ne-quid
 fig fruit grab-after:S/A>S come-while:S/A>A house roof-toss-Hab
 ‘After grabbing fig fruits, as they come flying by, they drop fruits down on house roofs.’ [ca- ‘back/roof/convex surface of something/etc.’]

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Superficially, these may appear somewhat like noun incorporation or some type of compounding; however, this is not the case, as in argued in section 11.5.4. Sections 10.4.2 and 11.5.4 describe how these prefixes can sometimes function as postpositions and apparently increase the valence of a verb (as in 39, where shubu ‘house’ appears to be an “extra” participant). Sentence (40) is a nice example of the use of body-part prefixes used to orient the hearer with respect to the canoe’s parts⁴.

- (40) da-tadëd-tanquin bëda-mbo-en
 side-chop.off-after:S/A>A good-Aug-Advzr:Tr
ca-tadëd-ban-quin da-tadëd-shun
 underside-chop.off-Iter-while:S/A>A perimeter-chop.off-after:S/A>A
cuëte-ua-shun an-shui-quid an-pichica-en-quio
 fire-Vzr:make-after:S/A>A inside-heat-Hab inside-burn-Neg-Aug
ic-quin
 Aux-while:S/A>A
 ‘After chopping away the sides, after carefully chopping away at the underside while simultaneously chopping away the outer part, they make a fire and then heat up the inside, while making sure not to burn the inside.’

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Some verbs actually occur more frequently with body-part prefixes than unprefixes. For example, the verb pan ‘wash’ usually occurs as da-pan (body-wash) ‘wash whole thing, wash outside of,’ and also commonly as më-pan ‘wash one’s hands,’ an-pan ‘wash inside of,’ etc.’ There are at least three verb roots that actually can never occur without prefixes, quiad ‘learn,’ dquëd ‘break (intransitive)’ and dquën ‘break

⁴ Prefixes applicable to canoes: da- ‘body’ = ‘perimeter of hull, especially before giving it shape, sides’; ca- ‘back’ = ‘underside/convex surface of hull, keel’; an- ‘mouth’ = ‘inside/ concave surface of hull’; dë- ‘nose’ = ‘prow’; tsi- ‘butt’ = ‘stern’; cui- ‘mandible’ = ‘gunwales.’

(transitive)’ There are verbs that occur as lexicalized forms, which most likely are products of historical prefixations (e.g., ancush ‘fill with liquid’ most likely contains the prefix an- ‘inside,’ but there is no synchronic root cush that occurs anywhere else in the language. But quiad, dquēd, and -nguēn occur with a wide range of prefixed, apparently productively (41), and so should be considered roots, rather than considering all instances with different prefixes as multiple lexicalized forms.

- (41a) an-quiad-o-bi ‘I learned a spoken activity (a language, to speak, a song,
mouth-learn-Past-1S to sing, to recite alphabet, to whistle, etc.)’
- (41b) mē-quiad-o-bi ‘I learned to weave, write, do math problems, fire
hand-learn-Past-1S shotgun, fletch arrows, or other manual tasks’
- (41c) ta-quiad-o-bi ‘I learned to play soccer, to wear on shoes, to cross a log
foot-learn-Past-1S bridge’
- (41d) ēc-quiad-o-bi ‘I learned to kiss’ [Matses did not traditionally kiss]
lip-learn-Past-1S
- (41e) quiad-o-bi ‘I chewed’ (homonym) / *‘I learned’
learn-Past-1S

5.4.2 bēsh- and pash- ‘De-intensifier’

The prefix bēsh- is quite different in function from the body-part prefixes. It does not occur all that often on verbs (I have no text examples), but some speakers use it productively with a wide variety of verbs in elicitation. It de-intensifies the verb in the sense of expressing that the action was done softly or partway (42).

- (42a) bēsh-sēn-Ø (42b) bēsh-se-Ø
Deintens-saw-Imper Deintens-pierce-Imper
‘Saw it halfway!’ ‘Shoot it softly!’/ ‘Pierce it partway!’
- (42c) bēsh-shuēshca-Ø (42d) bēsh-dēd-Ø
Deintens-comb-Imper Deintens-cut.with.ax-Imper
‘Comb it softly/a little!’ ‘Chop it halfway through!’

The prefix pash- is only accepted with nouns by a subset of the population. It means about the same thing as bësh-, but tends to have either a joking or critical connotation.

- | | | | |
|-------|--|-------|---|
| (43a) | <u>pash-se-o-sh</u>
Deintens-pierce-Past-3
'He barely shot it (with an arrow; i.e., he killed it, but almost missed, or got it by luck)' | (43b) | <u>pash-chud-o-sh</u>
Deintens-copulate.with-Past-3
'He had sex with her hastily (without satisfying her).' |
| (43c) | <u>pash-död-o-sh</u>
Deintens-pierce-Past-3
'He incorrectly chopped down the tree.' [Scenario for this word: someone cuts down a tree to get honey without first making the bees run off using smoke.] | | |

5.5 Derivational Suffixes

Table 5.4 lists all the derivational suffixes and all the finite inflectional suffixes that can occur on verbs (non-finite verbal suffixes, such as nominalizers, are not listed here, but they would go in position 10).⁵ It is difficult to assign position classes to the verbal suffixes in Matses because some suffixes can occur in different locations vis-à-vis one another, and one suffix (e.g. -me 'Causative') may be used iteratively. However, the ordering of the suffixes within the verb word is not completely random, and so it is possible to describe their relative positions even if we cannot assign them fully predictable position classes in all cases. For example, the valence-changing morphemes listed under position 3 in Table 5.4 do not represent a single "position class," because a verb can contain as many as three of these suffixes; however, this group of suffixes cannot be assigned to multiple position classes because they may be arranged in different orders vis-à-vis one another (usually resulting in different meanings; §5.5.1.2).

⁵ See section 3.2.4 for a discussion on the difference between derivational and inflectional morphology in Matses.

Nevertheless, it is readily observable that the valence-changing suffixes preferentially precede all other verbal suffixes, and it is predictable that they will always precede all suffixes in positions 5-13. The ordering of the suffixes in Table 5.4 reflects a combinations of several types of patterns: i) preferred orders; ii) disallowed relative orders; and iii) co-occurrence restrictions. The position classes without parentheses in Table 5.4 represent position classes with fixed relative order, and those enclosed in parentheses exhibit non-fixed relative order. The rule of thumb with these latter position classes is that the further apart two suffixes are on Table 5.4, the less likely it is for their order to be inverted.

The number of morphemes present in a verb word is potentially very large, theoretically up to 19 different morphemes: 1 prefix, the stem, and 17 suffixes. Additionally, the root may be reduplicated together with one or two derivational suffixes, increasing the number of possible morphemes in a verb word. And if the verb word involves a verbalized noun or adjectives, the number of morphemes in the word can potentially be even larger. However, the position classes in Table 5.4 are more representative of the wide range of morphological possibilities, rather than a reflection of the structure of typical words. In fact, in natural speech, seldom are verbs with more than 6 suffixes uttered, perhaps 3-5 on average.

Table 5.4. Relative positions of verbal morphology for finite verb words (n = 66 suffixes and 3 pronominal enclitics).

(1)	(2)	(3)	(4)	(5)	(6)	7	8	9	10	11	12	13
- <u>me</u>	- <u>do</u>	- <u>tan</u>	- <u>ne</u>	- <u>cueded</u>	- <u>quio</u>	- <u>tsēc</u>	- <u>bo</u>	- <u>ac</u>	- <u>o</u>	- <u>c</u>	- <u>i</u>	- <u>que</u>
- <u>shun</u>	- <u>an</u>	- <u>uan</u>		- <u>beded</u>	- <u>quimbo</u>	- <u>pa</u>		- <u>nēdac</u>	- <u>onda</u>	- <u>sh</u>		
- <u>nan</u>	- <u>cuen</u>	- <u>yo</u>			- <u>tsen</u>	- <u>chit</u>		- <u>ampic</u>	- <u>denne</u>	- <u>Ø</u>		
- <u>ad</u>	- <u>ben</u>	- <u>cuidan</u>						- <u>nēdampic</u>	- <u>e</u>	- <u>bi</u>		
- <u>an</u>	- <u>ded</u>	- <u>bidan</u>							- <u>enda</u>	- <u>mbi</u>		
	- <u>ban</u>	- <u>cuētsen</u>							- <u>tsia</u>	- <u>yoc</u>		
	- <u>bud</u>	- <u>bētsen</u>							- <u>ash</u>			
	- <u>uid</u>	- <u>nid</u>							- <u>nēdash</u>			
	- <u>ua</u>	- <u>ban</u>							- <u>quid</u>			
		- <u>cho</u>							- <u>paid</u>			
		- <u>bē</u>							- <u>esa</u>			
		- <u>cuen</u>							- <u>nui</u>			
		- <u>ben</u>							- <u>nu</u>			
		- <u>tuid</u>							- <u>mane</u>			
		- <u>bud</u>							- <u>nushe</u>			
		- <u>do</u>							- <u>nunda</u>			
									- <u>panonda</u>			
									- <u>ta</u>			
									- <u>Ø</u>			

Position	Meaning	# per word	Section
1	valence-changing morphology	0-3	5.5.1
2	aspect	0-2	5.5.2
3	directional suffixes (spatial deixis)	0-1	5.5.3
4	Distributive	0-1	5.5.4
5	Collective	0-1	5.5.5
6	intensifiers and 'almost'	0-2	5.5.6, 5.5.7
7	Uncertainty, Comment, Diminutive	0-1	5.5.8-5.5.10
8	Prior	0-1	5.5.11
9	tense-evidential (can occur instead of or in addition to a position 10 suffix)	0-1	5.6.1.2
10	tense/aspect/mode/person inflection	0-1	5.6
11	person agreement, pronominal enclitics and counter-expectation (only following a position 10 suffix)	0-1	5.6.5-5.6.7
12	first-person O (can only follow - <u>sh</u> or - <u>pashun</u>)	0-1	5.6.6
13	post-inflectional conjunction, 'so/because'	0-1	5.7

Note: at least one suffix from either position 9 or 10 is required on an inflected verb.

In the subsections of the present section, I will discuss the derivational verbal morphology in the relative order that it usually appears in verb words (i.e., as listed in Table 5.4), introducing each suffix and discussing them to various levels of detail.

Here, I summarize the elements that can occur on a verb. Verb words in Matses are composed minimally of a verb root and one inflectional or non-finite verbal suffix (or \emptyset in the imperative). A verb word may also contain one prefix, several derivational suffixes, full or partial reduplication of the root, a suffixed first-person pronoun, and a conjunction. The following represents the possible make-up of a finite verb word (optional elements in parentheses):

V = (prefix)-root-(derivational suffixes)-inflectional suffix(es)-(pronoun)-(conjunction)

The inflectional suffix(es) may be replaced by a non-finite (subordinating) verbal suffix (the infinitive suffix, a nominalizing suffix, etc.), in which case the conjunction suffix is longer possible, and pronominal enclitics can only occur following some of the non-finite morphology. But other morphology that would not normally occur on verbs can be added, such as the emphatic *-bi* on adverbialized verbs, case marking, nominalized verbs, etc.

5.5.1 Valence-adjusting suffixes

Valence increase and decrease is very productive in Matses. It is also very common, considering that there are no roots that may appear both as transitive and intransitive (or both as transitive and ditransitive) without being overtly modified with one of the valence-changing suffixes described in this section. Valence change is accomplished using one (or more) of the suffixes in Table 5.5.

Table 5.5. Summary of valence-adjusting suffixes

Suffix	Gloss	Valence adjustment	Type of verb stem it can occur on
- <u>me</u>	'Causative'	+1	any except <u>que</u> verbs
- <u>shun</u>	'Applicative'	+1	only transitive
- <u>nan</u>	'Reciprocal'	-1	only transitive
- <u>ad</u>	'Reflexive/Anticausative/Passive'	-1	only transitive
- <u>an</u>	'Antipassive'	-1	only transitive

More so than any of the other derivational suffixes (not counting class-changing morphology), valence-adjusting suffixes have a more significant impact on the syntactic properties of the clause than the modified verb heads. Therefore, I have reserved discussion of almost all aspects of class-changing morphology for chapter 11, where causation (§§11.5.1-11.5.2), applicative constructions (§11.5.3), general valence decrease (§11.6), passive clauses (§11.6.1.1), and antipassive clauses (§11.6.2.1) are treated in some detail. I have restricted discussion in this chapter to lexicalized and semi-lexicalized instances of these suffixes (next section), and the possible combinations of these suffixes on a verb stem (§5.5.1.2).

5.5.1.1 Lexicalized valence-adjusted stems

Some stems with -me could be said to be lexicalized, such as (44a), (45a), and (46a), considering their rather specific and idiosyncratic meanings, and that there are no other lexical roots for 'suckle,' 'feed,' or 'fish with hook and line.'

(44a) chishme
'suckle'

(44b) pia bata chish-me-o-sh
cane sweet **suck-Caus-Past-3**
'She made/let him suck sugarcane.'

- (45a) peme
'feed'
- (45b) opa pe-me-o-sh
dog bite/eat-Caus-Past-3
'She fed the dog./She made the dog bite/eat him/it.'
'He (unintentionally) let the dog bite her '
- (46a) anseme
'hook-and-line fish'
- (46b) tiante-n podo an-se-me-ta
bamboo-Inst arm inside-pierce-Caus-Imper
'Make the bamboo [blade] pierce the armpit.'

In the culturally relevant contexts (and usually also when context is lacking or there is ambiguity), the meanings in (44a), (45a), and (46a) obtain. Meanwhile, the same forms could also be interpreted in other contexts as more productive usages of -me (44b, 45b, & 46b). Furthermore, we note that there are no phonologically irregular forms associated with -me. So words like (44a), (45a), and (46a) appear to be in the process of obtaining lexical status. An interesting pattern to note here is that the meanings that get lexicalized are not just the more culturally relevant ones, but also ones denoting focused causation. There are no "cranberry morphemes" in forms containing -me; i.e., there are no lexicalized stems with -me that contain segments that do not occur elsewhere in the language. This observation, along with its formal regularity and high productivity, seems to indicate that -me is not a very old causative morpheme, sending one searching elsewhere for older causatives in the Matses language. Section 5.3.1, which discusses a set of lexical causative verbs, including a set of roots with which -me cannot be used (§5.3.1.4), may hold a clue to old causative/transitivizing morphology in Matses.

The suffix -shun is an applicative that specifies that the action affects an additional participant (which becomes a core argument). This suffix is attached only to transitive stems. The only possible exception to this is the verb mamēnshun 'to laugh at', which could be analyzed as the intransitive root mamēn 'laugh/smile/play' plus the applicative -shun; however, this would be the only case of the applicative appearing on an intransitive verb. Furthermore, -shun is used productively simply to add an affected,

patient-like participant, usually either a beneficiary or maleficiary, while mamēnshun can only imply detriment to the subject (i.e., it cannot be used to refer to laughing at someone's stale joke so they don't feel embarrassed, or to smiling at someone). We cannot be sure if mamēnshun is correctly analyzed diachronically as an instance of the use of -shun with an intransitive or a mere coincidence, but it is nevertheless clear that -shun is used *productively* only with transitive stems.

5.5.1.2 Combinations of Valence-adjusting Suffixes

A verb root can have several valence-changing suffixes attached to it. The only condition that seems to constrain combinations is that a univalent stem cannot have a valence-decreasing suffix added on to it. The order in which the suffixes are attached relative to one another can affect the meaning of the stem, as in (47-49).

- | | |
|---|---|
| (47a) <u>pe-nan-me-e-c</u>
eat/bite-Recip-Caus-Npast-Indic
'He is making them bite each other.'
[e.g., dogs] | (47b) <u>pe-me-nan-e-c</u>
eat/bite-Caus-Recip-Npast-Indic
'They are feeding each other.'
[e.g., romantically] |
| (48a) <u>aton iyua pe-me-shun-enda</u>
3Gen pet eat-Caus-Appl-Neg Imper | 'Don't feed his pets/chickens for him.' |
| (48b) <u>aton iyua pe-shun-me-enda</u>
3Gen pet eat-Appl-Caus-Neg Imper | 'Don't let him _i eat his _j chickens.'
[to his _i detriment] |
| (49a) <u>te-ad-me-o-sh</u>
cut-Rflx-Caus-Past-3
'He caused him to cut himself.' | (49b) <u>te-me-ad-o-sh</u>
cut-Caus-Rflx-Past-3
'He allowed himself to be cut.' |

Up to three sequential valence-changing suffixes are possible, though uncommon in regular speech (50). And at least the suffix -me can be used more than once in a verb stem. This iterative use is common in speech and readily accepted in elicitation with

semi-lexicalized stems like those introduced in the preceding section (51), but rare and sometimes only marginally accepted in elicitation with some stems (52).

- (50) che-me-shun-nan-e-c 'They help each other by feeding each other's pets.
eat-Caus-Appl-Recip-Npast-Indic
- (51) chish-me-me-o-sh suck-Caus-Caus-Past-3
'He made her suckle the baby.'
- (52) ?tsad-me-me-o-sh sit-Caus-Caus-Past-3
'He made him make him sit down.'

The resultant valence of a stem that includes more than one valence-changing morpheme is a total of the basic valence of the root plus 1 for each valence increasing-suffix and minus 1 for each valence-decreasing suffix (Table 5.5), so that the final valence of the stem is not controlled by a single dominant or final morpheme. For example, derived stems using the suffix -ad 'Reflexive' generally results in univalent stems, but when the valence of a transitive stem is first increased by a valence-increasing suffix like -me 'Causative,' final valence is 2, as in (53), which shows that the clause is transitive because it has a participant in the ergative case. Inverse order of these two suffixes would change the meaning, but not the valence (49).

- (53) cachita-n pe-me-ad-o-sh 'He allowed himself to be bitten by a caiman.'
caiman-Erg bite-Caus-Rflx-Past-3

5.5.2 Aspect markers

Aspectual information can be marked on Matses verbs in three different ways: i) verb reduplication can carry an iterative meaning (§5.9); ii) some inflectional suffixes mark habitual aspect (§5.6.2.3), and others imply perfect aspect (§5.6.1.2); and iii) with optional, derivational suffixes that carry specific aspectual meanings (the topic of this section; Table 5.6). Additionally, aspect can be marked by a few adverbs, such as a-bi

‘still (imperfective)’ and në-bi ‘now (inchoative)’ (§7.3.3), and clause-chaining constructions code progressive aspect (§12.4.4.4) and the notions ‘start to’ and ‘finish’ (§12.4.4.1). Some negative enclitics and nominalizers code aspect: -a ‘Negative: Perfect’ (§12.3.2) and -acmaid ‘Negative O: Perfect: Nominalizer’ (§4.7.3). However, even taking all of the varied forms of coding aspect into account, there are still no general aspect markers coding such general aspectual notions as ‘Imperfective’ vs. ‘Perfective.’ It turns out that general aspect (e.g., ‘went/had gone’ vs. ‘used to go/has gone’) must almost always be deduced from context.

Table 5.6. Position 2 aspect markers.

<u>-do</u>	‘Inceptive/Inchoative’	<u>-ded</u>	‘Iterative: Intermittent’	<u>-uid</u>	‘incompletely’
<u>-an</u>	‘Inceptive/Inchoative’	<u>-ban</u>	‘Iterative: Plural O’	<u>-ua</u>	‘again’
<u>-cuen/-ben</u>	‘Inchoative’	<u>-bud</u>	‘Durative’		

The aspectual notions that *are* coded by derivational suffixes are more specific ones, and, as can be seen in Table 5.6, some aspects, specifically inceptive and iterative, have more than one morpheme that marks them. The subsections of the present section will discuss these suffixes in more detail and explain the often subtle differences between these pairs and triplets.

5.5.2.1 Inceptive/inchoative suffixes: -do, -an, and -cuen/-ben

These suffixes -do (and its allomorph -to, which follows consonants except n; §2.6.1.2), -cuen/-ben (-cuen occurs with any verb, -ben only with transitive ones) and -an mark ‘Inceptive’ (beginning an activity) and/or ‘Inchoative’ (entering into a state). This seems like too many, considering that there are already inchoative verbs (5.10), and that there is also an analytic way to say “begin/start to X” using adverbial clauses (§12.4.4.1). What we find is that -do, -cuen/-ben, and -an are different, but do not differ in any neat

partitioning of inceptive/inchoative meanings. Rather, the meanings that they have depend on the semantics of the particular verb, and each also has apparently idiosyncratic restrictions as to which verbs it can occur with. To completely understand all their possible meanings and restrictions would require a more exhaustive study than I have had time to conduct, but some general trends are nevertheless identifiable at this point.

Before describing these, it should be noted that the semantics of the verb has an important impact on whether an inchoative or inceptive reading obtains with these suffixes. For example, activity verbs more naturally take an inceptive reading (e.g., ‘begin to walk’), but an inchoative reading can nevertheless be imposed (e.g., ‘become able to walk’).

Other semantic distinctions among the verb roots that seem to have an impact are: state (e.g., ‘be mad’), inchoative (e.g., ‘get mad’), posture (e.g., ‘sit’), locomotion (e.g., ‘walk’), in-place dynamic activity (e.g., ‘build’) and in-place non-dynamic activity (e.g., ‘cry’). For example, with the activity verb chonoad ‘work,’ -do produces an inceptive reading (54b), -an produces either an inceptive or an inchoative reading (54c), and -cuen produces only an inchoative reading (54c). But with state verbs, they all have inchoative readings (55).

(54a) chonoad-o-sh
sit-Past-3
‘He worked.’

(54b) chonoad-do-o-sh
work-Incep-Past-3
‘He started to work.’

(54c) chonoad-an-o-sh
sit-Incep-Past-3
‘He started to work/He works now.’

(54d) chonoad-cuen-o-sh
work-Incho-Past-3
‘He began to work regularly.’
(i.e., was formerly ill or lazy).

(55a) chiësh-o-sh
be.angry-Past-3
‘He was mad.’

(55b) chiësh-do-o-sh
be.angry-Incho-Past-3
‘He got mad.’

(55c) chiësh-an-sh
 be.angry-**Incep**-Past-3
 'He began to get mad.'

(55d) chiësh-cuen-o-sh
 be.angry-**Incho**-Past-3
 'He became a hothead.'

Below I will give a general characterization each of the inceptive/inchoative suffixes, but the reader should keep in mind that there are some idiosyncratic meanings and restrictions that remain exceptions to these generalizations.

The suffix that most frequently has an inceptive reading is -do, which carries an inchoative meaning only with state verbs (55b). It seems to focus on the abrupt beginning of an action, as in (56), or the period before the action is completely underway (57), and so it seems to be generally incompatible with verbs that code activities and states that do not begin abruptly (58b).

(56) chiad-do-shun _____ bë-quid _____ macueste
 carry.on.shoulder-**Incep**-after:S/A>A bring-Hab corn.grinding.tub
 'After **lifting** it onto their shoulders, they bring the corn grinding tub.'
 A-XIII 030 macueste 11

(57) adembidi ush-do-quin _____ chido-n _____ mocodi _____ aton
 likewise:Tr **sleep**-**Incep**-while:S/A>A woman-Erg seed.necklace 3Gen
dëushte-n _____ nadquën-quid
 hammock.rope-Loc hang-Hab
 'Also, when women **go to sleep**, they hang their necklaces on their hammock ropes.'
 A-XIII 013 mocodi 12

(58a) cun mapi nën-cuen-o-sh
 1Gen head hurt-**Incho**-Past-3
 'My head has started to hurt.'

(58b) *cun mapi nën-do-o-sh

The tricky thing about elucidating the meaning of -do is that with some in-place motion and locomotion verbs, it may mean 'upward,' instead (§5.5.3.6). This 'upward' meaning of do- seems to only occur in lexicalized or semi-lexicalized words, so this is not a

competing productive process, yet with the some (but not all) of verbs with which -do has an upwards meaning, it blocks the inceptive reading.

- (59) pudun-do 'Step up (e.g., onto elevated house)'
 leap-upward *'Start jumping/running/stepping.'

The "exception" to this is that if a lexicalized term has been worn down phonetically, the use of -do as an inceptive marker is acceptable.

- (60a) nito 'stand up'
 (60b) [nid.tó] 'start going.'
nid-do
 stand/go-Incep

Another confounding factor associated with -do is that it is frequently used with some roots in what seems to be an idiomatic use for reprimanding people. As can be seen in (61), here it is hard to find an inchoative meaning (maybe, 'You just had to start doing that, didn't you!'), and it uses third-person inflection to talk about the second person.

- (61a) titique-do-o-sh run-Incep-Past-3
 'Damn it, why are you running
 around in the house?'[said to a little kid]
 (61b) is-do-o-sh see-Incep-Past-3
 'Stop staring!' (reprimand)
 'He started reading!' (inceptive)

As can be seen in (61b), the idiomatic use does not preclude the inceptive use for at least some verbs, but the idiomatic use occurs with a wider range of verbs than is the inceptive use. For example, -do does not occur as an inceptive marker with titique 'run' (61a), and does not occur at all with lexically inchoative verbs (62). And with some verbs, an analytic construction is preferred (63).

- (62a) *neish-do-o-sh get.angry-Incep-Past-3
 (62b) *uimabud-do-o-sh get.tired-Incep-Past-3

- (63a) ?cues-do-o-sh (63b) cues-quin taua-o-sh
 hit/kill-Incep-Past-3 hit/kill-while:S/A>A start-Past-3
 ('He started shooting/hitting.')

The suffix -an contrasts with -do in that rather than pointing to an abrupt beginning or the time just before the action, -an seems to point to as discernable beginning stage, after an activity has started. So, in (64), the time specified is not right when the monkeys wake up, or the time when they are already traveling, but the period of time when they slowly get organized and begin to move as a troop. Similarly, in (65), the young are weaned, not right when they begin to grow bigger or when they are already big, but in the beginning stages of growth.

- (64) ushë bud-an padpide-ec capu-an-e-c
 sun descend-after:Diff.Ref again-Manr:Intr locomote-Incep-Npast-Indic
achu
 howler.monkey
 'After the sun gets lower, howler monkeys **start to travel** around again.'
 1-p55-B achu 09
- (65) nua ic-an-ac-sho-bi tësh-quid checa dë-uisac-n
 large be-Incep-Infer-when:S/A/O>O-Emph wean-Hab opossum nose-long-Erg
 'When they **start to get big**, the four-eyed opossum [lit. long-nosed opossum]
 weans them off.'

A-IV 043 checa dëuisac 18

When a beginning stage is not discernable, due to the abruptness of the beginning of the activity or other semantics of the verb, then the use of -an results in some sort of state being conceived, rather than somehow breaking up the event so it has a begging stage (66).

- (66a) capu-an-o-sh (66b) tsad-an-o-sh
 locomote-Incep-Past-3 sit-Incep-Past-3
 'The child learned to walk.'
 'The bird can fly now.'
- 'He can sit not (e.g., had boils on his butt)
 'He started to sit.'

The suffixes -cuen and -ben appears to always have an inchoative reading. With verbs that refer to states (55d) or inactive, state-like activities (67), the meaning is straightforward. But if the verb is less-state-like (54d, 68, & 69) or if it is already an inchoative verb (58a), it creates a meaning where there is some sort of state, similarly to -an, but with -cuen/-ben a longer-term state is often implied (70).

(67) ush-cuen-o-sh 'He started to sleep.' (68) is-ben-o-sh 'He can see now.'
sleep-Incho-Past-3 see-Incho.Tr-Past-3

(69) ado-ash-bi bacuë uidën-cuen-an
thus-after:S/A>S-Emph offspring contract.muscle-Incho-after:Diff.Ref
tsise bud bud-e-c
coati (redup=Distr) descend-Npast-Indic
'After that, once the young are able to contract their muscles [i.e., when they become a bit strong], the [mother] coati repeatedly comes down to the ground.'
A-IV 028 tsise 14

(70a) pïen-an-o-sh (70b) pïen-cuen-o-sh
diarrhea-Incep-Past-3 diarrhea-Incho-Past-3
'He started to get diarrhea.' 'He became sick with diarrhea.'
[gradually, after eating bad food] [in reference to an illness]

(70c) pïen-do-o-sh 'He started to defacate (having diarrhea).'
diarrhea-Incep-Past-3 [in reference to a single instance]

Either -cuen or -ben can occur on transitive verbs (71), but only -cuen occurs on intransitive verbs (72, cf. 67)⁶; the meanings of -cuen and -ben are identical.

(71) tied dëd-cuen/-ben-o-sh
swidden cut.with.ax-Incho/-Incho.Tr-Past-3
'He began felling trees to make a swidden [a process that takes several days]'
'(He is no longer lazy and now) he has begun to make swiddens.'

(72) *ush-ben-o-sh

⁶ With transitive verbs, some speakers prefer the use of -ben, others equally accept -ben and -cuen, and no speakers prefer -cuen.

This is an unexpected pattern: one might have expected one to occur only with intransitive verbs and the other only with transitive ones, a transitivity agreement pattern we find with other suffixes in the languages (see §5.5.3.4). Perhaps this was the case historically with -cuen and -ben, but presently they follow this pattern, as do several other verbal suffixes (see §§5.5.3.3 and 5.5.5).

The reader may have noted that the Inceptive suffix -an has the same form as the antipassive suffix in the preceding position class. The inceptive/inchoative function of -an (occurring on transitive or intransitive verbs) appears quite different from its antipassive function (occurring only on transitive verbs), but these functions are relatable, with more than simple homophony at work here. The functions of -an are related in that they both break up the event, and either (in the antipassive function) focus on the Agent by peripheralizing the Patient, or (in the inceptive/inchoative function) focus on the initiation of the event while peripheralizing the conclusion. Using Delancey's (1982) terminology, both the voice and the aspect functions of -an are associated with an "onset viewpoint." When -an is combined with -quid 'Agent Nominalizer,' inchoative, antipassive and causative meanings all result simultaneously. For example, (73) expresses a causative situation where a generic/unidentifiable patient is caused to enter into a state.

- (73) tsipis-an-quid 'one that causes [people] to become flatulent'
 fart-Antpass-Agt.Nzr [e.g., beans]

5.5.2.2 Iterative suffixes: -ded 'Intermittent' and -ban 'Iterative: Plural O'

The suffix -ded (and its allomorph -ted, which follows consonants except n) is used to express intermittent, iterative action. This suffix only occurs with reduplicated

roots or with the suffix -ne (reduplication has a distributive/iterative/plural meaning, §5.9; -ne has distributive/habitual/plural meaning, §5.5.4). The type of aspect specified by -ded is that there are spaces of time between repeated events, and, if the verb is transitive, the referent of the O is the same (74 & 75a).

(74) chushca-ded-ne-e-c
 reprimand-Interm-Distr-Npast-Indic
 'He yells at him repeatedly (every day or once a week).'

(75a) cuesban-n opa pe-ded pe-ded-e-c
 bat-Erg dog (redup=Distr) bite-Interm-Npast-Indic
 'The bat(s) keeps on biting the dog(s) every night (the same dog or dogs).'

The other iterative suffix, -ban is quite different. It does not imply intermittent action, but more non-stop iterative action; it can only be used with transitive verbs; it generally implies multiple O's are acted upon in a repetitive fashion; it is used more frequently *without* reduplication or -ne (75c & 76); and when combined with reduplication, a 'Plural A' meaning also obtains (75b).

(75b) cuesban-n opa pe-ban pe-ban-e-c
 bat-Erg dog (redup=Distr) bite-Iter-Npast-Indic
 'Many bats bite many dogs, biting one and then the next.'

(75c) cuesban-n opa pe-ban-e-c '(A/the) bat(s) bite(s) many dogs.'
 bat-Erg dog bite-Iter-Npast-Indic

(76) adembidi matses-n cues-shun aton matses mene-ban-quid
 likewise:Tr Matses-Erg kill-after:S/A>A 3Gen Matses give-Iter-Hab
 'Also, Matses, after killing it, give it [two-toed sloth meat] to their relatives.'

A-IV 024 chompish 16

5.5.2.3 -bud 'Durative'

The suffix -bud 'Durative' is attached to an activity verb to indicate that an activity continues for a period of time without stopping. It can be used, as in (77) and

(78), to emphasize that an activity is done over an extended period without stopping or without initiating any other major activities. Or, as in (79), it can be used with zero-verbalized adjectives to show that the inchoative process (inchoative readings always obtain in zero-verbalizations; §5.10) is one that occurs over time, as opposed to punctually.

- (77a) onque-bud-o-sh
talk-Dur-Past-3
'He talked without stopping.'
- (77b) chushca-bud-e-c
reprimand-Dur-Npast-Indic
'He yells at him for long periods.'

- (78) ashumbic bidica-quin taua-shun bidica-bud-quid
then twist-while:S/A>A begin-after:S/A>A twist-Dur-Hab
'After doing that, once they begin twisting the fiber, they keep on twisting it continually.' [i.e., once they get started, they keep going and it takes a long time]
A-XIII 039 di 11

- (79) shēni-bud-ac-sho padpide-en macueste
old-Dur-Infer-when:S/A/O>O again-Manr:Tr corn.grinding.tub
uēdēshca-quid matses-n
dig-Npast-Hab Matses-Erg
'When it is getting old, Matses carve out a new corn grinding tub.'
A-XIII 030 macueste 17

The suffix -bud is also used with some verbs to indicate 'downward motion' (§5.5.3.6), a situation similar to that described for -do 'Inceptive'/'upward motion.'

With transitive verbs that involve punctual actions, the meanings of -bud and -ban 'Iterative: Plural O' (preceding section) can be quite similar, as with the verb chococa 'plant' (80). The difference between the meanings in (80a) and (80b) is really just a matter of what information is coded, and what information is implied. In (80a), it is implied that the action was done iteratively, because planting, at least in the context of planting by the Matses, does not take a long time unless many individual plants, seeds, etc. are planted. And in (80b) it is implied that if many things were planted, then it must have taken a while.

(80a) chococa-bud-o-sh
 plant-Dur-Past-3
 'He planted (many) for a while
 without stopping.'

(80b) chococa-ban-o-sh
 plant-Iter:Pl.O-Past-3
 'He planted many (for a while)
 without stopping.'

5.5.2.4 -uid 'incompletely'

The suffix -uid is not really an aspect marker, but its meaning is aspect-like in that it breaks up the event. It indicates that an action was begun, but not completed or carried out effectively (81 & 82). This is not a good example of a frustrative marker as might be interpreted from example (81), because it can be used to describe uncompleted actions that do not involve frustration. For example, in (82), there is no indication that the speaker hoped or expected to finish that day, though he certainly intends to eventually finish.

(81) shēctenamē cues-uid-o-mbi
 white.lipped.peccary kill-Incompl-Past-1A
 'I ineffectively tried to kill a peccary.' [i.e., wounded it, but it escaped]

(82) cun tied neshca-uid-o-mbi
 1Gen swidden weed-Incompl-Past-1A
 'I started weeding my swidden but did not quite finish.'

When -uid is used with the verb ca 'say,' it does not mean "say incompletely," but rather forms an idiomatic expression meaning 'jump to a conclusion (incorrectly)' (83).

(83) debi cho-en-quio ic-e-c ca-uid-o-mbi
 Davy come-Neg-Aug Aux-Npast-Indic say-Incompl-Past-1A
 'I assumed incorrectly that Davy wasn't going to come here anymore.'

5.5.2.5 -ua 'again'

Another aspect-like marker in this position class is -ua 'again' (84). It is compatible with the adverb padpide 'again' (85; §7.3.1):

- (84) chimu-anec shuinte dectato-ua-quid aocbidi
defecate-after:S/A>S two.toed.sloth climb.up-again-Hab also
'After it defecates, the two-toed sloth climbs up again.'

A-IV 022 shuinte 31

- (85) ashumbic pisid padpide-en bed-ua-quid
then woven.mat again-Manr:Tr grab-again-Hab
'Then, they pick up the mat again.'

A-XIII 015 pisid 10

The meaning of -ua is more ample than that of the English *again*, and can refer to repetition of action by a different entity, or a property possessed by a different entity, situations where English *too* or *also* would be more appropriate (86 & 87).

- (86) ashumbic sica-shun utsi-n-tsen ada min secte
after.that strain-after:S/A>A other-Erg-next Uncertr 2Gen strainer
ic-tsēc-e-c que-quin bed-uan-shun aid-n
be-Dim-Npast-Indic say-while:S/A>A grab-come-after:S/A>A that.one-Erg
secte-n sica-ua-quid
strainer-Inst strain-again-Hab

'After that, after she strains, another [woman] comes and asks, "Do you have a strainer?" and then takes it and then she **also** strains with the strainer.'

A-XIII 025 secte 16

- (87) nidaid-n capu-esa chëshëid ne-ua-e-c
ground-Loc locomote-Neg.A.Nzr spider.monkey be-again-Npast-Indic
'The spider monkeys is **also** one that does not walk on the ground' [in comparison to the woolly monkeys]

+ A-I 053 chëshëid 25

Note that this form is homophonous with the verbalizing suffix -ua 'Verbalizer: make' (§5.10; 88).

- (88) chu-ua-ua-o-sh 'He heated it up again.'
 hot-Vzr.make-again-Past-3

5.5.3 Directional suffixes

The Matses language has an intricate morphological system for specifying the direction of movement before, after, and/or while performing an action (Table 5.7). For most of these suffixes, the movement is restricted to **locomotion**, displacement of the subject (the S or A; not applicable to, e.g., throwing an O) across a spatial distance (i.e., no in-place movement, such as movement of body parts, or metaphorical motion, such as seeing). It generally involves walking, running, or travel by canoe (and more recently by airplane, car, etc.) for humans, but when used for animals it can refer to any appropriate form of locomotion, including flying, swimming, burrowing, brachiating, crawling, etc. The directional suffixes restricted to locomotion are all spatial deictic suffixes: they take the speech act as the *default* reference point (deictic center). I say "speech act" rather than "speaker" because these can only be used when either the speaker and the hearer are together, or, in some cases, when the speaker and the goal are at the same location (e.g., as in yelling, 'Come here!' to someone who is far, but within earshot); the details will be described in the subsections of the present section. A relativized deictic center independent of the speech act is often established by narrative, particularly narratives that do not involve the speech act location. Three directional suffixes, -bud 'downward,' and -do 'upward,' and -tuid 'stop and do verb/do upon arrival,' do not refer to deictic reference points, and -bud and -do can refer to the movement of an O and their meanings have evidently extended to the temporal domain as aspect suffixes (homophonous/polysemous directional suffixes are considered in §5.5.3.7).

Table 5.7. Directional suffixes.

Gloss	Intransitive	Transitive	Both
'go (and come back)'			<u>-tan</u>
'come (and go back)'			<u>-uan</u>
'come/go: Imperative' (archaic)			<u>-yo</u>
'go, stop, do verb, and continue going'		<u>-bidan</u>	<u>-cuidan</u>
'come, stop, do verb, and continue coming'		<u>-bëtsen</u>	<u>-cuëtsen</u>
'do verb while going'	<u>-nid</u>	<u>-ban</u>	
'do verb while coming'	<u>-cho</u>	<u>-bë</u>	
'do verb while passing (by/though)'	<u>-cuen</u>	<u>-ben</u>	
'do verb upon arrival'/'stop to do verb'			<u>-tuid</u>
'downward'			<u>-bud</u>
'upward'			<u>-do</u>

As can be seen in Table 5.7, some of these suffixes have a single form for either transitive and intransitive verb stems, while others come in pairs. This is parallel to the transitivity agreement we see with adverbials (§§7.6.1, 8.6.1, 12.4). There are two patterns of verbal suffix transitivity agreement in Matses. One, which seems the most natural, has one suffix restricted to intransitive verbs, and a second restricted to transitive verbs. This occurs only with -nid/-ban, -cho/bë and -cuen/-ben (Table 5.7). The other pattern is more unusual but a bit more widespread: it occurs with -cuidan/-bidan and -cuëtsen/-bëtsen (Table 5.7), the inchoative suffixes -cuen/-ben (§5.5.2.1) and the collective suffixes -cueded/-beded (§5.5.5). With this second pattern, the suffixes starting with cu can go on any verb, and the ones starting with b are restricted to transitive verbs.⁷

⁷ There is some inter-speaker variation for this second pattern: some speakers prefer transitive verbs with b-suffixes, most other speakers use both interchangeably for transitive verbs with no preference, and a very few speakers allow b-suffixes with intransitive verbs during elicitation. It may be the case that these all historically followed a strict transitivity agreement pattern (perhaps originating from serial verb constructions involving locomotion verbs with different transitive and intransitive forms) that is now being relaxed. Note that there exist the verbal suffixes -tsen 'next' (§5.5.7) and -an 'Inceptive' (§5.5.2.1), suggesting that some of the directional suffixes may

In addition to the obvious association of morpheme-initial b with transitive agreement, and morpheme-initial cu ([kw]) with intransitive agreement, a second pattern that is apparent in Table 5.7 points to the probable sources of some of these morphemes. Some intransitive agreement directional suffixes are identical formally and related semantically to intransitive verb roots (nid ‘go, leave’; cho ‘come’; cuen ‘pass by, run off’). If these were not phonologically bound, it would be appropriate to call these serial verb constructions. While there are no productive serial verb constructions in Matses, these are the functional equivalents of serial verb constructions, and suggestive of a historically productive serial verb construction. The transitive counterparts of -nid, -cho, and -cuen, however, do not occur synchronically as verb roots, except for bē ‘bring,’ which does not quite match up semantically to the meaning of -bē ‘do while coming,’ but is the probable historical source. Similarly, the suffixes -ban ‘do while going’ and -ben ‘do while passing’ are reminiscent of the transitive verbs buan ‘take (i.e., go carrying)’⁸ and buen ‘pass by carrying.’

The use of directional suffixes is optional, although good style dictates that some suffixes be used to describe some situations. Only one directional suffix may be used per word. The subsections of the present section describe all of the directional suffixes, and section 5.5.3.7 points out some polysemy/homophony between directional suffixes and aspectual suffixes described in the preceding section.

have originated from combinations of morphemes (i.e., suffixed verbs; e.g., meaning ‘next he continued coming’ or ‘and then he started going again’). But at this point, we can only speculate.

⁸ It is interesting to note that in other Mayoruna languages (Chankuëshbo, Kapishto, and Matis), the verb *kuan* [kwan] is used to mean ‘go’ instead of the Matses nid, further pointing to a historical association of kw/b and intransitive/transitive verb pairs.

5.5.3.1 *-tan* 'go,' *-uan* 'come'

The suffix *-tan* is the most commonly used of the directional suffixes. It indicates that the subject moves away from the speech act location to a location where the activity will be carried out (89). Seldom does a Matses leave out the suffix *-tan* when it applies to the event being described, particularly when it involves the speaker's or the hearer's actions (90 & 91).

- (89) cun champi bundo-ac-que piush bēchi mē-te-tan-Ø
 1Gen daughter get.hungry-Infer-so tortoise fat branch-cut-go-Imper
que-onda-sh
 say-Dist.Past-3

“My daughter is hungry, so go cut down some piush bēchi fruits!” she said.’

+ K-XXII 011 chema 104

- (90) cuēte bed-tan-Ø (91) nes-tan-nu
 firewood obtain-go-Imper bathe-go-Intent
 ‘Go fetch some firewood!’ ‘I’m going to go bathe.’

The main purpose of using the suffix *-tan* is to specify that the subject must move away from the deictic center before being able to perform the action, regardless of the post-action path. The suffix *-tan* can imply that the subject returns to the original location after performing the action. Depending on the linguistic environment, this extra meaning may be foregrounded, or it may be lost. For example, when used for the future or as an imperative command, there is no necessary implication that the subject will return. But when used for the past tense, the implication is that the subject returned. Also, when used with the verb *nid* ‘go,’ the round-trip meaning is asserted (92). Also, when reduplicated, the iterativity of the situation will entail a back and forth path (93).

- (92a) nid-Ø (92b) nid-tan-Ø
 go-Imper go-go-Imper
 ‘Go!/Leave!’ ‘Go (and come back)!’

- (93) chiuish-dapa bacuë cuës-tan cuës-tan-e-c
 fig-large fruit (redup=Distr) gather-go-Npast-Indic
 ‘They [bats] continually go back and forth to eat fruits of big fig trees.’

G-XV 063 cuesban 07

The suffix -uan is essentially the converse of -tan: the speaker must move toward the deictic center to perform the action. Again, there is an implied return path that obtains necessarily only with the verb cho ‘come’ and with reduplication. Sentence (94) is a good example of a discourse-established relativized deictic center: i.e., the deictic center, the locality where the borrowing woman comes, is the location where the owner of the strainer has been straining manioc, while the location of the actual speech act is irrelevant.

- (94) ashumbic sica-shun utsi-n-tsen ada min secte
 after.that strain-after:S/A>A other-Erg-next Uncentr 2Gen strainer
ic-tsëc-e-c que-quin bed-uan-shun aid-n
 be-Dim-Npast-Indic say-while:S/A>A grab-come-after:S/A>A that.one-Erg
secte-n sica-ua-quid
 strainer-Inst strain-again-Hab
 ‘After that, after she strains, another [woman] comes and asks, “Do you have a strainer?” and then takes it and then she also strains with the strainer.’

A-XIII 025 secte 16

A rather common use of -uan involves imperative commands asking the hearer to come do something, which, as can be seen in (95), takes the speaker as the deictic center, with the hearer away from the deictic center at the time of the speech act. This is possible when the speaker and the goal are at the same location. When the goal is at the location of the hearer, one simply does not use any deictic suffix (96).

- (95) nëid bed-uan-Ø
 this.one get-come-Imper
 ‘Come get/fetch this.’

- (96a) *buan-uan-nu
 take-come-Intent:1
 ‘I’m taking this.’

- | | |
|--|---|
| (96b) <u>buan-tan-nu</u>
take-go-Intent:1
*‘I’m taking it (to where you are).’
‘I’m taking it (speaker and hearer are together).’ | (96c) <u>buan-nu</u>
take-Intent:1
‘I’m taking it (to you, etc).’ |
|--|---|

I was quite surprised to learn this one day when I yelled to another house asking a girl to boil some coffee for me. She said she didn’t have any, so I yelled back the utterance in sentence (96b). She laughed at me for a long time and then finally told me that (96b) would only have been appropriate if she and I were at the same place and I was commenting to her that I was about to take the coffee somewhere else.

5.5.3.2 -yo ‘come/go: Imperative’

While -tan and -uan are the most common directional suffixes, -yo is the least common. It is considered archaic by the Matses. I only hear it occasionally from old men, and only with the verb bed ‘get’ (97a). During elicitation, speakers allow it with some verbs, but not with others. The meaning implies locomotion either toward or away from the subject, though with some verbs only one of the two meanings obtains (97b).

- | | |
|---|---|
| (97a) [be.djó]
<u>bed-yo</u>
get-come/go:Imper
‘Come get this!’ (could also mean ‘Go get it!’) | (97b) [ne.sjó]
<u>nes-yo</u>
bathe-come/go:Imper
‘Go bathe!’/ *‘Come bathe!’ |
|---|---|

Because one of the ways to indicate imperative commands is with -Ø, one might analyze the examples in (97) as the suffix -yo not really coding ‘Imperative’ (i.e., as -yo-Ø).

However, we note that -yo can never occur with the other imperative suffixes, -ta ‘Imperative (excluding speaker)’ (98a) or -enda ‘Negative Imperative,’ and it cannot occur with any other inflections (98b). It can only be used for commands.

(98a) *nes-yo-ta
bathe-come/go:Imper-Imper

(98b) *bed-yo-o-sh
get-come/go:Imper-Past-3

5.5.3.3 *Stopping mid-path and continuing on*

The suffixes -cuidan and -bidan (-bidan follows transitive verbs, -cuidan any verb) are similar to -tan, except they further specify that after the action is performed, the subject continues to move away from the deictic center (99 & 100).

(99) chido bed-bidan-e-c
woman grab-go.do.go:Tr-Npast-Indic
'We then capture a woman and keep on going.' [historical present]
+ K-XXII 014 chema 138

(100) isun-cuidan-o-sh 'He stopped to urinate while going.'
urine-go.do.go-Past-3

The suffixes -cuëtsen and -bëtsen are the converses of -cuidan and -bidan, and are similar to -uan in that they specify a path where the subject is moving toward the deictic center, but in this case, the subject stops to perform an action before reaching the deictic center and then continues on toward the deictic center (101 & 102).

(101) pe-bëtsen-o-sh 'He stopped to eat on his way here.'
eat-come.do.come:Tr-Past-3

(102) chimu-cuëtsen-o-sh 'He stopped to poop on his way here.'
defecate-come.do.come-Past-3

The suffixes -cuidan/-bidan and -cuëtsen/-bëtsen, are used much less frequently than -uan and -tan, and they foreground the path much more consistently than -tan and -uan. The suffixes -tan and -uan are fairly automatic and grammaticised, while -bidan, etc. produce a more marked stem. Unlike -tan and -uan, -cuidan and -cuëtsen are incompatible with the verbs -nid 'go' and -cho 'come.'

(103a) *nid-cuidan-o-sh
go-go.do.go-Past-3

(103b) *cho-cuidan-o-sh
come-go.do.go-Past-3

5.5.3.4 *Doing something while traveling*

The three suffixes, -ban ‘while going,’ -bē ‘while coming,’ and -ben ‘while passing’ could all be used to describe the same exact external event; they differ only in the direction of movement of the subject in relation to the deictic center (104). The same could be said for their intransitive counterparts, -nid, -cho, and -cuen (105).

(104) is-ben-o-mbi
look-while.passing:Tr-Past-1A
‘I looked while passing by.’

(105) mamēn-cho-o-bi
laugh-while.coming:Intr-Past-1S
‘I came laughing.’

The suffixes -nid/-ban and -cho/-bē differ from -cuidan/-bidan and -cuitsen/-bitsen, in that with the latter two pairs of suffixes, it is implied that the subject stopped once to perform the action, while the former two pairs imply either that the subject did not stop, or that the subject stopped continuously while coming (deictic center is endpoint) or going (deictic center is origin) (106).

(106a) onque-cuētsen-o-sh
talk-come.do.come-Past-3

‘He stopped (once) to talk on his way here.’

(106b) onque-cho-o-sh
talk-while.coming:Intr-Past-3

‘He talked the whole way here.’
‘He kept stopping to talk on his way here.’

The suffixes -ben/-cuen ‘while passing,’ having no contrasting set of “stop suffixes,” are not so specific about whether and how many times the subject stopped. The possible scenarios are four: the subject i) passes by at a distance from the deictic center without stopping; ii) passes by at a distance from the deictic center stopping continuously; iii)

comes, makes a single stop at the deictic center, and continues on in the same direction; or iv) comes making continuous stops, including at the deictic center, and continues on the same path making more stops. So my gloss ‘while passing’ encompasses the meanings ‘while passing *by*’ and ‘while passing *through*’; i.e., the deictic center is neither the origin nor the endpoint of the unidirectional path of locomotion, but is either on or near the path.

The examples in (107) allow us compare Matses and English counterparts using the verb pe ‘eat’. While the Matses versions are all of equal grammatical complexity, there is still a rough three-way correlation: a positive correlation between number of Matses segments and the grammatical complexity of the English translations, and a negative correlation between number of segments and frequency in Matses discourse (from my encounter of these form in texts and conversations). In other words, the simpler the notion, the more common it is expressed, and the shorter the suffix (possibly because it is worn down faster over time).

very frequent	(107a)	<u>onque-tan</u>	‘Go talk!’
not so frequent	(107c)	<u>onque-nid</u>	‘Talk on the way there!’/?‘Go talking!’
least frequent	(107b)	<u>onque-cuidan</u>	‘Stop to talk on your way there!’

5.5.3.5 -tuid ‘upon arrival’/‘stop to do X’

The suffix -tuid has two possible related meanings: to stop and perform an action (108), or to perform an action upon arrival at one’s destination (109).

(108)	<u>aton</u>	<u>shëcuë</u>	<u>ënëd-ac-no</u>	<u>nid-quid</u>	<u>tsad-tuid-ec</u>
	3Gen	hole	end-Act.Nzr-Loc	go-Hab	sit-upon.arrival-Purp:S/A>A
	‘[The armallillo] goes to where its hole ends to sit there.’				

- (109) ēnapen nid-ec ush-tuid-quin matses-n
 long go-while:S/A>S sleep-stop-while:S/A>A Matses-Erg
isan podo shubu-ua-e-c
 palm.species frond house-Vzr:make-Npast-Indic
 ‘When Matses go far, if/when they stop to sleep, they make a shelter from isan
 palm fronds.’

E-XI 001 isan 20

Unlike all other suffixes discussed so far in this section, -tuid does not specify direction with respect to a deictic center, and so, unlike the suffixes discussed in the preceding sections, the path is less important. The suffix -tuid seems to refer to the end of either the path, the day, or of a concentrated effort. There is at least one lexicalized verb that seems to have been formed using -tuid: istuid ‘find, arrive (e.g., at a town),’ which seems to be is ‘see’ and -tuid. There are no cases of lexicalized roots using any of the other directional suffixes, except -bud and -do (next section), and perhaps -tan.

5.5.3.6 The vertical axis: -bud ‘downward’ and -do ‘upward’

The suffixes -bud and -do indicate that the action involves downward or upward movement (along a vertical axis, or downstream/upstream), respectively, not just of the subjects (110), but possibly of the object instead (111-113).⁹

- (110) mantse daəd naquiad-bud-ash nēbi nēbi-ec
 levee.island two cross-Dur-after:S/A>S (redup=Distr) near-Manr:Intr
capu-ac-no-uēsh-bi ue-bud-paid
 locomote-Act.Nzr-Loc-Ev.Init:Intr-Emph lie-downward-Hab
 ‘After walking over two levees, [the tapir] walks around in the same area and then lies **down**.’

C-III 001 shēcten 20

⁹ Actually, as I write this, I realize that I have no examples where the upward/downward motion refers to the path of the A. Some elicitation will be required to check if in fact -bud and -do cannot refer to the movement of the A. If not, these suffixes would specify yet another absolutive category in the language, parallel to that exhibited in singular-plural roots (§5.3.2).

- (111) titado tësh-bud tësh-bud-quid quëuëte-ua-shun
 peach.palm (redup=Distr) yank.off-down-Hab hook-Vzr:make-after:S/A>A
 ‘They pull **down** many peach palm fruits after making a hook.’
 A-XIII 008 quëuëte 05
- (112) cuibi-do-quin tabado-quid
 form.edge-upward-while:S/A>A begin-Hab
 ‘They begin building **up** the sides [of the water jar] with rolls of clay.’
 A-IX 013 tëchu 04
- (113) aucbidi shëc-do-pa-ac ca-denne-c
 back.again pull-upward-Comment-Narr.Past tell-Rem.Past-Indic
que-onda-sh a-mbo-bi tsadun-ec
 say-Dist.Past-3 there-Aug-Emph put.down.vertically-while:S/A>S
 ‘(The moon) would pull him **up** back to where he was, they used to tell, setting
 him down right back where he was.’
 K-XXIII 008 iscun bacuë 034

The use of -bun and -to is not so productive: i) they don’t occur with all verbs (114), and with some verbs only one of the two occurs (115); ii) with the verbs they occur with, their use is fairly automatic; and iii) the meaning of the suffixed verb root is often restricted or special (116 & 117), or does not add any actual directional information (118).

- | | |
|--|--|
| (114a) * <u>capu-bud</u>
locomote-downward
(can have duruative meaning) | (114b) * <u>capu-do</u>
locomote-upward
(can have inceptive meaning) |
| (115a) ? <u>pudun-bud</u>
jump/step-downward | (115b) <u>pudun-do</u>
jump/step-upward
‘step up onto’ |
| (116a) <u>ne-bud</u>
toss-downward
‘throw down/knock over’ | (116b) <u>ne-do</u>
toss-upward
‘put on cooking fire’ |
| (117a) <u>nan-bud</u>
put-downward
‘take off cooking fire/put down load’ | (117b) <u>nan-do</u>
put-upward
‘put into’ |
| (118) <u>uc-bud</u>
vomit-downward | ‘vomit’ |

There are multiple lexicalized stems, to the point that the original root is no longer occur independent in the language.

(119a) <u>dectato</u> ‘climb up/travel upriver’	(119b) * <u>decta</u>	(119c) * <u>dectabud</u>
(120a) <u>coshto</u> ‘fill up’	(120b) * <u>cosh</u>	(120c) * <u>coshbud</u>
(121a) <u>shuebud</u> ‘lean’ (e.g., partly fallen tree)	(121b) * <u>shue</u>	(121c) * <u>shueto</u>

The source of -bud is most certainly the verb bud ‘descend (e.g., a tree, a stream, etc.),’ again suggesting directional suffixes originated from serial verb constructions (there is no synchronic verb similar to -do). The next section discusses the polysemous aspectual meanings of -bud, -do, and other directional suffixes.

5.5.3.7 Homophonous/polysemous spatial/aspect markers

Four of the directional suffixes also occur as aspect suffixes (§5.5.2). These are listed in Table 5.8.

Table 5.8. Directional verbal suffixes.

Suffix	Directional meaning	Aspectual meaning
<u>-bud</u>	‘downward’	‘Durative’
<u>-do</u>	‘upward’	‘Inceptive’
<u>-ben/-cuen</u>	‘while passing’	‘Inchoative’
<u>-ban</u>	‘while going (Transitive)’	‘Iterative: Plural O’

I could speculate about what the conceptual connections may be that motivate meaning extension from downward motion to durative aspect and from upward motion to inceptive aspect, but these would be *post-hoc* and not really convincing. For -ben/-cuen I don’t even have a *post-hoc* explanation. The one case of polysemy that is readily

apparent is that for the suffix -ban. This can be seen in the various possible meanings for example (122).

- (122) is-ban-o-mpi
 see-while.going/Iter:Pl.O-Past-1A
 'I looked (at the jungle) as I went (from airplane).' directional
 'I checked all the notebooks one by one.' aspectual
 'I checked all the traps on the trapline as I went.' directional and aspectual

Aspect suffixes cannot occur iteratively, nor can two aspect suffixes (from section 5.5.2) occur together on the same stem. The same goes for the directional suffixes. The fact that forms like those in (123) are possible, suggests that -bud and -to should be considered separately, rather than as single suffixes with meanings spanning the spatial and temporal domains.

- | | |
|---|---|
| <p>(123a) <u>ue-bud-bud-o-sh</u>
 lie-downward-Dur-Past-3
 'He lied down slowly.'</p> | <p>(123b) <u>pudun-do-do-o-sh</u>
 step-upward-Incep-Past-3
 'He started to step up (e.g., onto the elevated house floor).'</p> |
|---|---|

Of course, the semi-lexicalized status of stems with -bud and -to may contribute to the permissibility this iterative use. The suffix series -ban-ban and -cuen-cuen, on the other hand, are not possible.

5.5.4 -ne 'Distributive'

The suffix -ne is anomalous in multiple ways. Unlike all the other derivational suffixes, it cannot occur as the sole derivational suffix on a verb: it must follow one of the aspect or directional suffixes (those in position classes 2 and 3). Only collective suffixes (position 5, next section) may intervene between -ne and the directional or aspectual suffix. It is incompatible with verbal reduplication (all other verbal suffixes can be either

reduplicated together with the root, or occur once, after the base), and actually carries almost the same meaning as reduplication (see §5.9). The use of -ne might even be said to be simply a stylistic variant to using reduplication, but although frequently there is no difference, the use of -ne and reduplication can sometimes carry a slightly different meaning. The different meanings of -ne can be captured in an abstract sense by the term ‘Distributive.’ The meanings of -ne include: i) ‘Distributive’ (spatial distribution; 124); ii) ‘Plural’ (physical distribution of participants; 125); and imperfective aspect (distribution in the temporal domain) realized as ‘Habitual’ (126), ‘Iterative’ (127) or ‘Durative’ (128).

- (124) matses-n adembidi dectan-ben-ne-quid
 Matses-Erg likewise:Tr set.trap-while.passing:Tr-Distr-Agt.Nzr
 ‘Similarly, Matses set the traps in several places.’
 A-XIII 023 nēishamē dectante 13
- (125) memupaid sedquied nantan samēd-cuen-ne-quid memupaid ne-e-c
 capybara clearing on lay-Incho-Distr-Agt.Nzr capybara be-Npast-Indic
 ‘Capybaras are ones that lay down in clearings.’
 A-IV 009 memupaid 13
- (126) ues-an-ne-quid
 finish.off-Antipass-Distr-Hab
 ‘They [insect larvae] **always** eat [the isan palm roof] up.’
 E-XI 001 isan 18
- (127) cuête-bi-mbo-ec bedque-do-tan-ne-quid yama
 fire-like-Aug-Manr:Intr flash-Incep-go-Distr-Agt.Nzr climbing.rat
ne-e-c
 be-Npast-Indic
 ‘Climbing rats [a magical animal] make bright flashes like fire does [**iterative flashing**].’
 A-IV 020 yama 09

- (128) ad-ash bacuë uëdën-cuen-ne-an bëdi
do.thus-after:S/A>S offspring be.strong-Incho-**Distr**-after:Diff.Ref jaguar
piu puduen-e-c nua ic-an ic-an-an
red exit-Npast-Indic large (redup=Distr) be-Incep-after:Diff.Ref
‘The puma comes out of its den once its cub starts getting strong (**over time**),
after it start getting big.’

A-IV 037 bëdi piu 15

These different meanings can be isolated in elicitation, but it is often the case that with text examples like those above, that it is not always possible to identify which of these meanings is being coded by -ne. Frequently, one meaning implies a second, and sometimes several of the distributive meanings are intended at once, as in (129), which involves many people and multiple events at different times and different places.

- (129) abitedi-mbo uënës-bud-ne-ac
all-Aug die-Dur-**Distr**-Narr.Past
‘Every single one of them [his older relatives] has died .’

+ K-XXII 005 chema 051

It is evident that the meaning of -ne that obtains is influenced (but not always determined or restricted) by the particular aspectual or directional suffix it occurs with. Sometimes, the meaning of the stem can best be understood as a non-additive combination of the two suffixes. This is a complex situation that I have not sorted out yet. See section 5.9, where I have begun to sort out a parallel situation involving reduplication.

5.5.5 Collective suffixes

As mentioned in section 5.3.2 above, singular vs. plural generally must be inferred from context because number cannot generally be marked directly on noun phrases. Plurality can be optionally marked on verbs to resolve some of this ambiguity using the suffixes -beded and -cueded. Only -cueded can be attached to intransitive verbs, and it indicates that the S is a group of entities (130), while either -beded or

-cueded can be attached to transitive verbs to indicate that A consists of multiple entities that act or occur as a group (131), with apparently no variation in meaning (see §5.5.3 for a discussion of this type of transitivity agreement).

- | | | | |
|-------|------------------------|-----------------------------|------------------------------|
| (130) | <u>nid-cueded-o-sh</u> | (131a) <u>pe-beded-o-sh</u> | (131b) <u>pe-cueded-o-sh</u> |
| | go-Coll.S/A-Npast-3 | eat-Coll.A-Npast-3 | eat-Coll.S/A-Npast-3 |
| | 'They left.' | 'They ate.' | 'They ate.' |

The absence of a collective suffix carries no implication that the arguments are singular. These suffixes have a collective reading, that is, they specify that the multiple entities are a group (132-134). And unlike the plural marker -bo (§4.6.1.1), can refer to a homogenous group of non-human entities (134).

- (132) aid matsu utsi-mpi-n-bi tēchu-mpi-n ac-beded-quid
 that.one pot other-small-Inst-Emph water.jar-small-Inst drink-Coll.A-Hab
 'From that other type of little pots, from little water jars, they [men, as a group] drink.'

A-IX 013 tēchu 12

- (133) ad-ec dēniad-cueded-quid matses nēnē-n
 like.that:Manr:Intr have.blown.in.nose-Coll.S/A-Hab Matses tobacco-Inst
 'That is how Matses have tobacco blown up their noses as a group.'

A-XIII 020 sedunte 13

- (134) nidaid ic-ac-mi mapi uebud-ne-ec cuesban
 ground be-Act.Nzr-Dir head turn.upside.down-Distr-while:S/A>S bat
ush-do-cueded-quid
 sleep-Incep-Coll.S/A-Hab
 '... flipped with their head toward the ground, bats go to sleep (in a group).'

G-XV 063 cuesban 20

At this point we can summarize the different means of marking number on verb stems (see § 4.6.1 for the different means of marking number on nouns). As we can see in Table 5.9, there are several means of indicating plurality on the verb root, but the different processes do not make up a coordinated system.

Table 5.9. Different processes that mark plurality on verb stems.

Process	Argument targeted	Other semantics associated with process	Section where described
plural roots	S/O	(semantics of root)	5.3.2
<u>-ban</u>	O	iterative action	5.5.2.2
<u>-ne</u>	S/A/O	distributive	5.5.4
reduplication	S/A/O	distributive	5.9
<u>-cueded</u>	S/A	collective	this section
<u>-beded</u>	A	collective	this section

5.5.6 Intensifiers: -quio and -quimbo

The suffix -quio (allomorph -qui preceding vowels) may be attached to a verb to indicate that an action really occurred (i.e., a “veridical” statement), that the action was done forcefully or well, and/or that the effect of the action was extreme (135 & 136).

(135) is-quio-Ø

see-Intens-Imper

‘Look well!’/ ‘See? (I told you so!)’

(136) shubi-me-quio-o-sh

cry-Caus-Intens-Past-3

‘He really made him cry hard.’

The suffix -quio is obviously related to the enclitic -quio ‘Augmentative/Adjectivalizer’ that also occurs on nouns (§4.6.6), adjectives (§6.6.2.1), adverbs (§7.6.4.1), and postpositions (§8.6.4.1), but in these other lexical classes, -quio only follows stems ending with a consonant, with the allomorph -mbo following vowels. With verbs, however, -mbo never occurs and -quio may follow vowels as well as consonants (as seen in the examples above). In part, -quio is the semantic opposite of the prefix bēsh- ‘De-intensifier’ (§5.4.2) and of unsuffixed verbal reduplication (§5.9).

The suffix -quimbo ‘Intensifier’ is a more emphatic version of -quio (137 & 138; cf. 135).

- | | |
|---|--|
| <p>(137a) <u>debi cho-ac</u>
 Davy come-Infer
 'Davy has come.'</p> | <p>(137b) <u>debi cho-quio-ac</u>
 Davy come-Intens-Infer
 'Davy has come to stay.'</p> |
| <p>(137c) <u>debi cho-quimbo-ac</u>
 Davy come-Intens-Infer
 'Davy has come to stay forever.'</p> | <p>(138) <u>is-quimbo-Ø</u>
 see-Intens-Imper
 'Look really well!'
 'See? I told you so a thousand times!'</p> |

Like -quio, -quimbo also occurs on adjectives, but it does not occur with nouns. Both of these suffixes are incompatible with the verbal suffix -pa 'Comment' (§5.5.9).

Position 6 suffixes (-quio, -quimbo, and -tsen) preferably occur following Position 1-5 suffixes, but speakers allow their inversion in these cases with no change in meaning (139).

- | | |
|---|---|
| <p>(139a) <u>pe-ben-quio-o-sh</u>
 eat-while.passing-Intens-Past-3
 'He ate a lot as he passed by.'</p> | <p>(139b) <u>pe-quio-ben-o-sh</u>
 eat-Emph-while.passing-Past-3
 'He ate a lot as he passed by.'</p> |
|---|---|

As mentioned above, this is the general trend with derivational suffixes (and generally enclitics well): position classes reflect trends and preferences, but positions classes adjacent or near each other are sometimes inverted. This inversion is accompanied by change in meaning only if a change in scope can be associated with a different meaning. Some suffixes have more fixed general ordering than others, even within the same position class. The suffix -quio, for example, has quite a range of different relative positions it can occur in, while -ne 'Distributive' (as mentioned in §5.5.4) and -tsen (next section) are not so free to move about.

5.5.7 -tsen 'almost'

The suffix -tsen indicates that an action was almost completed or realized. In example (140), it indicates that the sloth attempts to bite, but does not because its captor

is too careful. It is used for past counterfactual statements, as in (141). (See §5.6.2.2 for the use of the conditional inflection -tsia for nonpast counterfactual/conditional statements).

- (140) pe-tsen pe-tsen-quid bëdad-quo ic-quid-n
 (redup=Distr) bite-**almost**-Hab fierce-Aug be-Agt.Nzr-Erg
 ‘...[two-toed sloths] that are fierce, repeatedly bite at [their captor] (missing)...’
 A-IV 022 shuinte 28
- (141) mimbi ad-en ubi chui-en-quo ic-o-c ënden
 2Erg do.like.that-Advzr:Tr 1Abs tell-Neg-Aug Aux-Past-Indic:1/2 before
cuesunne-tsen-o-mbi ca-onda-sh
 kill-**almost**-Past-1A say-Dist.Past-3
 ‘‘‘You didn’t tell me so earlier, (otherwise) I would have killed him earlier,’’ he
 told her.’
 + K-XXII 012 chema 120

5.5.8 -tsëc ‘Diminutive’

The meaning of the suffix¹⁰ -tsëc (allomorph -ts preceding vowels) is quite vague: it indicates that the S (142), A (143), O (144), Instrument, or any participant in the clause is small.

- (142) sinnad adecbidi mapictsäc cani-tsëc-quid ne-e-c
 palm.genus likewise:Intr short grow-**Dim**-Agt.Nzr be-Npast-Indic
 ‘Also, the (little) sinnad palms are ones that grow short.’
 A-I 009 sinnad 03
- (143) cuëte da-daësh-tsëc-quid madu-n sipi-n
 dicot.tree trunk-eat.gnawing-**Dim**-Hab demon-Gen tamarin-Erg
 ‘The (little) pygmy marmosets [lit. demon’s tamarin] gnaw the trunks of trees.’
 A-IV 006 madun sipi 05

¹⁰ One might argue that -tsëc should be called an enclitic, rather than a suffix, based on the its property of occurring with most other lexical classes. See section 3.2.3 for a discussion of this issue.

- (144) pinchuc-n shëcuë-ua-ban-tsëc-quid mocodi chido-n
 thorn-Inst hole-Vzr:make-Iter-Dim-Hab plant.species woman-Erg
 ‘Women make holes in the (little) mocodi seeds with a thorn.’

A-XIII 013 mocodi 04

Less frequently, it can be used to mean that a participant is few in number or dear to the speaker (145). Or it could express a derogatory attitude toward the state or activity coded by the verb (145). Or it can be used to express politeness when asking for a favor or to borrow something (see 94 above).

- (145) debi cho-tsëc-ac ‘At least Davy has come.’
 Davy come-Dim-Infer ‘(Dear) Davy has come.’
 ‘(Darn!) Davy has come!’

The use of this suffix is completely optional regardless of the size or number of the participants, and the occurrence of this suffix in Matses speech varies greatly depending on style and the personality of the speaker, and some speakers say it annoys them when other speakers overuse it—comparable in some ways to the use of diminutives on nouns in Spanish and Portuguese.

5.5.9 -pa ‘Comment’

The suffix -pa (allomorph -p preceding vowels) is actually a very complex one semantically and syntactically, and quite impossible to give a single gloss that covers all its meaning and functions straightforwardly. It is obligatory or strongly preferred in some environments (e.g., with dubitative and mirative), and optional in other environments. I gloss it as ‘Comment’ because -pa-marked sentences can generally be distinguished from unmarked ones in minimal pairs by the added implication that there is something about the utterance that is (for some usually unmentioned reason) worthy of

comment or remarkable.¹¹ Without it, the sentence will be interpreted as a straightforward and possibly banal statement. It can be thought of as a cue to the speaker that there is something more to the utterance, and should look for an implication, a sarcastic meaning, an attitude, an opinion, an emotional reaction, etc., that may or may not be explained overtly. It can function to express an intention to continue commenting on the topic of the clause, or to initiate a conversation on the topic. Here, I will characterize *-pa* by laying out the different meanings associated with it. Kneeland (1996) wrote an article exclusively on *-pa*, and while the details of her description differ somewhat from mine, her general conclusions about the function of *-pa* with verbs are not incompatible with the ones presented here. In particular, I agree with her statement that “El sufijo *-pa* en el verbo señala que el narrador está añadiendo un comentario extra acerca de lo que está diciendo” [The suffix *-pa* on the verb signals that the narrator is adding an extra comment about what s/he is saying] (Kneeland 1996:132).

First, I will describe the non-obligatory (or non-strongly-preferred) uses of *-pa*, where minimal pairs of sentences can be compared. One common use is in questions. Example (146a)¹² is a simple request for information, where the speaker does not know the answer, but expects the other person does, whereas (146b) is appropriate when the speaker does not know the answer and knows the other person could not know the answer either, but the speaker wishes to comment on it, and perhaps start a conversation. Sentence (146b) could also be a sarcastic answer to (146a) (i.e., “Where do you *think* it is?”), when the speaker knows the answer and expects the speaker should know and not have to ask (again, not a straightforward request for information).

¹¹ ‘Subjunctive,’ ‘Irrealis’ or ‘Ignorative’ would be other options for glosses, but, as will be seen below, these would cover only a subset of the possible meanings/functions associated with *-pa*.

¹² Spanish glosses are the verbatim translations offered by speakers.

	(146a) <u>mida-mbo ic-e-c</u>	(146b) <u>mida-mbo ic-pa-e-c</u>
	where-Aug be-Npast-Indic	where-Aug be-Comment-Npast-Indic
Spanish:	'¿Dónde está?'	'¿Dónde estará?'
English:	'Where is it?'	'Where could it be?'

Likewise with yes-no questions (147). In addition to the gloss provided for sentence (147b), this sentence can also be a sarcastic criticism, using the third person to refer to the second person, meaning roughly, "You obviously have not done what you were supposed to, Davy."

	(147a) <u>ada debi na-ac</u>	(147b) <u>ada debi na-pa-ac</u>
	Uncert Davy do-Infer	Uncert Davy do-Comment-Infer
Spanish:	'¿Lo hizo David?'	'¿Lo habra hecho David?'
English:	'Did Davy do it?'	'Might Davy be the one who did it?'/ 'Might Davy have done it yet?'

Generally speaking, -pa is quite compatible with questions, and the semantic difference between pairs of questions with -pa and without it can sometimes be quite subtle and hard for speakers to elucidate. The difference is more notable with declarative statements. While common with questions, the suffix -pa is not usually appropriate for straightforward *answers* to questions. For example (148a) would be a good answer to the questions, "Who spoke" or "What did your son do?" (if not an answer, it sounds like a banal or pointless statement), while (148b) would *not* be appropriate as an answer to a question. So while sometimes speakers offer the reason for using -pa in a question as being simply "because it is a question," with declarative sentences (*sans* dubitative, mirative sentences where it is required or strongly preferred) there must be a clear and obvious reason for using -pa.

	(148a) <u>cun mado onque-o-sh</u>	(148b) <u>cun mado onque-pa-o-sh</u>
	1Gen son talk-Past-3	1Gen son talk-Comment-Past-3
	'My son spoke/talked.'	'My son spoke (for the first time today).'

If a Matses enters a house and says (149a), no further comment on the topic is expected; it is like saying *Hello*, and others in the house might just answer *ai* ‘yes’ to acknowledge the person’s arrival, and then other people in the house may exit the room to fetch food, tobacco snuff, etc., or they may change the topic. But if the visitor says (149b), then it is expected that he will continue to explain how, why or despite what obstacles he has arrived, or if the owner of the house requested the visitor’s presence, the speaker is asking for the reason why he was summoned.

- | | |
|---|---|
| (149a) <u>cho-o-bi</u>
come-Past-1S
‘I have arrived.’ | (149b) <u>cho-pa-o-bi</u>
come- Comment -Past-1S
‘So, I have arrived.’ [Do you wonder why/how I came?]
‘Well, I’m here.’ [So why did you ask me to come?] |
|---|---|

Sentence (150a) would be a straight-forward comment, said upon finding fresh peccary tracks. Sentence (150b) has more to it. It might be used to express that it might be too late to pursue them, and is asking the speaker what should be done, or it expresses “Boy, if we had found their spoor earlier, we might have been able to chase them.” Thus, *-pa* signals that there is more to the statement, and this extra comment may come in the following discourse, or it may simply be understood by the interlocutors.

- | | | |
|--|---|---|
| (150a) <u>shēctenamē</u>
white.lipped.peccary | <u>cuen-ac</u>
pass.by-Infer | ‘White-lipped peccaries passed by.’ |
| (150b) <u>shēctenamē</u>
white.lipped.peccary | <u>cuen-pa-ac</u>
pass.by- Comment -Infer | ‘Oh, man, white-lipped peccaries passed by.’ [Is it too late chase them?] |

The suffix *-pa* is *required* with the dubitative particle *ba* (151; §9.4.2).

- (151a) ada debi cho-pa-ash ba (151b) *ada debi cho-ash ba
 Uncert Davy come-Comment-Conjec Dub
 ‘Perhaps Davy has *not* come; Davy might have come, but I doubt it.’

It is *very strongly preferred* with the mirative enclitic -shenda (152; §4.6.10.2).

- (152a) debi-n-shenda na-pa-o-sh (152b) debi-n-shenda na-o-sh
 Davy-Erg-Mirat do-Comment-Past-3 Davy-Erg-Mirat do-Past-3
 ‘Oh! So it was Davy who did it.’ ‘Oh! So it was Davy who did it.’
 (strongly preferred form) (grammatical, but not used)

It is *strongly preferred* in questions with first-person subject (152 & 153) and with the uncertainty particle/enclitic ada/-da when it is not used in a question (154) (and optionally used with ada/-da in questions, see above).

- (153) ada-mbi cues-pa-e-Ø ‘Shall I hit him.’
 Uncert-1A hit-Comment-Npast-Interr: 1/2
- (154) atoda-mbi na-pa-e-Ø ‘What should I do?’
 what-1A do-Comment-Npast-Interr: 1/2
- (155) shubu bacuë-bi-mbo-ec-da ic-pa-e-c-que
 house fruit-like-Aug-Manr:Intr-Uncert be-Comment-Npast-Indic-so
 ‘Perhaps they [shubu quëdë fruits] might be like shubu palm [fruits].’
 A-I 028 shubu quëdë 11

It is *regularly used* in mythical and historical texts (§5.6.1.5). It depends on the style of the speaker and the narration, but some speakers use it in almost every sentence while narrating myths, as in (156), where it does not seem to add any meaning.

- (156) chui-enda que-pa-ac ca-denne-c que-onda-sh
 tell-Neg.Imper say-Comment-Narr.Past tell-Rem.Past-Indic say-Dist.Past-3
 “‘Don't tell them,’ (the moon) said, they used to tell.’

In these constructions, it is not easy to assign -pa an independent meaning or function, rather it just seems a part of the construction. There are many restrictions to the use of -pa: it does not occur in subordinate clauses; it does not occur with habitual inflections (e.g., -quid, -esa, -paid; §5.6.2.3); and when used with the inflectional suffix -e ‘Nonpast,’ which can normally have a future, present progressive, or habitual reading (§5.6.2.1), the habitual reading does not obtain (157).

(157a) bacuë-bo bēdia-tsēc capu-e-c
 child-PI slowly-Dim locomote-Npast-Indic
 ‘The children are walking slowly’/‘Children (always) walk slowly.’

(157b) bacuë-bo bēdia-tsēc capu-pa-e-c
 child-PI slowly-Dim locomote-Comment-Npast-Indic
 ‘Man, the children are walking too slowly’/ *‘Children (always) walk slowly.’

Although -pa occurs with some constructions that could be considered emphatic (e.g., mirative), -pa itself is not an emphatic marker. Note that it is not even compatible on verbs with the intensifier suffixes -quio and -quimbo (§5.5.6).¹³ The nominal enclitic -pa ‘large: Characterized,’ which follows body-part terms and has no allomorph -p (§4.6.2), should not be confused with the verbal suffix that is the topic of the present section (though it is possible that these are historically related).

5.5.10 -chit ‘Uncertainty’

The suffix -chit¹⁴ is used to mark uncertainty. It is, however, incompatible with the uncertainty particle/enclitic ada/-da. Note that I have placed it in the same position

¹³ The suffix -pa is also not compatible on verbs with the diminutive suffix -tsēc. Note, however, the very common adjectival enclitics -pambo and -patsēc, analyzable as -pa + -mbo/-quio and -pa + tsēc (§6.6.2).

¹⁴ The suffix -chit has the distinction of being the only morpheme (bound or free) in the language that ends in /t/. Since [t] never occurs word-finally or even syllable-finally, it would be interesting to see what would happen if a verb ended in -chit or if -chit was followed by a consonant-initial suffix. However, -chit only occurs preceding vowel-initial inflections (-e, -o,

class as -tsēc and -pa, and cannot co-occur with these suffixes. Most commonly, -chit works in conjunction with the contrast enclitic -en (§4.6.10.1), which occurs on the constituent that there is uncertainty about.

- (158) cuēte shēcūē-n-shun-bi-en tish-chit-e-c
 dicot.tree hole-Loc-Ev.Init:Tr-Emph-Contr give.birth.to-Uncert-Npast-Indic
isa-n
 porcupine-Erg
 ‘It is possibly in tree cavities that the porcupine gives birth.’

A-IV 041 isa 14

- (159) utsi-bo-n-bi-en ac-chit-e-c isan
 other-Pl-Erg-Emph-Contr drink-Uncert-Npast-Indic palm.species
dachianmēs
 curse.causer
 ‘But others probably drink isan dachianmēs [mashed fruit drink].’

A-I 041 isan dachianmēs 05

This constituent can be a noun/noun phrase, as in (159), or it can be any constituent except for a finite verb, like the postpositional phrase in (158), the interrogative adverb in (160) or the non-finite verb in (161).

- (160) midapad-en bacuē ic-chit-e-c
 how-Contr fruit be-Uncert-Npast-Indic
 ‘I’m not sure what their fruits could be like.’

A-I 028 shubu quēdē 10

- (161) ushte-ua-ash-bi-en ic-chit-e-c
 nest-Vzr:make-after:S/A>S-Emph-Contr be-Uncert-Npast-Indic
mapiocos
 common.opossum
 ‘Perhaps it [the common opossum] makes a nest and then lives in that.’

A-IV 045 mapiocos 13

The uncertainty suffix does not have to co-occur with -en. Unexpectedly, when -chit occurs without an -en-marked constituent, rather than expressing uncertainty about the

-onda, -ac, -ash, etc.), so the situation where the use of -chit would result in a syllable-final /t/ never comes up.

finite verb, the uncertainty is about some unspoken concern related somehow to the uttered phrase (162-164).

- (162) debi-n cacheta pe-chit-e-c
 Davy-Erg cracker eat-Uncert-Npast-Indic
 ‘Davy is eating crackers (perhaps he will give me one.)’
- (163) deibi-n cun pachid-Ø pe-chit-onda-sh
 Davy-Erg 1Gen manioc-Abs eat-Uncert-Dist.Past-3
 ‘Davy ate my manioc a long time ago (so maybe he will give me some now).’
- (164) bēdi-n opa pe-chit-ac
 jaguar-Erg dog bite-Uncert-Infer
 ‘(Dang it,) a jaguar bit the dog (, and now how am I supposed to hunt?).’

Since -en cannot occur on finite verbs, the solution for expressing uncertainty about a verb is to adverbialize the verb, making it a subordinate clause in clause-chaining constructions, where the main verb is ic ‘be,’ which here functions as an auxiliary, fulfilling the requirement that well-formed sentences must have a finite verb, and taking the finite verb inflection (165).

- (165a) uēnēs-chit-ec-en ic-ash
 die-Uncert-while:S/A>S-Contrast be-Conjec
 ‘Perhaps he has died (lit. Maybe he was perhaps-dead)’ [Speculating]
- (165b) uēnēs-chit-ec-en ic-o-sh
 die-Uncert-while:S/A>S-Contrast be-Past-3
 ‘Perhaps he died (lit. He was perhaps-dying)’ [Saw accident, but not sure if person died]
- (165c) uēnēs-chit-ec-en ic-e-c
 die-Uncert-while:S/A>S-Contrast be-Npast-Indic
 ‘Perhaps he will die (lit. He will be perhaps-dying)’

The suffix -chit may be used with any person. It can sometimes be used to talk of an action that the speaker knows did not occur, but feels it probably should have (166).

- (166) mibi nid-chit-o-c 'After having said that, you nevertheless did
2Abs go-Uncert-Past-Indic:1/2 not go (for some unknown reason).'

5.5.11 -bo 'Prior'

The suffix -bo is a very irregular one and a tricky one to characterize. It occurs as a sub-morphemic element in several lexicalized suffixes in place of the expected experiential recent past form -o. For example: -boed 'Recent Past Nominalizer' (instead of the expected -oed; §4.7.2); -boc 'Recent Past Action Nominalizer' (instead of the expected -oc; §4.7.5); and -boc 'Recent Past: Counter-expectation (instead of the expected -oyoc) the irregular outcome of the combination of -o 'Recent Past' and -yoc 'Counter-expectation' (§5.6.6). Thus, -o occurs is the regular productive recent past experiential inflection (§5.6.1.1), and -bo occurs in these fossilized forms. Yet, -bo seems to nevertheless continue to exist side-by-side with -o as a semi-productive suffix (semi productive in that it only occurs in a limited number of environments). In these productive usages, it does not replace -o as an inflection, but rather precedes some inflections and some non-finite suffixes to express what seems to be a 'Prior' meaning. The clearest example is unfortunately also one that only a few speakers recognize (167).

- (167a) cho-Ø 'Come!' (167b) cho-bo-Ø 'You come first!'
come-Imper come-Prior-Imper

Another case where we can see the 'Prior' meaning is preceding the inflection -nu
'Intent: 1 (§5.6.3.1).

- (168a) pe-nu (168b) pe-bo-nu
eat-Intent:1 eat-Prior-Intent:1
'I'm gonna eat (now).' '(Hold on,) first, I'm gonna eat.' [e.g., before we leave]

The suffix -bo also occurs preceding some of the non-finite adverbializing/clause-chaining enclitics -shun 'S/A>A', -ash 'after: S/A>S,' -an 'after: Different Referent: Inferential,' and -ac 'when: O>S/A: inferential' (§§12.4.2.2, 12.4.2.3), forming what I consider semi-lexicalized composite suffixes. These morpheme combinations exhibit a vowel reduction pattern o + a → o; e.g., -bo + -ash → -bosh. The enclitics -shun and -ash have as their basic meaning the temporal notion 'after,' but can additionally have logical relation readings: reason or cause-and-effect. When used with these forms, -bo forces the reason reading, so that the clauses cannot have only a neutral temporal relation (169).

(169a) chonoad-ash nes-o-bi
 work-after:S/A>S bathe-Past-1S
 'I bathed after working.' / 'I bathed because I had worked.'

(169b) chonoad-bo-ash nes-o-bi
 work-Prior-after:S/A>S bathe-Past-1S
 'I bathed because I had worked.' [i.e., because I was sweaty.]

Therefore, with -shun and -ash, -bo emphasizes that the temporal ordering is not simple chance, but that the second event occurred because the other event (the one coded by the verb suffixed with -shun or -ash) came *first*. With -ac 'when: O>S/A,' which is neutral with respect to evidentiality, -bo forces an experiential reading, which is part of the meaning of -bo (and -o). And with -an, which has an inferential meaning, -bo reverses the inferential meaning to an experiential one (170).

(170a) cun cucu nid-an nid-o-bi
 1Gen cross-uncle go-after:Diff.Ref:Infer go-Past-1S
 'I left after my uncle had left.' (speaker did **not** see uncle leave)

(170b) cun cucu nid-bon nid-o-bi
 1Gen cross-uncle go-after:Diff.Ref:Exper go-Past-1S
 'I left after my uncle left.' (speaker saw uncle leave)

In combination with -shun, -ash, and -ac, only either an abstract logical version of -bo's 'Prior' meaning or only the 'Experiential' part its meaning obtain, but the meanings of -shun, -ash, and -ac are not altered. By contrast, the meaning of -an and -bo do not equal the meaning of -bon (-bo-an) by any means, so I consider -bon a fully lexicalized form rather than a synchronically segmentable form (§12.4.2.2). I continue to segment the other forms, considering them to be in an intermediate stage of lexicalization.

5.5.12 General patterns in verbal derivational morphology

We can see three general patterns with respect to the verbal derivational morphology: i) **proximal** (close to root) derivational suffixes sometimes fuse to the root creating new lexemes; ii) **distal** (far from root) derivational suffixes may fuse to inflectional morphology, or tend to take on diffuse meanings that vary unpredictably for different inflectional contexts; and iii) intervening inflectional suffixes (e.g., collective suffixes) are generally easy to segment and generally code a single meaning at a time (i.e., some are polysemous, but almost none are portmanteau morphemes), and thus resemble the morphology in agglutinating languages. It is as if there were two poles of fusion, the root at one end, and the inflection at the other end.

The issue of fusion and partial fusion of distal derivational suffixes with inflectional morphology deserves some elaboration. As mentioned above and will be seen in the next section, inflectional morphology is **fusional** (i.e., they are portmanteau forms that contain multiple meaning, and while some can be internally reconstructed as consisting of more than one morpheme, the suffixes are not synchronically segmentable). One pattern we see with distal derivational morphology is that they are reduced phonologically in some environments, specifically, -quio → -qui, -tsēc → -ts and -pa → -p preceding vowels, and -bo + a → bo. Also, suffixes in these position classes are

generally semantically diffuse, not productive with all inflections or constructions and obligatory in others, and they take on different meanings with different inflections or may be semantically empty in some required or strongly preferred environments. These properties contribute to the difficulty in pinning down these forms as an independent morphemes in the preceding section, especially -bo and -pa. And, as will be seen in the next section, several inflections, namely -paid, -pashun and -panondac evidently contain the suffix -pa, but cannot be segmented synchronically, and the suffix combination -bo-nu could arguably be better analyzed as a single morpheme. It is interesting to note that there is a tendency for these “pre-inflectional” suffixes to code mood, a category often coded by inflectional morphology (and coded by some of the Matses inflectional suffixes, see next section). These patterns lead one to speculate about a historical situation where current verb words were historically multi-verb verb phrases, or verb-particle phrases, with the final verb/particle in the phrase taking the (probably older) inflectional morphology.

5.6 Finite Verbal Inflection

This category of suffixes minimally marks tense and usually also person agreement, either with a single portmanteau tense-person suffix, or with a combination of suffixes. Many of these suffixes also simultaneously mark evidentiality, aspect, mode, and/or epistemic modality. In other words, verbal inflection codes TAM and person agreement. This is the first category of verbal morphology discussed so far in this chapter that can be the final suffix at the end of discourse-ready verb word. This is also the first position class(es) that can be considered obligatory. Because verbal inflection is sometimes accomplished by more than one suffix, verbal inflection does not consist of a single position class. However, as I have assigned the verbal suffixes into position classes in Table 5.4, it is possible to say that all verbs (except the imperative) must have

at least one position 9 suffix or one position 10 suffix to be ready for discourse as an independent verb. And non-finite verbs must likewise be suffixed with one of the class-changing/subordinating suffixes (§5.8), which occur in paradigmatic contrast with the suffixes in position 10, to be discourse-ready.

It is useful to divide the position 10 inflectional suffixes into two categories before describing each of these suffixes in detail:

Type 1 verb inflectional suffixes: these all mark tense, and may also mark evidentiality and/or modal information, such as conditional or permission (Table 5.10). These all must co-occur with either one of several position 11 suffixes, which mark subject person agreement and interrogative vs. indicative mode (171; Table 5.11) or a first-person pronominal enclitic (172; §5.6.5).

(171) mibi nid-onda-c
2Abs go-Dist.Past-Indic:1/2
'You went (long ago)'

(172) pe-o-mbi
eat-Past-1A
'I ate'

Table 5.10. Position 10 Type 1 independent verb inflectional suffixes (n = 6).

- <u>o</u>	'Recent Past: Experiential'	- <u>e</u>	'Nonpast'
- <u>onda</u>	'Distant Past: Experiential'	- <u>enda</u>	'Nonpast: (Permission)'
- <u>denne</u>	'Remote Past: Experiential'	- <u>tsia</u>	'Nonpast: Conditional'

Table 5.11. Position 11 verb inflectional suffixes that go with those in Table 5.10 (n = 3).

with - <u>o</u> , - <u>onda</u> & - <u>tsia</u>		with - <u>denne</u> , - <u>e</u> and - <u>enda</u>	
- <u>c</u>	'Indicative: 1/2'	'Indicative: 1/2/3' or 'Interrogative: 3'	
- <u>sh</u>	'Indicative: 3' or 'Interrogative: 3'	—	
- <u>Ø</u>	'Interrogative: 1/2'	'Interrogative: 1/2'	

Note: first-person pronominal enclitics (e.g., -mibi '1A,' -bi '1S') can replace these.

Note: morpheme line glosses: -sh '3'; -Ø 'Interr:1/2'; -c 'Indic:1/2,' 'Indic' or 'Interr:3.

Type 2 verb inflectional suffixes: these require no further ending (173 & 174). They mark tense, have either fixed person subject agreement or general (i.e., do not specify person, and cannot be suffixed by a person-specifying suffix), do not vary for interrogative mode, and may mark evidentiality, aspect and/or modal information, such as uncertainty and intention (Table 5.12).

(173) nid-nu 'I'm leaving' (174) bēdi-n senad pe-quid 'Jaguars eat deer'
 go-Intent:1 jaguar-Erg deer eat-Hab

Table 5.12. Position 11 Type 2 independent verb inflectional suffixes (n = 20).

-ac	'Narrative Past: 3'	-nui	'Nonpast: Uncertainty: 2/3'
-ac	'Recent Past: Inferential'	-pashun	'Nonpast: Desiderative: 2/3'
-nēdac	'Distant Past: Inferential'	-nu	'Intention: 1'
-ampic	'Remote Past: Inferential: 2/3'	-mane	'Future: Potential: 1'
-nēdampic	'Remote Past: Inferential: 2/3'	-nunda	'Future: Potential: 3'
-ash	'Recent Past: Conjecture: 3'	-panonda	'Future: Potential: 3'
-nēdash	'Distant Past: Conjecture: 3'	-nushe	'Future: Potential: 3'
-quid	'Present: Habitual'	-∅	'Imperative: 2 (may include 1)'
-paid	'Present: Habitual'	-ta	'Imperative: 2: Excluding 1'
-esa	'Negative Habitual'	-enda	'Negative Imperative: 2'

Looking at Tables 5.10 and 5.12, we note that for each tense, there are several suffixes that can be used. The past tense inflections are clearly the most complex. In addition to specifying three degrees of temporal distance ("metrical tense," as referred to by Chung and Timberlake 1985:207), all past tense suffixes specify one of three levels of evidentiality (experiential, inferential, or conjecture). Section 5.6.1 will describe this complex system of tense and evidentiality. Similarly, there are seven nonpast and present suffixes (§5.6.2), five future suffixes (§5.6.3), and three imperative suffixes (§5.6.4) that need to be sorted out. Section 5.6.5 describes the agreement suffixes listed in Table 5.11.

5.6.1 Past tenses and evidentiality

The Matsigenka language has a system for coding evidentiality that is not only interesting in its own intricacies, but it differs from evidentiality systems described in other languages in such a manner that will surely have much to contribute to our understanding of the linguistic coding of evidentiality. Evidential devices in languages often code multiple types of information with respect to the reliability of the information being related by the speaker. These include: i) source of knowledge (e.g., hearsay); ii) degree of precision or truth, iii) probability of the information being true, and iv) the speaker's expectations concerning the probability of the statement (Mithun 1986). Because often a single marker serves more than one of these functions, some authors (e.g., Mithun 1986) suggest that these distinctions should be treated as a single complex system. Others believe that in some languages one of these distinctions is basic to the evidential system, and the other meanings are derived. For example, Weber (1986) makes a distinction between evidential force (source of knowledge) and validation force (speaker's commitment to the truth of the statement), analyzing a set of Quechua suffixes as being basically evidential, with their validation functions being an epiphenomenon (e.g., information obtained through direct experience is expected to be more reliable). While Weber's suggestion is intriguing, the fact remains that some of the morphemes he analyzes can have a validation function without any meaning referring to the source of the knowledge (e.g., his "direct experience" marker can be used for future events). In fact, it seems that all evidential systems described so far code a mix of two or more similar functions, either simultaneously or separately in different contexts (e.g., Botne 1997). This condition seems inevitable in light of recent studies that show that these distinctions (source of knowledge, validation, etc.) are generally diachronically related (Mithun 1986, Traugott 1989).

The evidential system in the Matses language is one that not only promises to help resolve this issue, but also provides a clear view of the intrinsic characteristics of evidential systems. What is different about Matses is that it codes **evidentiality** (source of knowledge) in one set of verbal inflectional suffixes, and **epistemic modality** (certainty/validation/commitment to truth of statement) by various other means, such as a verbal suffix that comprises a different position class, an uncertainty particle, and a dubitative particle (inflectional suffixes only code uncertainty in nonpast and future tenses). Thus, there is no need for Matses speakers to extend the function of evidentials to code epistemic modality because there are other markers that do this, which are outside the Matses evidential system.

While separate from epistemic modality, mirativity, and precision functions, Matses evidential markers are intricately associated with tense. Evidentiality is coded only in verbal suffixes that also mark past tense. Nine different tense-evidentiality inflectional suffixes mark a combination of one of three evidential distinctions (direct experience, inference, and conjecture) and one of three past tense distinctions (recent past, distant past and remote past). There are no past tense inflections besides these nine suffixes, so every time a speaker reports a past event, he must reveal the source of knowledge. This contrasts with epistemic modality, which is not an obligatory category in any tense (e.g., the absence of -chit 'Uncertainty' does not necessarily imply certainty; §5.5.10). There is no morphological means of marking hearsay—it must be reported via direct quotation with the quotative verb inflected with one of the nine tense-evidentiality suffixes. Mythical and historical past is marked with the recent past inferential suffix, often reported in a quotative sentence.

5.6.1.1 *Experiential (direct experience)*

Past events that are experienced directly are reported using one of three past tense inflectional suffixes, which differ in the length of time before the speech act that the event occurred. The suffixes are¹⁵:

- <u>o</u>	'Recent Past: Experiential'	immediate past to about one month ago
- <u>onda</u> ¹⁶	'Distant Past: Experiential'	about one month to about 50 years ago
- <u>denne</u>	'Remote Past: Experiential'	about 50 to about 100 years ago (approximate maximum human life span)

The one-month cut-off point may be motivated by the lunar month, but the cut-off point is not rigidly defined (e.g., exactly 28 days or prior to the last new moon).¹⁷ In practice, the suffix -onda (allomorph -conda following /k/) may be used for events that happened as recently as two weeks ago, and -o (allomorph -co following /k/) may be used for events that happened as far back as 2 months ago, depending on the speaker, context, desired rhetorical effect, etc. The 50-year cut-off point for -denne (allomorph -tenne following unvoiced consonants and /d/) is similarly not so rigid, but its use responds to other factors. The first thing to consider with -denne is that it is used mostly by old people. With first-person subject agreement, then, -denne can only be used by old people (other than in quotation). So, to use -denne (at least in the first person) is essentially to admit/claim that you are an old man or an old woman (in Matses culture, it is not so bad to be considered old). This subset of the population that uses -denne, then, reserves this form for events that happened during their childhood, and then, as they get older, also

¹⁵ Morpheme gloss line abbreviations: -o 'Past,' -onda 'Dist.Past,' -denne 'Rem.Past'

¹⁶ There is an alternate form to the inflection -onda-sh (i.e., the third-person form of -onda), -oshash (I'm unsure about how to or if to segment it), which is rarely used, considered archaic, and seems to have the exact same meaning as -onda-sh.

¹⁷ Significant cyclical time units in traditional Matses culture include the day, the lunar month, and the year.

during their youth and their middle age.¹⁸ Since -denne is an experiential marker, even for talking about a third person, it is necessary that the speaker be old. However, where this requirement is relaxed most drastically is in reference to dead people, where speakers as young as 25 might use -denne when talking about a deceased third person subject. It is taboo in Matses to speak of the dead, particularly if they are recently deceased, so the use of -denne to talk of the dead may be a way of distancing the event to make it okay to talk about it. In example (175), the speaker finds it necessary to mention his late father as he pleads for his life; he does so using the -denne suffix.

- (175) ubi bina ne-e-c ca-ac ubi ac-enda papa
 1Abs man's.name be-Npast-Indic say-when:O>S/A 1Abs kill-Neg.Imper father
aid-bi cun papa ic-denne-c cun papa uënës-onda-sh
 that.one-Emph 1Gen father be-Rem.Past-Indic 1Gen father die-Dist.Past-3
aid-bi cun papa ic-denne-c ubi ac-enda papa
 that.one-Emph 1Gen father be-Rem.Past-Indic 1Abs kill-Neg.Imper father
que-onda-sh
 say-Dist.Past-3

'...one told him, "I am Bina," and then he (the Dēmushbo Indian) responded, "Don't kill me, father! My father used to be that same (name), my father has died, my father used to also be that (name), don't kill me, father!"'

+ K-XXII 004 chema 037

- (176) ai cunesunne-o-sh chido bed-Ø ca-ac bed-o-mbi
 yes kill-Past-3 woman grab-Imper say-when:O>S/A grab-Past-1A
ca-onda-mbi
 say-Dist.Past-1A

"'Yes, they killed him; they said, 'Take the woman!' so I took her," I told him.'

+ K-XXII 010 chema 096

As can be seen in examples (175) and (176), these suffixes require person subject agreement suffixes (-Ø, -c or -sh; agreement is with the S or A argument) or first-person pronominal enclitics (-bi or -mbi) to be complete:

¹⁸ At least one younger speaker (who never uses -denne himself) says that denne can be used for events that occurred as little as 5 or 6 years ago.

Table 5.13. Person-mode verbal suffixes and pronominal enclitics for past experiential tense-evidentiality suffixes.

	Subject agreement			Pronominal Enclitics			
	1/2		3	1A	1S	2A:1O	3A:1O
	Interrogative	Indicative					
-o	-Ø	-c	-sh	-mbi	-bi	-bi	-sh-i
-onda	-Ø	-c	-sh	-mbi	-bi	-bi	-sh-i
-denne	-Ø	-c	-c	-mbi	-bi	-bi	-bi

Note: third-person agreement markers vary depending on the tense-evidentiality suffix.

Inferential and conjecture suffixes occur without person suffixes (although inferential suffixes may occur in combination with experiential suffixes, in which case person suffixes are attached to the experiential suffixes; next section)

Like all past tense suffixes (and many other inflectional suffixes), none of these forms contain information about aspect. Some aspectual distinctions can be specified using reduplication (177; §5.9), derivational suffixes (178; §5.5.2), or both (179).

(177) cho _____ cho-o-sh
 (redup=Distr) come-Past-3
 'Many came'

(178) cues-bud-onda-sh
 hit-Dur-Dist.Past-3
 'He kept on hitting him.'

(179) cho-an _____ cho-an-denne-c
 (redup=Distr) come-Incep-Rem.Past-Indic

'He kept on coming and going.'

Otherwise, aspect is determined according to context. For example, in (180a), the more natural reading is an imperfective aspect, considering that woolly monkeys are commonly killed game animals, while in (180b), a perfective reading is more natural considering that jaguars are not hunted by Matses and are seldom encountered and rarely killed (to the point that many Matses have never even seen one).

- (180a) poshto cues-denne-mbi 'I used to kill woolly monkeys
woolly.monkey kill-Rem.Past-1A (when I was young).'
- (180b) bēdi cues-denne-mbi 'I killed a jaguar (when I was young).'
- jaguar kill-Rem.Past-1A

The term “Experiential” should be defined carefully here to distinguish it from “Inferential” (next section). The essential condition is that the speaker witnesses the event (using any of the five senses) *as the event happens*. A definition could be as follows: **experiential** refers to a situation where the speaker detects the occurrence of an event at the time that it transpires (or a state at the time that it is holds true). The primary (i.e., optimal or most direct) way of detecting most events is by visual contact, but not always. Learning that there was a thunder clap or that a dog has barked is done more directly by hearing the thunder or hearing the dog bark rather than by seeing a flash of lightning or seeing the dog’s mouth open. Similarly, states such as stinking, tasting bad, and being rough can be detected most directly by senses other than sight. However, events that are detected through some secondary (i.e., non-optimal or less direct) means are still coded as experiential, as long as they are detected as they occur. For example, hearing dogs fighting is less direct than seeing them fight, and hearing rain on the roof is less direct than seeing the rain or feeling it on your head, and thus one might consider these “indirect evidence,” but in the Matses language these are still coded as in the same way as experiential, since the detection of the occurrence of the event and the actual occurrence of the event are simultaneous. If the stimuli available were not enough for the person to be sure that the event actually occurred, experiential inflection is nevertheless used, but generally with the uncertainty marker, -chit (§5.5.10). The essential criterion for using experiential suffixes is that the event and the event’s detection (via the

speaker's own senses) be *simultaneous* (evincing another facet of the intricate association between tense and evidentiality).

To understand the full range of usages of past tense experiential inflections, it is important to briefly consider the present tense (but a full description of present/nonpast tense suffixes can be found in §5.6.2.1). Present tense is coded principally by -e, which I gloss as 'Nonpast', since it codes both present and future tense (181). In the present tense, -e may code either progressive or habitual (or generic) aspect.

(181a) <u>chonoad-e-bi</u> work-Npast-1S 'I will work.' / 'I am working.' 'I (always/usually) work.'	(181b) <u>is-Ø</u> <u>a-bi</u> <u>cho-e-c</u> see-Imper there-Emph come-Npast-Indic 'Look! Here, he comes now.' lit., 'Look! There he is coming.'
---	--

The tense-aspect of -e that enters into the Matses evidential system is the present progressive. In the present-progressive tense-aspect, -e indicates that the event being reported is presently being witnessed directly; i.e., i) the event, ii) the detection of the event, and iii) the report of the event are all simultaneous, as in (181b). This condition precludes reporting events or states that are presently occurring at a distant or otherwise immediately unobservable location. Events or states that are expected to be true at the time of the speech act but cannot be directly confirmed due to spatial separation or some other factor must be reported in the past tense. This makes sense if one considers that the last time the event or state was directly experienced had to have been in the past, and, in fact, one cannot be sure that the event presently continues to occur or that the state still holds true.¹⁹ For example, in (182), the speaker being quoted must use the past tense because his uncle is not present at the location of the speech act.

¹⁹ An English sentence like *My brother is working in Arkansas* is technically an assumption, since the speaker cannot be completely certain that his brother has not recently died, been fired etc.

- (182) ad-sho-bi ubi ac-enda cucu
do.like.that-when:S/A/O>O-Emph 1Abs kill-Neg.Imper cross.uncle
aid-bi cun cucu ic-o-sh que-onda-sh dēmushbo
that.one-Emph 1Gen cross.uncle be-Past-3 say-Dist.Past-3 Dēmushbo.Indian
‘When he said that to him, the Dēmushbo told him, “Don’t kill me, uncle, my
uncle is (lit. was) that same (name)”.’

+ K-XXII 004 chema 039

Similarly, if you ask a Matses how many wives he has, the question is properly asked in the recent past tense if his wives are not present (183a). And the answer might be (183b).

- (183a) tedtsi min chido ic-o-sh (183b) daëd ic-o-sh
how.many 2Gen woman be-Past-3 two be-Past-3
‘How many wives do (lit. ‘did’) you have?’ ‘There were two.’

I think of it as saying, ‘There were two (last time I checked!).’ The logic of this can be seen in that the speaker cannot be 100% sure that his wives have not run off with another man, etc. Nevertheless, the use of the past tense for reporting distant events seems to be more of a grammaticised, automatic speech pattern, rather than a conscious intention of the speaker to convey this lack of knowledge. It should be pointed out that it may appear that this set of suffixes refers both to temporal and spatial distance, since -o, as described above, is sometimes required for referring to distant states or events that are presently going on. But note that distant visible situations, like noting that rain clouds are approaching, do not call for -o. And selection of -o vs. -onda does not depend on relative distance, but on how long ago the speaker was at the distant locality. So the association of experiential past tense suffix with distance is epiphenomenal.

Before ending this section, I should describe a special use of the suffix -o. As explained in section 11.2.4, first-person pronouns (either free forms or enclitics) must occur overtly in all but a few special instances. This requirement includes clauses inflected with -o (and any past tense suffix), but the suffix -o may be used in a special

construction to express surprise by the speaker about something he himself just did, where an overt first-person pronoun is actually disallowed:

- | | |
|--|---|
| (184a) <u>sia</u> _____ <u>pe-o-c</u>
chili.pepper eat-Past-Indic:1/2
'I (accidentally) ate chili pepper!' | (184b) <u>pien-o-c</u>
diarrhea-Past-Indic:1/2
'I pooped myself!' |
|--|---|

5.6.1.2 *Inferential*

What is meant by “**inferential**” here is that the speaker did not witness the event itself, but is able to deduce its occurrence via some *resulting evidence*. Again, we see the role of tense in defining inferential distinctions in that this condition then precludes reference to events that are occurring at the time of the speech act or to future events. Also, the requirement of resulting evidence seems to always entail a past perfect (but not always perfective) reading, but nevertheless ‘Inferential’ is the constant meaning, as observed situations cannot be reported with inferential suffixes, even if best reported as having a past perfect aspect. A second condition on the use of inferential suffixes is that the speaker himself must behold the evidence (otherwise a hearsay construction must be used, §5.6.1.4). A third condition is that the resulting evidence must be at least potentially directly tied to the inferred event (a lack of such evidence would call for a conjecture suffix; next section), but the evidence does not have to be conclusive or even convincing—if the evidence is not convincing, the statement can be qualified with uncertainty suffix, -chit (§5.5.10). For example, the sudden absence of someone in a room during a feast might motivate one of the three following inferences: i) the person left (185a); ii) the person left to go to sleep (185b); or iii) the person left because he got bored (185c). The person’s absence is conclusive evidence for inference (i), but it is not convincing evidence for events (ii) or (iii), yet the person’s absence is enough to allow the use of an inferential suffix for all three of these complex events since they all involve

vacating the room (the latter two inferences could be qualified with the uncertainty marker and the contrast marker, as in 185c).

- (185a) debi nid-ac (185b) debi ush-ec nid-ac
 Davy go-**Infer** Davy sleep-Purp:S/A>S go-**Infer**
 ‘Davy (evidently) left’ ‘Davy (evidently) left to go to sleep.’
- (185c) chiesh-do-ash-bi-en debi nid-chit-ac
 be.bored-Incep-after:S/A>S-Emph-Contr Davy go-**Uncert-Infer**
 ‘Davy (evidently) left, probably because he got bored.’

However, to simply assert the person slept or got bored without any evidence other than their leaving, would call for conjecture morphology (186).

- (186a) debi ush-ash (186b) debi chiesh-do-ash
 Davy sleep-**Conjec** Davy be.bored-Incep-**Conjec**
 ‘Davy probably slept.’ ‘I suppose Davy got bored.’

There are four inferential inflectional suffixes, -ac, -nēdac, -ampic, and -nēdampic, which parallel the experiential suffixes, -o, -onda, and -denne in terms of transpired time²⁰:

<u>-ac</u>	‘Recent Past: Inferential’	immediate past to about one month ago
<u>-nēdac</u>	‘Distant Past: Inferential’	about one month ago to speaker’s infancy
<u>-ampic</u>	‘Remote Past: Inferential’	before speaker’s infancy
<u>-nēdampic</u>	‘Remote Past: Inferential’	before speaker’s infancy

As with -o and -onda, there is variation in the cut-off point between -ac and -nēdac depending on the speaker, context, desired rhetorical effect, speaker’s interpretation, etc.

With -ampic and -nēdampic, speakers usually say that the event happened “before I was born,” but they are also occasionally used to refer to (unwitnessed) events that

²⁰ Morpheme gloss line abbreviations: -ac ‘Infer,’ -nēdac ‘Dist.Past:Infer’ -ampic/-nēdampic ‘Rem.Past:Infer’

happened during the speaker's infancy, before they could clearly recall or understand events. With habitual past actions, the more common usage of -ampic and -nēdampic, these suffixes do not necessarily point to any specific resulting evidence. For example, younger speakers may talk about how Matses women used to make clay pots long ago, and may see pot shards or a few pots still intact during their life, but if pressed to reveal their source of knowledge, the speakers usually just say that it is "common knowledge." For reporting a single instance of an event, however, specific physical resulting evidence is required to use -ampic and -nēdampic. But due to the infrequency of evidence persisting for such long periods of time in a humid rainforest environment, as might be expected, -ampic and -nēdampic seldom occur in texts and discourse for this purpose. Perhaps as a result of the rareness of these forms in natural speech, there is much vagueness and disagreement among speakers about how and if -ampic and -nēdampic differ in meaning. Some speakers claim that -nēdampic refers to events that happened a longer time ago, while other speakers claim that there is no difference at all in sentence pairs like (187).

(187a) debi-n uncate cuësh-ampic
 Davy-Erg paddle remove.from.tree-Rem.Past:Infer
 'Davy removed (a buttress root from a tree to make) a paddle.'

(187b) debi-n uncate cuësh-nēdampic
 Davy-Erg paddle remove.from.tree-Rem.Past:Infer
 'Davy removed (a buttress root from a tree to make) a paddle.'

Note that the experiential suffixes (e.g., -denne) are logically impossible for events that transpired prior to the speaker's birth (unless in a quotation), and marginally valid for events that transpired during the speaker's infancy.

The suffixes -ac and -nēdac can be used in three different structural environments:

i) as the sole inflectional suffix on a finite verb (188a); ii) preceding an experiential

inflectional suffix on a finite verb (188b); or iii) preceding a nominalizer (188c) or other non-finite verbal suffix. There is some disagreement among speakers as to whether -ampic and -nēdampic can be used in environments (ii) and (iii).

(188a) <u>nid-ac</u> go- Infer 'He (evidently) left (from here).'	(188b) <u>nid-ac-o-sh</u> go- Infer-Past-3 'He (evidently) left (from a distant place).'
--	---

(188c) aid nid-ac-onda ne-e-c
that.one go-**Infer-Dist.Past.Nzr** be-Npast-Indic
'He is the one who (evidently) left (more than a month ago).'

'That is what [e.g., a boat] he (evidently) left in (more than a month ago).'

This first configuration, where -ac or -nēdac occurs as the sole verbal inflectional suffix, is appropriate when reporting the event while beholding (or otherwise experiencing) the resulting evidence, as in the quotation in (189), which was said upon detection of the absence of the captives, who had escaped during the night.

(189) tsaodi ubi chui-en-quo nid-an-ne-ac inchësh-n
I.don't.know 1Abs tell-Neg-Aug go-Incep-Distr-**Infer** dark-Loc
nique-ac que-onda-sh
run.off.Pl-**Infer** say-Dist.Past-3
'"I don't know, they took off without telling us; they ran off at night," he said.'
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In other words, to use an inferential suffix as the lone inflection, the report of the event must be contemporaneous with the detection of the evidence, or the report must take place while beholding the persisting evidence. For example, (190a) or (190b) could be said to a hunting partner upon detection of the white-lipped peccary (pig-like mammals) tracks crossing the hunting path; but it could likewise be said to a man who arrives upon the scene afterwards. The essential condition is that the utterance is made while perceiving the resulting evidence.

- (190a) shēctenamē cuen-ac
 white-lipped.peccary pass.by-**Infer**
 ‘White-lipped peccaries (evidently) passed by (here).’ [looking at fresh tracks]
- (190b) shēctenamē cuen-nēdac
 white-lipped.peccary pass.by-**Dist.Past:Infer**
 ‘White-lipped peccaries (evidently) passed by (here).’ [said looking at old tracks]

When the event is reported away from the evidence (i.e., at a place from which the evidence is not discernible) or when the event is reported after the evidence is no longer perceptible (e.g., erased tracks), then one of the three experiential suffixes (-o, -onda or -denne; preceding section) must be included (directly following the inferential suffix). The combination of the two suffixes then refers to two separate time spans, demarcated by three temporally separated events (henceforth “**temporal reference points**”): i) the actual event or state (as construed by the person who makes the inference), ii) the detection (when the resulting evidence is detected or is being beheld), and iii) the report (when the sentence is uttered). The inferential suffixes refer to the time period spanning temporal reference points (i) and (ii), and the experiential suffixes refer to the time period spanning points (ii) and (iii) (Figure 5.2).

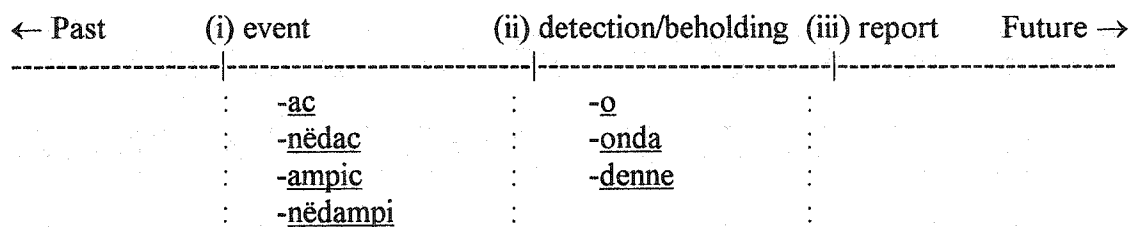


Figure 5.2. Temporal reference points for inferential and experiential suffixes.

This phenomenon, which I will call “double tense” is illustrated in examples (190c-g), all of which contain two past tense markers, an inferential past tense marker and an experiential past tense marker. It could be considered a sort of “relative tense” (as

described in Comrie 1985), where the experiential suffix specifies the inferential suffix's non-present-moment temporal deictic reference point.

- (190c) shëctenamë cuen-ac-o-sh
 white-lipped peccary pass.by-**Infer-Past-3**
 'White-lipped peccaries passed by (far away, a short time ago).' [fresh tracks]
- (190d) shëctenamë cuen-ac-onda-sh
 white-lipped peccary pass.by-**Infer-Dist.Past-3**
 'White-lipped peccaries passed by (far away, a long time ago).' [fresh tracks]
- (190e) shëctenamë cuen-nëdac-o-sh
 white-lipped peccary pass.by-**Dist.Past:Infer-Past-3**
 'White-lipped peccaries passed by (far away, a long time ago).' [old tracks]
- (190f) shëctenamë cuen-nëdac-onda-sh
 white-lipped peccary pass.by-**Dist.Past:Infer-Dist.Past-3**
 'White-lipped peccaries passed by (far away, a long time ago).' [old tracks]
- (190g) shëctenamë cuen-ac-denne-c
 white-lipped peccary pass.by-**Infer-Rem.Past-3**
 'White-lipped peccaries passed by (far away, a very long time ago).' [fresh tracks]

It seems contradictory to have an experiential and an inferential marker referring to the same event, but because the two markers refer to time spans that are bounded by different temporal reference points, no contradiction need occur. For example, in (190d), -ac marks that the event (evidently) happened shortly before the resulting evidence was detected (<1 month ago), and -onda marks that the resulting evidence was beheld (i.e., directly experienced) relatively longer (1 month to 50 years ago) before it was reported. Because there are four inferential suffixes and three experiential markers, there are 12 logical possibilities for their combination; the different combinations differ only in the lengths of time spanning the different temporal reference points.²¹ For example, (190d)

²¹ As described in section 2.6.6.1, when the suffixes -o or -onda (but not -tenne) follow -ac or -nëdac (or any root or suffix ending in /k/) the /k/ is repeated; e.g.: pe + -ac + -o + -sh = piaccosh. It is worth pointing out that the suffixes -ac and -nëdac are action nominalizing suffixes (§4.7.5).

differs from (190c) in that in (190d) the event was reported a longer time after the evidence was first detected. Sentence (190c) might be uttered by a hunter upon arrival at the village, while relating what he had found in the jungle that day; and the same event could be reported with (190d) to a person from another village who arrives to visit more than a month afterwards. By contrast, (190e) differs from (190c) in that the event transpired a longer time before the peccaries' spoor was detected (as inferred from the hunter's aging of the tracks). Sentence (190f) differs from (190c) both in the length of time between the occurrence of the event and the detection of its evidence, and in the length of time between the beholding of the evidence and the report of the evidence (> about one month ago). Example (190g) might be told by an old man telling a story about his youthful days as a hunter. The suffix combination -nēdac-denne is often judged ungrammatical, and all suffix combinations involving -ampic and -nēdampic are rejected all the time by some speakers, and most of the time by the other speakers. Those speakers who judged these combinations as correct would do so in only a few situations, like those in (191). This is to be expected with suffixes involving long periods of time, since few types of evidence persist for many years, especially in a humid rainforest environment. Nevertheless, situations can be found where the right conditions would call for these suffix combinations, and some degree of acceptance is attained (191)²².

(191a) tsundan-bi-en tied dēd-pa-nēdac-denne-c
 who:Erg-Emph-Contr swidden fell-Comment-Dist.Past:Infer-Rem.Past-Indic
 'I wonder who felled (trees to make) that swidden.' [far away, swidden was
 already planted, told by an old person about what he saw as a youth]

The implication is that this extra /k/ may be the copula/auxiliary verb ic (which is frequently contracted to -c), suggesting that historically this may have been a copular construction or a complex verb phrase with the verbal inflections actually occurring on two separate verbs (cf. negative constructions, §12.3.2).

²² Those speakers that would reject the examples in (141), would use instead -nēdac-onda for both situations.

- (191b) ?tsundan-bi-en tied död-pa-ampic-denne-c
 who:Erg-Emph-Contr swidden fell-Comment-Rem.Past:Infer-Rem.Past-Indic
 ‘I wonder who felled (trees to make) that swidden.’ [far away, evidence is
 secondary forest that has been growing back for maybe 30 years]

The text excerpt in (192) illustrates how these suffix combinations are used to keep track of temporal relations within a story.

- (192) acte pote-ac-onda-sh [pote pote-ac-o-sh-que
 river cross-Infer-Dist.Past-3 (redup=Distr) cross-Infer-Past-3-so
nunte ac-ec nid-nu] que-anec
 palm.canoe do-Purp:S/A>S go-Intent:1 say-after:S/A>S
 ‘He (evidently) crossed the river after saying: “(Evidently) they crossed the river,
 so I’m going to make a palm canoe”.’

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In this real-life story, a Matses man (the speaker’s father) tracks his escaped captives to find that they had crossed the river by making canoes out of palm trunks—the palm canoes are the telltale evidence motivating the use of -ac in the quoted speech (quoted speech in brackets), which was reported to the speaker very shortly after finding the evidence, hence calling for the recent past suffix -o. In the main clause, the speaker reports his father’s crossing of the river (which he did not witness, but inferred from his father’s absence followed by his return with a captive woman) to me in this text using the suffix -onda because he is reporting an event that transpired many years ago.

One way to describe the selection and combination of evidential and experiential suffixes is to consider that when reporting any past tense event, both position classes 9 and 10 must be considered (Table 5.14). When the occurrence of the event and the detection of the event are simultaneous (as the case would have to be with directly-experienced events), then the inferential suffix is omitted (i.e., -Ø is selected for this slot). When the detection/witnessing of the event is simultaneous with the reporting

of the event, then the experiential suffix is omitted (i.e., $-\emptyset$ is selected).²³ And when none of the three temporal reference points are simultaneous, one suffix from each column must be selected. When all three temporal reference points are simultaneous, then we are no longer talking about a past event, but about a directly experienced present tense event (for which the inflectional suffix $-e$ is used).

Table 5.14. Combining inferential and experiential suffixes.

Time transpired	Position class 9 event → detection	Position class 10 detection/beholding → speech act
simultaneous	$-\emptyset$	$-\emptyset$
short time period	$-ac$	$-o$
long time period	$-nedac$	$-onda$
very long time period	$-ampic/-nedampic$	$-denne$

Note: $-\emptyset + -\emptyset = -e$, directly-experienced present tense

Note: some speakers reject $-nedac-denne$ and combinations involving $-ampic/-nedampic$

Often, due to the impossibility or unusualness of transporting evidence (e.g., someone's absence or animal tracks), using an inferential suffix as the sole inflection often entails reporting the event at the locality where the event took place. However, as can be shown with examples using transportable (193) and impermanent (194) evidence, the beholding of the evidence, rather than location governs the use of single vs. combined inferential inflections.

(193a) poshto-n cun maquinia icsa-ua-ac
 woolly.monkey-Erg 1Gen machine bad-Vzr:make-**Infer**
 'The woolly monkey ruined my recorder.' [can be said where the recorder was found when you checked if it worked, or when you took the recorder to the house of the owner of the pet monkey]

²³ An iconic way to think about this is that if the time span between two temporal reference points (as defined in Figure 5.2) is zero seconds, the suffix that goes in this slot is $-\emptyset$.

- (193b) poshto-n cun maquinia icsa-ua-ac-o-sh
 woolly.monkey-Erg 1Gen machine bad-Vzr:make-**Infer-Past-3**
 ‘The woolly monkey ruined my recorder.’ [can be said to the owner of the pet monkey when you don’t have the recorder with you.]
- (194a) poshto-n cun maquinia ne-bud-ac
 woolly.monkey-Erg 1Gen machine throw-down-**Infer**
 ‘The woolly monkey threw down my recorder.’ [can be said where the monkey did it while looking at recorder lying on the ground (damaged or undamaged)]
- (194b) poshto-n cun maquinia ne-bud-ac-o-sh
 woolly.monkey-Erg 1Gen machine throw-down-**Infer-Past-3**
 ‘The woolly monkey threw down my recorder.’ [can be said at a distant location, or at the place where recorder was found after it has been picked up]

It should be noted, however, that although speakers generally agree that evidence is more important than location, this rule is not always applied consistently in some complicated scenarios. In fact, any time a report involves transporting the evidence, there is a potential for inter-speaker variation in judgments about whether a single inflectional suffix or a suffix combination should be used.

When a person’s absence is the evidence (a typical scenario for inferential statements), the situation differs a bit once the person returns. It becomes as if one can no longer consider the absence as evidence, as if the evidence never existed. In sentence (195a), as expected, the subject cannot have returned because the speaker must be beholding the evidence (the absence) at the time of the speech act. But one would expect (195b) to employable once the speaker has returned, but rather it can only be used at a distant location.

- (195a) chotac ic-ac-no nid-nēdac
 non-Indian be-Act.Nzr-Loc go-**Dist.Past:Infer**
 ‘He went to the city (and never came back).’ [told at the village from where the person left; can’t say this if he has returned, even after one month]

- (195b) chotac ic-ac-no nid-nēdac-o-sh
 non-Indian be-Act.Nzr-Loc go-Dist.Past:Infer-Past-3
 ‘He went to the city (and never came back).’ [told at a distant village; can’t say
 this if the person has come back, even after one month]

Past events can be related using nominalized relative clauses instead of active sentences. However, the nominalizing suffixes (which are obviously related to the past tense inflections, but are not really synchronically segmentable, §4.7.8) make evidential distinctions that parallel the inferential distinctions made by finite morphology (Table 5.15) Therefore, using nominalized relative clauses to relate past tense events is not a possible strategy for keeping the source of knowledge ambiguous. In fact, there is no way to report past tense events without obligatorily making evidential distinctions.

Table 5.15. Finite verbal inflectional suffixes and corresponding nominalizing suffixes.

Inflectional suffixes	Nominalizing suffixes	Inflection combinations	Nominalizer-inflection combination
-o	-boed	-ac-o	-ac-boed
-onda	-ondaid	-ac-onda	-ac-ondaid
-denne	-denned	-ac-denne	-ac-denned
-ac	-aid	-nēdac-o	-nēdac-boed
-nēdac	-nēdaid	-nēdac-onda	-nēdac-ondaid
-ampic	-ampid	-nēdac-denne ^a	-nēdac-denned ^a
-nēdampic	-nēdampid	-ampic-o ^a	-ampic-boed ^a

^a Not accepted by all speakers; those speakers that allow the combination of -ampic and -nēdampic with direct-evidence inflection suffixes also allow their combination with direct-evidence nominalizers; only one of the possible 12 combinations involving -ampic and -nēdampic is listed in this table.

I refer the reader to section 4.7, especially 4.7.2, for a discussion of these nominalizers. The relevant temporal reference points for the nominalizing suffixes are the same as those in Figure 5.2, except that the final reference point (the speech act) can sometimes be the moment when the nominalization is relevant within the utterance

(which may be in the past [196a], present [196b] or future [196b]). In this sense, the sentence in (196a) in addition to coding “absolute tense” (i.e., with the speech act as the temporal deictic center; Comrie 1985), it can code “relative tense.” But, as can be seen in (196b), there is a restriction that the relative temporal reference point must be in the past.

(196a) debi-n nian-ondaïd bed-o-mbi
 Davy-Erg leave-Dist.Past.Nzr take-Past-1A
 ‘I took what Davy left behind (>1 month ago).’ absolute tense
 ‘I took what Davy had left behind (>1 month before I took it).’ relative tense

(196b) debi-n nian-ondaïd bed-e-mbi
 Davy-Erg leave-Dist.Past.Nzr take-Npast-1A
 ‘I’m taking what Davy left behind (>1 month before speech act).’
 ‘I will take what Davy left behind (>1 month before speech act).’
 *‘I will take what Davy will have left behind (>1 month before I take it).’

Because nominalizations are embedded in main clauses that contain a main verb that is also inflected, three sequential time spans may be coded in the sentence, bound by the following temporal reference points: i) the actual event; ii) detection of the evidence; iii) relative deictic reference point (established by the inflection of the main verb, and any context in the main clause); and iv) the speech act. For example, in sentence (197), -ac refers to the (short) period of time between when the event is calculated to have happened and the moment when the evidence was first detected; -boed refers to the (short) period of time between the moment when the evidence was first detected and the moment when the referent of the nominalization is relevant to the sentence (the moment when the speaker saw tree again); and -onda (on the main verb) refers to the (long) period of time between the relevant moment and the moment that the sentence was uttered.

(197) deibi-n uncate cuësh-ac-boed is-onda-mbi
 Davy-Erg paddle remove.from.tree-Infer-Past.Nzr see-Dist.Past-1A
 ‘I saw (the tree) from which Davy removed [a buttress root to make] a paddle.’

5.6.1.3 Conjecture

There are two conjecture suffixes, -ash and -nēdash.²⁴

<u>-ash</u>	Recent Past Conjecture	immediate past to about one month ago
<u>-nēdash</u>	Distant Past Conjecture	more than about one month ago

These parallel the inferential inflectional suffixes, -ac and -nēdac, and the experiential inflectional suffixes, -o and -onda, in terms of the one-month cut-off point, but there is no conjecture suffix corresponding to the remote past experiential and inferential suffixes (Table 5.16)²⁵.

Table 5.16. Comparison of past tense/evidentiality suffixes.

Tense	Experiential	Inferential	Conjecture
Recent Past (<1 mo. ago)	<u>-o(-Ø/-c/-sh)</u>	<u>-ac</u>	<u>-ash</u>
Distant Past (1 mo.-50 yrs. ago/infancy)	<u>-onda(-Ø/-c/-sh)</u>	<u>-nēdac</u>	<u>-nēdash</u>
Remote Past (>50 yrs. ago/infancy)	<u>-denne(-Ø/-c)</u>	<u>-ampic/-nēdampic</u>	<u>-nēdash</u>

What is meant by “conjecture” here is that the speaker wishes to report the occurrence of an event or state that he did not witness, did not hear about from somebody else, and for which there is no resulting evidence. For example, if a dog is missing, the owner might conjecture that a snake bit it or a jaguar ate it. As might be expected, the nature of conjecture as a source of knowledge is often associated with uncertainty; however, the speaker does not necessarily have to be uncertain about the event to use the conjecture markers. For example, in (148), the speaker can feel completely sure that

²⁴ Morpheme line gloss abbreviations: -ash ‘Conjec’; -nēdash ‘Dist.Past:Conjec’

²⁵ Looking at Table 5.16, it becomes very tempting to segment out -nēd as meaning ‘Distant Past.’ However, it is not very useful to do so, considering that nēd does not seem to add to the meaning of -nēdampic, and that it cannot be used productively with other past-tense suffixes (e.g., *nēd-o, *nēd-denne). Rather, I recognized nēd (and possibly nda in -onda) as a formative, and point out that it most likely was a productive morpheme historically.

Miguel Grau (a Peruvian naval hero) died because he lived a long time ago, but the speaker did not see him die, has no evidence of his death, and did not hear or read about his death.

- (198) miqued cadau uënës-nëdash 'Miguel Grau is dead.'
 Miguel Grau die-Dist.Past.Conjec lit. 'Miguel Grau has died long ago.'

Additionally, the fact that -ash and -nëdash can occur with the uncertainty marker -chit (§5.5.10) without being redundant supports the analysis that these suffixes mark source of knowledge, rather than level of certainty.

We find that unlike the experiential and the inferential suffixes, the conjecture suffixes only occur in one environment: as the sole inflection on a finite verb (199 & 200).

- (199) në-bi poshto daëdpatsëc-quo ic-an-ash
 now-Emph woolly.monkey few-Aug be-Incep-Conjec
 'Now there has started to be very few woolly monkeys.'

A-I 052 poshto 30

- (200) pia-n ënden se-shun pe-nëdash matses-n
 arrow-Inst before pierce-after:S/A>A eat-Dist.Past:Conjec Matses-Erg
 'Before, a long time ago, Matses used to kill them with arrows and then eat them.'

A-I 052 poshto 28

The time span that is referred to by the suffixes is bounded by the actual occurrence of the event (as estimated by the speaker) and the report of the event. Unlike with the experiential and inferential suffixes, there is no clear detection event since neither was event witnessed nor was any evidence found (nor was it told by someone else). One could posit that the detection takes place when the person conjures up the idea that the hypothetical event took place, but the only motivation for such a claim would be

to make -ash and -nēdash fit nicely into Figure 5.2. Actually, the conjecture suffixes are more accurately described as fitting into Figure 5.2 as illustrated in Figure 5.3:

← Past	(i) event	(ii) detection/beholding	(iii) report	Future →
:	<u>-ac</u>	:	<u>-o</u>	:
:	<u>-nēdac</u>	:	<u>-onda</u>	:
:	<u>-ampic</u>	:	<u>-denne</u>	:
:	<u>-nēdampi</u>	:		:
:		<u>-ash</u>		:
:		<u>-nēdash</u>		:

Figure 5.3. Relationship between tense/evidentiality markers and temporal reference points.

At this point we can make a generalization about past tense inflection. Past tense inflections involving a single suffix involve the neutralization of the detection temporal reference point (point ii). The use of a lone experiential suffix neutralizes the detection reference point by making it co-extensive with the event reference point ($i + ii \rightarrow i$). The use of a lone inferential suffix neutralizes the detection reference point by making it co-extensive with the report reference point ($ii + iii \rightarrow iii$); and the use of the conjecture suffix neutralizes the detection reference point by eliminating it altogether from the equation ($ii \rightarrow \emptyset$).

5.6.1.4 Hearsay

When one wishes to report an event that he has learned about by word of mouth, the honest way to relate it is through direct quotation using one of two quotative verbs, -que ‘say (Intransitive)’ and ca ‘tell, say to (Transitive)’ (201-203; §12.5.1).²⁶

²⁶ Some data suggest that distant past events that could only have been learned about by hearsay, but the specifics of the hearsay event (e.g., who said it and when) are not easily recalled, are sometimes related using the inferential marker, -nēdac, but I need to look further into this to be sure.

- (201) [adashic nid-o-bi] que-onda-sh tsësio mēdin-bo
 then go-Past-1S say-Dist.Past-3 old.man deceased.person-Pl
 “After that we moved on,” said the now-deceased old men.’

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- (202) cun buchi-n [debi-n na-o-sh] ca-o-sh
 1Gen older.brother-Erg Davy-Erg do-Past-3 say-Past-3
 ‘My brother told that Davy did it.’

- (203) [dēdma-mbo ic-e-c] que-onda-sh
 weak-Aug be-Npast-Indic say-Dist.Past-3
 ‘They say [lit. said] that it is too weak.’

A-I 007 acte pinchuc 05

In English, the sentence in (201) might be incorporated into the text just as easily as *Then the now-deceased old men moved on*, but in Matses the quotative construction is required because the speaker learned about this event by hearsay. Similarly, in English we would have the choice of relating (202) as *Davy did it*, without revealing the source of knowledge. And (203) would likely be related in English as *They say it is too weak* or even *It is too weak*.

Although hearsay is not formally in paradigmatic contrast with the evidential morphology described above (i.e., quotative verb vs. inflectional suffixes), it is functionally in paradigmatic contrast with the other forms of reporting past tense events in that information about past events must be categorized as learned about through one of four sources of knowledge: i) experiential, ii) inference from resulting evidence, iii) conjecture, or iv) hearsay. It is worth noting that the quoted verb and the quotative verb may both be inflected with past tense inflections, thus even hearsay is qualified by evidential morphology:

(204a) <u>nid-o-sh</u> <u>que-ash</u> go-Past-3 say-Conjec 'He probably assumed that he left.' [quoted person saw person leave]	(204b) <u>nid-ash</u> <u>que-o-sh</u> go-Conjec go-Conjec 'He said that he probably left.' [speaker heard quoted person speak]
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5.6.1.5 Mythical and historical past

Myths and stories that occur before a person is born, which normally must be learned about by hearsay and are generally common knowledge, are related using a special construction that combines inflectional morphology and quotation. The most common is for the main verb in the quoted speech to be inflected with -pac, which is segmentable as a combination of the topic continuity suffix -pa (§5.5.9), which is common in irrealis situations, and -ac, which is formally identical to the “Recent Past: Inferential” inflection, but here there is no inference, and the time span is very remote, not recent, so I assign it a homophonous/polysemous meaning: ‘Narrative Past.’ Most commonly, then, this -pac-inflected sentence is embedded in a quotative clause with the Distant Past Experiential suffix -denne, as in (205).²⁷

(205) <u>matses-n</u> <u>cun</u> <u>tita</u> <u>bed-pa-ac</u> <u>ca-denne-c</u> Matses-Erg 1Gen mother grab-Comment-Narr.Past say-Rem.Past-Indic <u>ubi</u> <u>usun-sho</u> 1Abs be.pregnant.with-when:S/A/O>O 'They tell that Matses captured my mother while she was pregnant with me.'	K-XXI 007 dēmushbo 02
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Each old man that I have worked with seems to have his own signature style for narrating myths, some generally use -pa-ac others just -ac (206). And some regularly further embed the quotative sentence into another quotative clause, as in (206), and as can be seen in this same example, -pa is not obligatory.

²⁷ Once, when telling some Matses the “Little boy who cried wolf” fable, they kept on correcting me, instructing me to end all the sentences with -pac cadennec.

- (206) iscu-n bacuë tësh-nu que-ec dectato-ac
 cacique-Gen offspring pull.off-Intent:1 say-while:S/A>S climb.up-Narr.Past
ca-denne-c que-onda-sh cuëte ise-n
 say-Rem.Past-Indic say-Dist.Past-3 dicot.tree smooth-Loc
 ‘Saying, “I’m going to pull out some cacique (bird species) chicks,” he climbed
 up, they tell, (up) a smooth trunked tree.’

XXII 005-001 iscun bacuë

Also, the quotative sentence is sometimes not used (207), and the historical present is sometimes intermixed into the myths and historical accounts. But the prototypical sentence in a myth or historical narrative is like (205), with -pac cadennec.

- (207) uesnid uin-sho tantia-tuid-pa-ac
 curassow breathe-when:S/A/O>O hear-stop-Comment-Narr.Past
 ‘He stopped and heard the curassow as it breathed.’

5.6.1.6 Evidential distinctions for first-person subjects

The notion of inferring an event from resulting evidence is quite reasonable for third-person subjects. We find in Matses that inferential statements almost always have a third-person subject. It can be a bit impolite for referring to the second-person, but this is not problematic (208a). However, for the first person, it requires that the person not be fully aware of his actions, as when the speaker was drunk (a new activity in Matses culture), sleepwalking, etc. (208b).

- | | |
|-------------------------------------|--|
| (208a) <u>mimbi</u> <u>ucbud-ac</u> | (208b) <u>umbi</u> <u>ucbud-ac</u> |
| 2Erg vomit-Infer | 1Erg vomit-Infer |
| ‘It looks like you vomited.’ | ‘It appears that I vomited (e.g., while drunk).’ |

With perception verbs, the distinction between experiential and inferential is trivial for third-person subjects (209), but troublesome for first-person subjects. What we find is that perception verbs inflected with -ac (and less frequently with -nëdac) with first-person

subjects usually simply marks past perfect aspect, and thus are an exception in that they do not really fit into the obligatory evidential system for past tense (210-212).²⁸

- | | |
|--|--|
| (209a) <u>tantia-o-sh</u>
understand/listen-Past-3
'He understood/heard' | (209b) <u>tantia-ac</u>
understand/listen-Infer-
'He must have understood/heard.' |
| (210) <u>umbi tantia-ac</u>
1Erg listen-Infer
'I have heard that already/before.' | (211) <u>pictsa tanambi</u>
<u>pictsa tan-ac-mbi</u>
pizza try-Infer-1A
'I have tried pizza.' |
| (212) <u>isa-uid-bi</u> <u>is-ac-mbi</u> <u>ani-uid-bi</u>
porcupine-only-Emph see-Infer-1A mother-only-Emph
'I have only seen the porcupine itself, only the mother.' | |

A-IV 041 isa 17

Thus, perception verbs inflected with -ac (or -nēdac) fall outside of the evidential system, as no evidential distinction is made (rather, a past perfect reading obtains). The only other case of past inflections not coding evidentiality likewise has to do with -ac and first-person subjects: as direct answers to questions, -ac may be used as a neutral recent past inflection for the first person (without an overt first-person pronoun.) This could be seen as an idiomatic use of -ac, and it represents one of the few cases where a first-person pronoun/enclitic is not required in a finite clause (in fact, a first-person pronoun/enclitic cannot occur in these abbreviated responses; see section 5.6.5 for a comparable example).

- (213) pe-ac '(Yes,) I ate/have eaten.'
eat-Infer

The big picture, as I see it is as follows. The use and meaning of the experiential suffixes is fairly straight forward: they are used when the speaker directly experiences the event. The conjecture suffixes are likewise fairly straight forward: they are used when a

²⁸ Note in (211) that when first-person enclitics are cliticized to -ac, the /c/ is deleted.

statement must be made based on a lack of knowledge. The inferential suffixes, then would be sort of the default past tense inflections. With third-person subjects, where the event occurred during the speaker's lifetime, the evidential space is fairly neatly divided among these three groups of inflections (and quotation), but with first-person forms, narrative and mythical past, ancient habitual activities, etc., where evidential distinctions are difficult or not relevant, inferential suffixes are used as a default. The irregular patterns associated with -ac and the other evidential forms and this proposed default status, I suspect, stem from inferential suffixes being the older past tense forms.

5.6.1.7 Evidentiality vs. epistemic modality

Table 5.17 summarizes the evidential distinctions that the language makes.

Table 5.17. Summary of markers composing the Matses evidential system.

	Present	Recent Past	Distant Past	Remote Past	Inaccessible Past
Experiential	<u>-e</u>	<u>-o</u>	<u>-onda</u>	<u>-denne</u>	
Inferential		<u>-ac</u>	<u>-nēdac</u>	<u>-ampic/-nēdampic</u>	
Conjecture		<u>-ash</u>	<u>-nēdash</u>		
Mythical/Historical					<u>(-pa)-ac (cadennec)</u>

Hearsay: direct quote + quotative (<u>ca</u> or <u>que</u>) + any experiential or conjecture suffix					

What I have found is that the evidential meanings associated with -o, -ac, -ash, etc. are present in all contexts (except for the first-person perception verb constructions illustrated in the preceding section), i.e., their meanings have not been extended into modal categories, like certainty, mirativity, etc. Thus, in Matses we have the opportunity to observe the characteristics of an evidential system and an epistemic modality system independently from one another. The following are the associations that I have found:

1. Some uncertainty markers (-chit ‘Uncertainty,’ ada/-da ‘Uncertainty’ and ba ‘Dubitative’; §§5.5.10, 9.4.1, 9.4.2) can be used in any tense, but evidential distinctions are restricted to past tenses.
2. Inflectional suffixes that carry an uncertainty meaning (e.g., -mane ‘Future: Potential: 1,’ -nui ‘Nonpast: Uncertainty: 3’) do not occur for past tenses.
3. Conjecture inflections cannot be used with first-person subjects, and inferential inflection are unusual and irregular with first-person subjects.
4. The uncertainty marker (-chit) is not semantically associated with finite verbs, i.e., it always refers to an explicitly mentioned noun or adverb that is marked with a focus suffix, or, if there is no marker, it refers to something that is not coded linguistically; the evidentiality markers are associated exclusively with the verb.

The first characteristic is not surprising, since we would not expect speakers of a language to make evidential distinctions about future events, i.e., distinctions like the following seem unlikely: “I will see him die.” vs. “I will infer that he died/I infer that he will die.” Of course, cases of seeing the future would work, and some people may believe that they can infer the future, but these are exceptional cases.²⁹ Evidential distinctions are much more useful for reporting past events than for talking about future events. The second characteristic is also not unexpected, considering that future events and are not realized and therefore associated with uncertainty. The third characteristic is also not surprising, considering that one generally does not require inference, reports from others, or conjecture to find out about one’s own past actions. Intense drunkenness or sleep walking would make inferring and speculating (and learning from hearsay) about

²⁹ Foretelling the future is not part of Matses culture. They do believe that dreams indirectly reveal potential future dangers (e.g., a woman in a man’s dream represents a snake, so a man who dreams of a woman should not go hunting that day, lest he is bitten by a snake). They also believe in omens that foretell/cause future unwanted events (see Fleck 2001 and §4.7.4.1).

one's past actions logical, but the fact that the Matses don't permit speculation at all (and permit inference with only subset of verbs) with first-person subjects indicates that there are grammatical restrictions rather than just logical ones. The motivation for the fourth observation is not evident to me at this point.

5.6.2 *Nonpast tenses and present habitual inflections*

There are two suffixes, -e and -enda, both Type 1 inflectional suffixes (i.e., they must be followed by a person agreement suffix or a pronominal enclitic), that can be considered nonpast tense markers because they can refer either to future events or to presently ongoing or generic/habitual events/states. A third (Type 1) nonpast suffix marks conditional aspect: -tsia 'Nonpast: Conditional.' Three (Type 2) suffixes, -quid 'Present: Habitual,' -paid 'Present: Habitual' and -esa 'Negative Habitual' are restricted to generic/habitual events with usually a third-person subject. Two other (Type 2) suffixes mark nonpast: -nui 'Nonpast: Uncertainty: 2/3' and -pashun 'Nonpast: Desiderative: 2/3.'

5.6.2.1 *-e and -enda 'Nonpast'*

The suffix -e, despite coding a variety of notions, is easier to understand (for the non-Matses) than is -enda. One function of -e was already described in section 5.6.1.2 in its role in the evidential system. The suffix -e only has evidential meaning ('Experiential') when referring to a present non-habitual/non-generic event/state, which, since none of the inflectional suffixes makes a perfective-imperfective distinction, in principle could be perfective (e.g., punctual; 214, first reading); however, in practice, it is only used with evidential function to refer to a progressive (i.e., ongoing) event that is being beheld at the moment of the speech act (214, second interpretation & 215).

- (214) tonca-e-c ?‘He shoots (once, as speaker hears).’
 shoot.gun-Past-Indic ‘He is shooting (multiple shots, as speaker hears)’
 ‘He (can/always) shoots.’
 ‘He will shoot.’
- (215) ano-bi-da diad-e-Ø papa ca-onda-sh
 there-Emph-Uncert hang-Npast-Interr:1/2 father say-Dist.Past-3
 ‘He asked him, “Are you hanging there (in your hammock), father?”.’
 + K-XXII 007 chema 066

The present habitual reading (though habitual is technically an imperfective aspect) and the future reading can refer equally to perfective (e.g., punctual) or imperfective (e.g., iterative, durative) aspects, and have no implications about the source of knowledge (214, third and fourth readings; 216 & 217).

- (216) në-mbo-bi-da mi-ben-tsëc-bi ush-e-Ø
 here-Aug-Emph-Uncert 2-alone-Dim-Emph sleep-Npast-Interr:1/2
que-onda-sh
 tell-Dist.Past-3
 “‘Are you going to sleep here alone?’” he asked me.’
 + K-XXII 010 chema 099
- (217) inchësh-n-uid-bi tsauesamë capu-e-c
 dark-Loc-only-Emph giant.armadillo locomote-Npast-Indic
 ‘The giant armadillo walks around only at night.’
 A-I 049 tsauesamë 07

An additional use of -e is “historical present”:

- (218) titado-Ø pe-quid cho-sho
 peach.palm-Abs eat-Agt.Nzr come-when:S/A/O>O
cuesunne-shun-bidan-e-c
 kill-Appl-go.do.go:Tr-Npast-Indic
 “‘As the ones eating peach palm fruits are coming, we kill them and then keep on going’.” [historical present]
 + K-XXII 014 chema 137

As opposed to -e, which is spoken in a “matter of fact” sort of manner, the suffix -enda, when used in the first person, indicates that the speaker wants to perform an action, but wishes to clear it with the hearer first (219 & 220).

(219) nid-enda-bi ‘I’m leaving [okay?/or shouldn’t I?].’
go-Npast-1S

(220) adnubic utsi chido umbi nidte bed-enda-c
meanwhile other woman 1Erg leg grab-Npast-Indic
‘Meanwhile, another woman (says), “I shall take a [peccary] leg (okay?)”.’
G-XV 001 shēcten 30

This inflection is often just a form of politeness since in many cases the hearer is not expected to say no. In other cases, where the hearer might say no, there is not a sense of permission or control, but more of a consultation as to adequate behavior or synchronization with the hearer (221 & 222b).

(221) isun-enda-bi
urinate-Npast-1S
‘I’m going to urinate (is it okay to do it here?).’
‘I’m going to urinate (perhaps you have to go too, and then you go can go outside with me and then I won’t have to go out in the dark alone).’

(222a) nē-bi nid-e-bi
now-Emph go-Npast-1S
‘I’m leaving now.’

(222b) nē-bi nid-enda-bi
now-Emph go-Npast-1S
‘I’m leaving now (so hurry up if you don’t want to be left behind).’

I overheard the sentence in (223a) spoken by a little boy who was hanging on a rafter pretending to be a two-toed sloth. When I asked his father why the boy did not use (223b) instead, he responded that (223a) implies a request for people who were not paying attention to him to look at him, while (223b) would be appropriate if the hearer was already paying attention to him. So the contrast between -e and -enda could be

boiled down to -e being neutral and -enda requesting some involvement from the hearer.

Note as well that -e is also much more frequently used than -enda.

- | | | | | | |
|--------|--|-------------------|--------|--------------------------------|----------------|
| (223a) | <u>shuinte-mpi</u> | <u>ne-enda-bi</u> | (223b) | <u>shuinte-mpi</u> | <u>ne-e-bi</u> |
| | two.toed.sloth-small | be-Npast-1S | | two.toed.sloth-small | be-Npast-1S |
| | '(Hey look!) I'm a little two-toed sloth.' | | | 'I'm a little two-toed sloth.' | |

When used with the second or third person, -enda does not imply politeness or asking for approval, but simply refers to the future tense, generally with a sense of uncertainty:

- | | | | |
|-------|-------------|-------------------|-----------------|
| (224) | <u>mibi</u> | <u>nid-enda-c</u> | 'You might go.' |
| | 2Abs | go-Npast-Indic | |

It is also used by older speakers as a habitual form when teaching about natural history, etc. with a sense of certainty, rather than uncertainty (225). For some reason younger speakers translate this as future, as in the "literal" translation in (225). It is similar perhaps to the English use of future tense to talk about habitual/generic actions: *A female grizzly with cubs will attack.*

- | | | | | |
|-------|------------------|--------------------|--------------|-------------------------------------|
| (225) | <u>mapictsēc</u> | <u>cani-enda-c</u> | <u>mio</u> | 'Mio palms grow short.' |
| | short | grow-Npast-Indic | palm.species | [lit. 'Mio palms will grow short.'] |

5.6.2.2 -tsia 'Nonpast Conditional'

Another nonpast inflectional suffix, -tsia, expresses conditional mood. The condition can be expressed as an adverbial subordinate clause (the "if clause"; see §12.4.2.11 for conditional adverbial clauses), as in (226), but just as frequently, -tsia occurs with the condition understood and not stated overtly in a conditional clause or elsewhere (227 & 228).

- (226) ue cho-nuc acate-n se-me-tsia-mbi
rain come-while:Diff.Ref tree.toad-Inst pierce-Caus-Npast:Cond-1A
'If rains, I **would** have myself pierced with tree toad poison.'
- (227) ada chido icsa-patsec ic-quid bed-tsia-Ø
Uncert woman ugly-Dim be-Agt.Nzr grab-Npast:Cond-Interr:1/2
'**Would** you take an ugly wife? [i.e., if the opportunity presented itself].'
- (228) aid-n-bi bëui-n matses uëdëshca-tsia-sh
that.one-Erg-Emph tamandua-Erg Matses dig-Npast:Cond-3
dayun-tanquin uëdëshca-tsia-sh bëui-n
embrace-after:S/A>A dig-Npast:Cond-3 tamandua-Erg
'That one, the tamandua [a medium-sized anteater], **would** dig out a piece of a Matses; it would dig out a piece of him after embracing him.' [i.e., if the person got too close]

A-IV 026 bëui 31

The conditional meaning is always accompanied by a sense of uncertainty that the condition will present itself (but not uncertainty that the action will be carried out if the condition presents itself), hence the *would* translation in the above examples and in (170a). Conditional clauses involving more certainty that the condition will come about utilize the neutral nonpast suffix *-e*, instead (229b).

- (229a) istuid-shun cues-tsia-mbi
find-after:S/A>A hit-Npast:Cond-1A
'If I (could) find him, I **would** hit him.' (uncertain or impossible)
- (229b) istuid-shun cues-e-mbi
find-after:S/A>A hit-Npast-1A
'If/When I find him, I **will** hit him.' (certain or likely)

In the vast majority of cases, *-tsia* is used to refer to future events, but as can be seen in (230a), it can be used to refer to the present tense as well. Past counterfactual/conditional statements are made using *-tsen* 'almost' (230b; §§5.5.7, 12.4.2.11). Note that *-tsen* and *-tsia* are incompatible on the same verb.

- (230a) onque-ac-no nid-shun tantia-tsia-sh
 talk-Past.Act.Nzr-Loc go-after:S/A>A understand-Npast:Cond-3
 ‘If he went to the meeting, then he knows.’ (present conditional)
 ‘If he goes to the meeting, he will find out.’ (future conditional)
 ‘If he had gone to the meeting, he would know.’ (present counterfactual)
 *‘If he had gone to the meeting, he would have known.’ (past counterfactual)
- (230b) onque-ac-no nid-shun tantia-tsen-ash
 talk-Past.Act.Nzr-Loc go-after:S/A>A understand-almost-Conjec
 ‘If he had gone to the meeting, he would have known.’ (past counterfactual)

5.6.2.3 Present habitual suffixes

Three suffixes mark present habitual/generic tense-aspect exclusively: -quid ‘Present: Habitual,’ -paid ‘Present: Habitual: 3’ and -esa ‘Negative Habitual.’³⁰ Habitual aspect is hard to relate clearly with any specific tense, since it often implies that the action or state applies to the past, present, and future. Here, I identify these as associated with the present tense because they cannot refer to an event happened only in the past or is expected to happen only in the future. In other words, the condition is that the event is performed habitually or the state holds true during a time period that includes the present moment. But, the impossibility of a habitual/generic action being performed only during the present moment makes these suffixes not true present-tense markers. We note that other than these habitual suffixes’ marginal coding of present, no other inflections code present tense. Therefore, the real tense distinctions in Matses are narrative past, remote past, distant past, recent past, nonpast and future, but not present.

The meaning of these two of these habitual suffixes overlap in part the meanings of -e and -enda (discussed in the preceding section), namely, the present habitual/generic meaning (231 & 232). In fact, it is not so clear what the difference is among -quid, -paid, and -e when referring to habitual actions (233).

³⁰ Morpheme gloss line abbreviations: -quid ‘Hab,’ -paid ‘Hab,’ -esa ‘Neg.Hab’

- (231) aid-bi matses-n canti chësh-paid
 that.one-Emph Matses-Erg bow carve-Hab
 ‘Matses carve those [toncate palms] into bows.’

A-I 018 toncate 03

- (232) aid-bi matses-n canti chësh-quid
 that.one-Emph Matses-Erg bow carve-Hab
 ‘Matses carve those [cuëbun isan palms] into bows.’

A-I 025 cuëbun isan 09

- (233) canti matses-n chësh-e-c ‘Matses carve bows.’
 bow Matses-Erg carve-Npast-Indic

A-XIII 035 canti 02

One difference is that -paid can occasionally carry an implication, as in (234).³¹ There may be other subtle meaning differences to be discovered, but for now it worth pointing out that -paid occurs considerably less commonly than -quid or -e-c in the texts that I have collected or in every-day speech that I have overheard.

- (234) chotac-n pambid bendeua-paid
 non-Indian-Erg meat sell-Hab
 ‘Non-Indians sell meat (so maybe we should, too.)’

The suffix -esa simply marks that some action does not habitually take place (235 & 236).

- (235) budëd ushu ic-ac-no cani-esa
 palm.species white be-Act.Nzr-Loc grow-Neg.Hab
 ‘They [niste ushu palms] do not grow where there are budëd ushu palms.’

A-I 035 niste ushu 03

³¹ This type of implication is typical of the verbal suffix -pa ‘Comment’ (§5.5.9), and this, along with the form of -paid, suggests that this is a fused form, historically involving -pa. However, the only synchronically possible ending would be -aid ‘Patient Nominalizer’ (§4.7.1.2), which is not compatible with -paid, which is a finite verb inflection that is never used as a nominalizer (unlike -quid and -esa; §4.7.7 & 12.2.2).

- (236) inchësh-n capu-esa
 dark-Loc locomote-Neg.Hab
 ‘They [tamarins (small primates)] don’t move about at night.’

A-IV 005 sipi 07

These occur most frequently with third-person subjects, but -quid, -esa, and -paid can occur with first or second-person subjects:

- (237a) ubi ënden isucun-quid
 1Abs early awaken-Hab
 ‘I always wake up early.’

- (237b) ubi ënden isucun-esa
 1Abs early awaken-Neg.Hab
 ‘I don’t wake up early.’

- (237c) ubi ënden isucun-paid ‘Yea, right, I wake up early.’ [sarcastic comment]
 1Abs early awaken-Hab

5.6.2.4 -nui ‘Nonpast: Uncertainty: 2/3’

An uncommon and specialized nonpast suffix is -nui ‘Nonpast: Uncertainty: 2/3.’

This suffix is used when the speaker wishes to indicate that he is unsure about the truth value of the statement. It is used to suggest a possibility. In my experience, it occurs most often in habitual aspect with third-person subjects, and frequently, but not obligatorily, occurs with -pa ‘Comment’ (238).

- (238) mencudu nuen-bi pe-pa-nui
 naked.tailed.armadillo worm-Emph eat-Comment-**Hab:Uncert**
 ‘Perhaps the naked-tailed armadillo eats earthworms.’

However, it can occur in reference to future events and second-person subjects as well (239); sentences inflected with -nui having first-person subjects or referring to past events are rejected in elicitation.

- (239) badiadash mi-ben-tsëc-bi nid-pa-nui
 tomorrow:Intr 2-alone-Dim-Emph go-Comment-**Hab:Uncert**
 ‘You may have to go alone tomorrow.’

5.6.2.5 -pashun 'Nonpast: Desiderative: 2/3'

Desiderative notions are expressed with infinitive clauses with the verb bun (§12.2.6), or with adverbialized clauses using the abilitative/desiderative adverbializer -tiad (§12.3.1), but these are restricted to same-subject situations (e.g., I want to go, He wants to go, *I want him to go). To express the notion of the speaker wanting or wishing that another person do something, the finite verbal inflection -pashun is used (240).

- (240a) acte bacush ac-pashun (240b) acte bacush mibi ac-pashun
 water foam drink-Desid:2/3 water foam 2Erg drink-Desid:2/3
 'I wish he would drink beer.' 'I wish you would drink beer.'
- (240c) *acte bacush umbi ac-pashun (240d) acte bacush ac-me-pashun-i
 water foam 1Erg drink-Desid:2/3 water foam drink-Caus-Desid:2/3-10
 'I wish he would let me drink beer.'

The first-person O suffix, -i, can follow this inflection (240d). (The only other inflectional suffix it can follow is -sh; §5.6.5.) It seems most probable that this is a combination of the suffix -pa 'Comment' (§5.5.9), and the form -shun,³² which occurs as a nonpast desiderative inflection in myths (241).³³

- (241) mibi-shë matses-ua-shun _____ que-pa-ac
 2Abs-Aug person-Vzr:Tr-Desid:2/3 say-Comment-Narr.Past
ca-denne-c _____ que-onda-sh
 tell-Rem.Past-Indic say-Dist.Past-3
 "I wish someone would turn you into a person" (the man) said, they used to tell.'
 K-XXIII 006 iscun bacuë 018

³² The form -shun also occurs (not as a verbal inflection) as an applicative verbal derivational suffix (§§5.5.1, 11.5.3), as a clause-chaining adverbializing enclitic (§12.4.2.2), and as an adverbial event initiation transitivity agreement enclitic (§§7.6.1.2, 8.6.1.2).

³³ mibi-shë is also a form that only occur in myths.

5.6.3 Future tense inflections

The inflectional suffixes that are restricted to the future tense all have in common that they are Type 2 inflectional suffixes (i.e., they have intrinsic person agreement and do not need a position 11 suffix or a pronominal enclitic). Also, all but one contain the formative nu, which is associated with the future tense. None is a straightforward future (comparable to the English will). They express either intent to do something in the near future (-nu; §5.6.3.1), or uncertainty (i.e., ‘potential/perhaps’: -mane, -nunda, -panondac, -nushe; §5.6.3.2).

5.6.3.1 -nu ‘Intention: 1’

The suffix -nu (and its vowel-harmony-conditioned allomorph, -no) indicates the intention of the speaker to perform some activity in the very immediate future (242). Often, the speaker has already begun to perform the preliminary steps of the action (243).

(242) shecten _____ chui-nu ‘I’m gonna tell you about collared peccaries.’
collared.peccary tell-Intent:1

A-I 043 shecten 1

(243) pe-nu ‘I’m gonna eat now.’ [already putting the spoon in the soup]
eat-Intent:1

If one uses this suffix with a spatial deictic suffix (§5.5.3), the implication is not that the speaker will perform the action coded in the verb right away, but that he will set off on the specified path associated with the action right away (244).

(244) pe-tan-nu ‘I’m gonna go eat now.’
eat-go-Intent:1

The suffix -nu is one of the most commonly used inflections in Matses discourse. Often, it is used to refer to what you are obviously going to do as a form of greeting or polite

address. For example, when you are walking toward the river to bathe and happen upon another person on the path, you would say (245a), and the other person will reply (245b).

(245a) nes-tan-nu 'I'm going to bathe.' (245b) ai nes-tan-Ø 'Yes, go bathe!'
bathe-go-Intent:1 yes bathe-go-Imper

Or, if you get to the river and someone is bathing there, you say (246a), and the other person responds with (246b).

(246a) nes-nu 'I'm gonna bathe.' (246b) ai nes-Ø 'Yes, bathe!'
bathe-Intent:1 yes bathe-Imper

In the above examples, -nu could be glossed as 'Immediate Future,' considering that these references are to actions that are obviously going to be (and may have already started to be) carried by the speaker. However, in other cases, like (247), -nu expresses more of an intention to immediately perform an action, but which is contingent upon another person's action (the lighting of the torch), and therefore is not a simple future tense. And, in (248), the intended action was not carried out at that time.

(247) tabote tabo-Ø is-nu abentsēc-uid-bi cuēd-e-c-que
torch light-Imper see-Intent:1 one-only-Emph call-Npast-Indic-because
"Light the torch! I want to see because only one answers".'

+ K-XXII 007 chema 069

(248) aid-bi chud-nu ca-ac bacuē-bo-n
that.one-Emph copulate.with-Intent:1 say-when:O>S/A child-Pl-Erg
chud-tiapi-mbo ic-e-bi min bacuē utsi-da-bi
copulate.with-Neg.Abil-Adjzr be-Npast-1S 2Gen child other-Uncert-1S
ne-e-Ø que-onda-sh
be-Npast-Interr:1/2 say-Dist.Past-3

'When I told that one [the speaker's newly-kidnapped wife], "I'm going to have sex with you now," she responded "I won't have sex with children, do you think I'm your age-mate or something?" she said.'

+ K-XXII 015 chema 150

While immediacy of the action is usually part of the meaning of -nu, sometimes it is used to refer to an action that cannot physically take place at the moment. So in (249), where the speaker's daughter is many days away, as is the interlocutor's house, the immediacy of the action is not possible, but the speaker, wishing to persuade the hearer, attempts to impart a sense of things already being in the works in terms of sincere intention and commitment (i.e., the betrothal as opposed to handing over the bride, and plans to visit their village as soon as possible).

- (249) cuen-enda inchësh-n cuen-enda min shubu is-nu
 run.off-Neg.Imper dark-Loc run.off-Neg.Imper 2Gen house see-Intent:1
cun champi mibi mene-nu ashic min champi umbi
 1Gen daughter 2Abs give-Intent:1 then 2Gen daughter 1Erg
bed-e-c ca-onda-sh matses-n
 take-Npast-Indic say-Dist.Past-3 Matses-Erg
 ‘‘Don't run off! Don't run off at night! I plan to see your house; I'm going to give you my daughter, and then I'm going to take your daughter,’’ the Matses told them.’

+ K-XXII 006 chema 062

Another common use of -nu is in hortative constructions (250 & 251).

- (250) nid-nu nid-Ø ‘Let's go!’ (lit. ‘I'm going; go!’)
 go-Intent:1 go-Imper
- (251) abitedi aton matses ad-en chui-ash acate-n
 all 3Gen Matses like.that-Manr:Tr tell-after:S/A>S tree.toad.poisn-Inst
se-ad-nu na-Ø que-ash se-ad-quid
 pierce-Pass-Intent:1 do-Imper say-after:S/A>S pierce-Pass-Hab
 ‘After notifying all their relatives like that, after saying ‘let's have ourselves pierced with tree toad poison,’’ they have themselves pierced.’

A-XIII 019 acate 25

The suffix combination -bo-nu ‘Prior-Intention: 1’ (pronounced [bo.no] due to the vowel harmony), is used in a very similar fashion to -nu, to such an extent that speakers often claim that they are the same. But they are used in slightly different situations. For

example, the difference between (252a) and (252b) is that one could say (252a) while he is already getting up to do it, or while addressing someone while already pulling his penis out of his pants. But (252b) is used when interrupting an activity such as a conversation in a house, or to get someone to stop and wait while walking on a trail. In a sense, it implies sequencing of events, as -bo generally does (§5.5.11). Compare these with similar forms that can be used to refer to the immediate future (§5.6.2.1): with -enda, there is a sense of asking if it is okay before doing it (252c), while with the other forms there is no such consultation. And with -e, there is no implication about the immediacy of the action (252d), as there is with -nu (-bo-nu can be a bit less immediate).

(252a) isun-nu
urinate-Intent:1
'I'm gonna pee (now).'

(252b) isun-bo-nu
urinate-Prior-Intent:1
'(Hold on,) first, I'm gonna pee.'

(252c) isun-enda-bi
urinate-Npast-1S
'I'm gonna pee, (okay?)'

(252d) isun-e-bi
urinate-Npast-1S
'I'm going to pee.' / 'I'm peeing myself.'

To further illustrate this contrast, consider the examples in (253), where the situation involves two people conversing while lounging in hammocks inside a house.

(253a) chimu-bo-nu
defecate-Prior-Intent:1
'(Hold on to that thought,)
I'm going to go poop now.'

(253b) chimu-tan-nu
defecate-go-Intent:1
'I'm going to go poop now.' [polite way
to get visitor out of your house]

(253c) chimu-tan-bo-nu
defecate-go-Prior-Intent:1
'I'm going to go poop now,
and then I'll be right back.'

(253d) chimu-nu
defecate-Intent:1
'I'm going to poop now.' [sounds like
is about to poop right in the hammock]

(253e) chimu-tan-enda-bi
defecate-go-Npast-1S
'Do you mind if I go poop now?'

(253f) chimu-enda-bi
defecate-Npast-1S
'Is it okay to poop now?' [in hammock]

5.6.3.2 Future potential inflections

There are four suffixes that are closely related in meaning in that they mark that some future action could potentially occur. In the senses that I am familiar with, these are always used as warnings or words of caution about a possible dangerous or undesired event. Three of these, -mane ‘Future: Potential: 1,’ -nunda ‘Future: Potential: 3,’ and -panondac ‘Future: Potential: 3,’ evidently differ only in the person of their arguments (with transitive verbs, -nunda can only have a third-person O, and -panondac only a first- or second-person O). The fourth, -nushe ‘Future: Potential: 3) has a more complex meaning.

The suffix -mane signals that there is a possibility that the speaker will accidentally or unwittingly perform or cause an action (254). With transitive verbs, the O can be the second (255) or third person (256).

- (254) uesnid chimadēsh pe-en-quo ic-e-c shēta nēn-mane
 curassow gizzard eat-Neg-Aug Aux-Npast-Indic tooth hurt-Fut:Poten:1
que-shun
 say-after:S/A>A
 ‘(Matses) do not eat curassow gizzards because [lit. after saying:] I might cause my tooth to hurt [lit. ‘I might tooth-hurt’].’

- (255) mibi cues-mane ‘I might accidentally hit you.’
 2:Abs hit-Fut:Poten:1 [e.g., if you stand behind me as I split firewood]

- (256) dachui-an-mane que-quin tantia-e-c
 curse.to.die-Antpass-Fut:Poten:1 say-while:S/A>A think-Npast-Indic
 ‘(The one coming) thinks saying, ‘I (inadvertently) might curse someone to die’

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The suffix -nunda (and its vowel-harmony-conditioned allomorph, -nonda) is quite similar to -mane: the main difference is that with -nunda the subject (S or A) is always third person. When the verb is transitive, the O is always third person (unlike -mane, where the O can be second or third person):

- (257a) nisi-n pe-nunda
 snake-Loc bite-Fut:Poten:3
 ‘(Be careful), a snake might bite (e.g., our son).’
 *‘...bite you/me.’
- (257b) chononda
cho-nunda
 come-Fut:Poten:3
 ‘(He) might come.’

The suffix -panondac is identical semantically to -nunda³⁴ with the exception that the O of -panondac is either a first- or second-person participant (258).

- (258) nisi-n pe-panondac
 snake-Erg bite-Fut:Poten:3
 ‘Shoot, now maybe a snake will bite me.’
 [Said, e.g., as the speaker is going off to hunt on a rainy day.]

The suffix -nushe (and its vowel-harmony conditioned allomorph, -noshe) also expresses future possibility, but it additionally expresses a type future irrealis or counterfactual notion that might be translated into English as “maybe would unless.” In other words, if a suggested precaution is not heeded, there is a potential that the stated event will occur. Another way of putting it is the converse: ‘if you [imperative phrase], this otherwise potential event [the -nushe-inflected verb] will not occur.’

- (259) nisi-n pe-nushe tapucute ta-siuid-Ø
 snake-Erg bite-Fut:Poten:3 shoe foot-put.on.clothes-Imper
 ‘Put on boots because (if you don’t) a snake might bite you.’

This suffix can function as a conjunction, linking the clause to a counterfactual clause (259)³⁵. When there is no counterfactual sentence, some condition is understood, and

³⁴ The two suffixes are obviously formally related, probably with panondac containing the comment suffix -pa (§5.5.9). However, there is no reason why there should be an /o/ instead of a /u/, since there is no /o/ in the syllable preceding /non/. And there is no way to account for the final /k/. So -panondac is not readily synchronically segmentable.

³⁵ Possibly there is a historical connection to the conjunction -que (allomorph -e following consonants, §5.7), which would predict this pattern, but -que cannot occur with clause chaining

furthermore, it is understood the conditional event will not be carried out in order to avoid the potential event (260).

- (260) nisi-n _____ pe-nushe '(I won't go because if I do), a snake might bite me.'
snake-Erg bite-Fut:Poten:3

As I understand it, the gist of it seems to be that with -mane, -panondac, and -nunda, the speaker is acknowledging that something might happen in the future, just as a general word of caution. With -nushe, the warning involves taking specific evasive action to eliminate the possibility of a potential action happening, or it is used as an excuse for not performing an action, to avoid an otherwise possibly dangerous or unwanted situation.

The suffix -nushe indicates that the subject (A or S) is third person. If the verb is transitive, the object is usually the first (260), second (259), or first person plural inclusive (261). If the O is a third person entity, it is such that the first and/or second person are affected to some degree by the event (262).

- (261) cain-ac-que nid-nu cho-Ø se-nushe
wait-Infer-so go-Intent:1 come-Imper pierce-Fut:Poten:3
que-anec cho-onda-sh abitedi
say-after:S/A>S come-Dist.Past-3 all
'After saying, "They're waiting for us, so come let's leave because they may shoot us," they all came.'

+ K-XXII 015 chema 145

- (262) bacuë cuid-nushe que-shun matses-n is-en-quo
child make.sick-Fut:Poten:3 say-after:S/A>A Matses-Erg see-Neg-Aug
ic-quid tsipud
Aux-Hab pygmy.anteater
'Thinking, "It might make [my] children sick," Matses don't look at the pygmy anteater.'

A-IV 025 tsiput 23

suffixes like -nush 'Purpose: S/A>A (§12.4.2.7), and the semantics of -nush + -e/-que don't add up at all. Therefore here I do not analyze -nushe as synchronically segmentable.

This contrasts with -nunda, where the O is always a third person entity, independently of any relationship with first- and second-person participants (Table 5.18). Further, if the O is a third-person participant, the clause cannot occur without a conjoined clause, which would specify the third-person argument.

Table 5.18. Comparison of future potential inflections.

suffix	A	S	O	meaning
<u>-mane</u>	1	1	2/3	perhaps will
<u>-nunda</u>	3	3	3	perhaps will
<u>-panondac</u>	3	3	1/2	perhaps will
<u>-nushe</u>	3	3	1/2/3	perhaps would/because perhaps

The suffixes -nunda and -nushe are words of warning that could be seen as imperative commands telling the second person not to allow something to happen. Thus, it is interesting to compare them to the suffix combination -me-enda ([men.da]) ‘Causative-Negative Imperative,’ which codes this directly (263; cf. 257a & 259).

(263) nisi-Ø pe-me-enda ‘Don’t let a snake bite you!’
 snake-Abs bite-Caus-Neg Imper

The following are the main differences: i) while -nushe and -me-enda can involve the same set of arguments, with -me-enda, the default (i.e., in the absence of an overt pronoun or noun phrase) is a second-person Patient, while with -nushe the default seems to be a first or third person Patient; ii) clauses with -me-enda, being true causative constructions, they have the Causee as an absolutive-marked participant, while with -nunda and -nushe, the (notional) Causee is an ergative-marked participant (Table 5.19).

Table 5.19. Comparison of “words of warning” inflections.

suffix	Causer	Causee	Default Patient	Possible Patients
<u>-nunda</u>	2 (implied)	3 A	3 O	3 O
<u>-nushe</u>	2 (implied)	3 A	1/3 O	1/3/2 O
<u>-me-enda</u>	2 A	3 O	2 O	2/1/3 O

Finally, I note that the with the verb ac ‘kill’ (and perhaps other verbs), a variant of -me-enda is simply -me, but here the second-person Patient reading always obtains, not just as the default (264).

(264) në-mbo-bi ic-ta bëdi ac-me
 here-Aug-Emph be-Imper jaguar kill-Caus
 ‘Stay right here, a jaguar might kill you (i.e., in order to not let a jaguar kill you.)’

5.6.4 Imperatives

There are three imperative suffixes (all type 2 inflectional suffixes), one negative one, -enda, and two positive ones, -Ø and -ta.³⁶ The inflection -Ø (the only case where a verb root may occur unaffixed) is the most general one in that it does not specify whether the first person will be involved in the action or not (265a). The suffix -ta specifies that the first person is not included (265a & 266).

(265a) neshca-Ø
 weed-Imper
 ‘Weed! (e.g., the swidden)’

(265b) neshca-ta
 weed-Imper
 ‘Weed!’ (by yourself, I’m going home)

³⁶ The suffix -ta is sometimes pronounced as -tac, apparently in free variation. One speaker once told me that -tac was emphatic, representing an order as opposed to a simple request, or indicating that the speaker was having to repeat the order. However, this was never confirmed by other speakers, and during later interviews this speaker said there was no difference at all. It is my impression that the glottal stop at the end of this suffix tends to co-occur with emphatic intonation/loud volume, and so perhaps this has to do with the speaker’s perception of a distinction.

- (266) adnubien nid-an nid-an-e-c në-mbo-bi ush-ta
 then (redup=Distr) go-Incep-Npast-Indic here-Aug-Emph sleep-Imper
que-anec
 say-after:S/A>S
 ‘Then, as they leave, they tell me, “(You stay and) sleep right here!”.’
 + K-XXII 013 chema 125

Using -Ø does not imply that the speaker will be involved in the action; it just simply does not specify it. Sentences like (267) show that -ta do not just specify that the second person should act alone.

- (267) min chido-bëtan pe-ta ‘Eat with your wife (but not with me).’
 2Gen woman-Com:A eat-Imper

The negative imperative, -enda, is used to tell a person not to do something:

- (268) ubi ac-enda ca-onda-sh mëdin-bo-n cun tita
 1Abs kill-Neg.Imper say-Dist.Past-3 deceased.person-Pl-Erg 1Gen mother
bed-quid mëdin-bo-n
 grab-Agt.Nzr deceased.person-Pl-Erg
 “‘Don’t kill me,” said the now-deceased ones, the late ones that stole my mother.’
 + K-XXII 005 chema 042

- (269) pos-enda ‘Don’t break it!’ (270) [bwán.ta]/*[bwán.da] ‘Carry it!’
 shatter-Neg.Imper buan-ta
 carry-Imper

The suffix -enda seems analyzable into -en ‘Negative’ (§12.3.2) and -ta, ‘Imperative: Excluding 1.’ However, this does not seem to be a synchronic analysis because the imperative suffix -ta does not change to -da at any morpheme boundary, nor does -enda imply any exclusion of the first person (270). (But see morphophonological alteration between /t/ and /d/ for other suffixes/enclitic; §2.6.1.2). Note as well that there is a homophonous Type 1 inflectional suffix, -enda ‘Nonpast’ (§5.6.2.1).

5.6.5 Person agreement suffixes and pronominal enclitics

As mentioned in the introduction to this section (§5.6), Type 2 inflectional suffixes do not take person agreement suffixes or pronominal enclitics, but rather either have specific subject (and sometimes object) person agreement as an invariable part of their meaning, or they are general/ambiguous with respect to subject person agreement (see Table 5.12). So the morphemes discussed here only apply to the six Type 1 tense suffixes *-o*, *-onda*, *-denne*, *-e*, *-enda*, and *-tsia* (one Type 2 suffix, *-pashun*, takes the first-person object enclitic, *-i*, but not other pronominal enclitics or person agreement suffixes). The subject person agreement suffixes were already listed in Table 5.11 in the introduction to this section, and the first-person pronominal enclitics were already presented in Table 4.7 in section 4.4.1. Furthermore, subject person agreement and pronominal enclitics are discussed in the context of grammatical relations in sections 11.2.5 and 11.2.6, so here I will discuss these only very briefly. Essentially, verb agreement is always with the person of the subject (A or S) of the clause, and only distinguishes first/second person vs. third person³⁷. Paradigms differ depending on the Type 1 inflectional suffix (Table 5.11). Person agreement suffixes also distinguish indicative vs. interrogative modes, but only for the first and second persons. Pronominal enclitics do not vary for mode, and only exist for the first person.

Pronominal enclitics substitute person agreement markers, directly following the Type 1 inflectional suffix (and thereby neutralizing the indicative/interrogative distinction), except for *-i* '3O' which only occurs following the suffix *-sh*

³⁷ Recall that the first-person plural suffix, *nuqui* is inclusive (1+2), so in its dual form does not create a conflict, since first and second person take the same person agreement. However, *nuqui* can potentially mean '1+2+3' (but never just '1+3') and the first-person singular forms (*ubi* and *umbi*) can mean '1+3' (§4.4.1; Table 4.6); in these cases, agreement is with the first/second person, and the third-person is essentially ignored.

'Indicative/Interrogative: 3' or -pashun 'Nonpast: Desiderative: 2/3.'³⁸ Table 5.20

illustrates the different paradigms (cf. Table 5.11 to get a complete picture).

Table 5.20. Paradigm for the verbs nid 'go' and cues 'hit/kill' inflected with -e 'Nonpast' and -o 'Recent Past: Experiential.'

	Indicative		Interrogative	
	Nonpast	Recent Past	Nonpast	Recent Past
person agreement:				
1/2(S/A)	<u>nid-e-c</u>	<u>nid-o-c</u>	<u>nid-e-Ø</u>	<u>nid-o-Ø</u>
3(S/A)	<u>nid-e-c</u>	<u>nid-o-sh</u>	<u>nid-e-c</u>	<u>nid-o-sh</u>
pronominal enclitics:				
1S	<u>nid-e-bi</u>	<u>nid-o-bi</u>	<u>nid-e-bi</u>	<u>nid-o-bi</u>
1A	<u>cues-e-mbi</u>	<u>cues-o-mbi</u>	<u>cues-e-mbi</u>	<u>cues-o-mbi</u>
1O	<u>cues-e-bi</u>	—	<u>cues-e-bi</u>	—
2A:1O	—	<u>cues-o-bi</u>	—	<u>cues-o-bi</u>
3A-1O	—	<u>cues-o-sh-i</u>	—	<u>cues-o-sh-i</u>

Note that person agreement follows a nominative-accusative pattern in that agreement is only with the S or the A, never with the O. Meanwhile, the pronominal enclitics follow an unusual pattern in that they follow a tripartite pattern in some situations (e.g., -o with third-person A and first-person O), and an ergative one in other situations (e.g., with the inflection -e). This is in contrast to the straight ergative pattern for the corresponding full pronouns (Table 4.6; §4.4.1). For example, -bi cannot refer to the O when -o, -onda, and -tsia have a third-person A.

³⁸ It would not be unreasonable to propose that -i is an allomorph of -bi (-i following consonants, and -bi vowels), which exactly the allomorphic patterns followed by the emphatic enclitic -bi (§4.6.8). It is likely that this points to a historical alternation for the absolutive pronominal enclitic; however, this allomorphic pattern would not explain why synchronically why -bi/-i follows rather than replaces -sh, while -bi/-i replaces rather than follows -c (one might expect [eki] from -e-c-bi, rather than simply [ebi]; note that we find the form [eki] as a product of the adverbializing suffix -ec and the emphatic enclitic -bi). Thus, it seems best to consider the pronominal enclitics -bi and -i as independent forms, while making due note of their likely common origin.

- (271a) mimbi bedebi quiondash “‘Now you’re capturing me,” she said.’
mimbi bed-e-bi que-onda-sh
 2Erg take-Npast-1O say-Dist.Past-3

+ K-XXII 011 chema 110

- (271b) debi-n bed-e-bi (271c) mimbi bed-o-bi
 Davy-Erg take-Npast-1O 2Erg take-Past-2A:1O
 ‘Davy will take me (as a wife)’ ‘You captured me/took me (as a wife).’
- (271d) *debi-n bed-o-bi (271e) debi-n bed-o-sh-i
 Davy-Erg take-Past-2A:1O Davy-Erg take-Past-3-1O
 ‘Davy captured me/took me (as a wife).’

5.6.6 -yoc ‘Counter-expectation’

The suffix -yoc is used to indicate what might be considered a type of mode where the utterance is counter to the expectations or beliefs of either the first person or the second person. It is usually accompanied with emphatic intonation and often involves an emotional reaction of the speaker (usually negative).

- (272) chuscaquidioc (273) aton tita chotac neyoc
chusca-quid-yoc aton tita chotac ne-e-yoc
 reprimand-Hab-Counter 3Gen mother non-Indian be-Npast-Counter
 ‘He’s always reprimanding him (but people should not do that.)’ ‘(You may be surprised to learn that) his mother is a non-Indian.’
- (274) chiquin cachina bedayoc (275) choenquio icboc
chiqui-n cachina bed-ac-yoc cho-en-quio ic-boc
 hawk-Erg chicken grab-Infer-Counter come-Neg-Aug Aux-Past:Counter
 ‘Man, a hawk got a chicken after all.’ ‘Shoot! He didn’t come after all.’
- (276) mambi bēmepaboc (277) nideyoc
ma-mbi bē-me-pa-boc nid-e-yoc
 but-1A bring-Caus-Comment-Past:Counter go-Npast-Counter
 ‘But I did send it [e.g., a letter].’ ‘Shoot, he actually *is* going.’

The suffix -yoc can occur following a wide range of inflectional suffixes. When it follows a Type I inflectional suffix, it occurs in place of and instead of the subject person

agreement suffix or the pronominal enclitic (thereby neutralizing any person agreement or interrogative vs. indicative mode distinction). The allomorphy pattern is as follows: -ioc follows consonants (272), -yoc follows vowels (273 & 277), and with the recent past tense suffix -o, there is the suppletive form -boc instead of the expected oyoc (275, 276 & 279). Following -ac or -nēdac, -yoc causes the c to be dropped at the morpheme boundary (274 & 278a).

(278a) chiquin cachina bedpanēdayoc
chiqui-in cachina bed-pa-nēdac-yoc
hawk-Erg chicken grab-Comment-Dist.Past:Infer-Counter
‘Man, a hawk got a chicken (even though I thought someone had stole it).’
[inferred from old scattered feathers, reported at locality of feathers; dismayed].’

(278b) chiquin cachina bedpachoc
chiqui-n cachina bed-pa-ac-boc
hawk-Erg chicken grab-Comment-Infer-Past:Counter
‘Man, a hawk got a chicken (even though I thought someone had stole it, now, how will we stop it from killing again)’ [inferred from fresh feathers and reported elsewhere].’

As can be seen in (278), -yoc is quite compatible with the evidentiality system, and it is often accompanied by the ‘Comment’ suffix -pa to express dismay, or concern or uncertainty about the consequences of the reported event. Because -yoc involves countering some expectation or belief, it often seems to code veridical mode (assertion that the statement is true; -quio and -quimbo can code veridical mode; §5.5.6), but this is not always the case (279). In fact, -yoc can even occur with questions (279, second interpretation). Note that -yoc is incompatible with the uncertainty particle ada (which usually accompanies yes-no questions), and so only interrogative intonation marks these as questions (recall that since -yoc replaces person agreement/mode suffixes, -c, -sh or -Ø, any interrogative vs. indicative distinction is lost from the inflection).

- (279) ma cho-pa-boc
 but come-Comment-Past:Counter
 ‘But he has come.’ (declarative intonation)
 ‘But he has come, hasn’t he?’ (interrogative intonation)

I note that the copular/auxiliary verb ic ‘be’ has a pattern of optional reduction to y ([j]), and also commonly forms contractions with preceding elements (§2.6.8). So one possible internal reconstruction is that post-inflectional morphology was historically part of a complex verb phrase or clause. Speculating: yoc = ic-o-c ‘he/she/it/they was/were’ (as in *He arrived, he did*).

5.6.7 ba/-ba ‘Dubitative’

To orient anyone who may be trying to parse Matses verb words, in included here brief mention of the dubitative particle ba (§9.4.2), which may bind phonologically to verbs. The particle ba occurs as a phonologically independent particle with most inflections (280a), but occurs phonologically attached following the Type 1 suffix -e ‘Nonpast,’ in place of the (position 11) person agreement or pronominal enclitics, in the same slot -yoc appears (280b)

- (280a) ada debi cho-pa-ash ba
 Uncert Davy come-Comment-Conjec Dub
 ‘I’m not sure if Davy has arrived.’

- (280b) ada chopeba
ada cho-pa-e ba
 Uncert come-Comment-Npast Dub
 ‘I wonder if he might come?’
- (280c) *ada chopec ba

5.7 Post-inflectional morphology: conjunction -que ‘so/because’

This position class includes a single suffix that can follow the finite verbal inflections (but not non-finite suffixes). The suffix -que is suffixed to inflected verbs,

making the clause dependent (i.e., requiring an additional clause in the complex sentence), and having a meaning of ‘so’ or ‘because,’ depending on whether the dependent clause precedes (281) or follows (282) the conjoined clause. These conjoined clauses are discussed in more detail in the section on clause coordination (§12.6.1).

- (281) daca nēcquidba dēmushbo bedanombique
daca nē ic-quid-ba dēmush-bo bedan-o-mbi-que
 umm here be-Agt.Nzr-first Dēmushbo.Indians-Pl begin-Past-1A-so
aid-ba na-nu
 that.one-first do-Intent:1
 ‘Umm... This one first, I’ve started [the story about] the Dēmushbo Indians, so I’m going to do that one first.’

K-XXI 009 dēmushbo 18

- (282) shēni-bud-ac-sho padpide-en di bidica-Ø cun
 old-Dur-Infer-when:S/A/O>O again-Tr palm.fiber twist-Imper 1Gen
chiëshēd tēsēdoshe quequin bidicamequid
chiëshēd tēs-ad-o-sh-que que-quin bidica-me-quid
 penis.string pull.off-Antcaus-Past-3-**because** say-while:S/A>A twist-Caus-Hab
aton chido tsēsio-bo-n
 3Gen woman old.man-Pl-Erg
 ‘When it gets old, old men have their wives twist a penis string saying, ‘Twist palm fiber again to make my penis string **because** it has broken”.’

A-XIII 017 chiëshēd 02

Its allomorphy pattern is as follows: -que (/ke/) follows vowels (281) and -e follows consonants (282 & 283), but following /k/, optionally: k + ke → je (284 & 285).

- (283) cun champi bunduaque piush bēchi mētetan
cun champi bundo-ac-que piush bēchi mē-te-tan-Ø
 1Gen daughter get.hungry-Infer-so tortoise fat branch-cut-go-Imper
que-onda-sh
 say-Dist.Past-3

“‘My daughter is hungry, **so** go cut down some piush bēchi fruits!’” she said.’

+ K-XXII 011 chema 104

- (284) tsauesamë-dapan uëdëshcaye mannenda quequid
tsauesamë-dapa-n uëdëshca-ac-que manne-enda que-quid
giant.armadillo-large-Erg dig-Infer-so step.on-Neg.Imper say-Agt.Nzr
matses ne-e-c
Matses be-Npast-Indic
‘Matses are ones that say, “A big giant armadillo has dug here, so don’t step on
(its diggings).’

A-I 049 tsauesamë 17

- (285) cainaye nidnu cho senushe quianec
cain-ac-que nid-nu cho-Ø se-nushe que-anec
wait-Infer-so go-Intent:1 come-Imper pierce-Fut:Poten:3 say-after:S/A>S
cho-onda-sh abitedi
come-Dist.Past-3 all
‘After saying, “They are waiting for us, so come let’s leave because they may
shoot us,” they all came.’

+ K-XXII 015 chema 145

As with -yoc, the allomorphy pattern suggests that historically this suffix may have involved the copular/auxiliary verb -ic (see end of §2.6.8.)

5.8 Non-finite Verbal Morphology

In addition to the verbal morphology discussed so far, we can also talk about non-finite verbal morphology. This morphology consists of the infinitive suffix, -te, and the class-changing suffixes: 27 nominalizers, 5 adjectivalizers, and 20 adverbializing suffixes. In addition to deriving class-changed stems, the class-changing suffixes are the means by which almost all subordinate clauses are formed (i.e., all but the infinitive), and so this morphology is discussed in chapters dealing with the target stem class and in the complex sentences chapter: nominalizers in sections 4.7 and 12.2; adjectivalizers in sections 6.8.2 and 12.3; and adverbializers in sections 7.8.2 and 12.4. Infinitive constructions are discussed in section 12.2.6. So, to avoid repetition, I will not discuss these here. I will only note that non-finite verbal morphology occurs instead of and in the place of the finite inflectional morphology. More precisely, they can be described as

occurring in position class 10 (see Table 5.4), since inferential suffixes can precede some non-finite morphology (e.g., nominalizers, as discussed in §5.6.1.2), and pronominal enclitics can follow adverbializing suffixes (§12.4.5). The topics of inflectional vs. non-inflectional, finite vs. non-finite, and dependent vs. independent verbs/clauses are taken up in section 12.1.1.

5.9 Verb Reduplication

The fourth means of modifying verbs in addition to prefixation, suffixation and encliticization, is reduplication. Reduplicated forms in Matses generally form a single grammatical word but two phonological words, that is, the base and the reduplicand are not phonologically attached (see §2.8 for the phonological details of reduplication in Matses and §3.2.7 for general discussion of reduplication in the language). Prefixes must be reduplicated along with the root (286) and proximal derivational suffixes can optionally be reduplicated together with the verb root (287) (with different semantic effects, as will be illustrated below), while inflectional suffixes (287), non-finite verbal suffixes (286, 288 & 289) and some distal derivational suffixes (288) occur only on the base (the second instance of the root).

- (286) mēnēsh mēnēshshun acate da-ucquid matsesēn
redup mē-nēsh-shun acate da-uc-quid matses-n
Distr hand-tie-after:S/A>A tree.toad body-wipe-Hab Matses-Erg
 ‘After tying up all its hands and feet, Matses scrape the tree toad’s body [to collect the venemous skin gland secretions].’

A-XIII 019 acate 06

- (287) chiuish bacuē chedo cuēstan cuēstanec
chiuish bacuē chedo redup cuēs-tan-e-c
 fig fruit etc **Distr** gather-go-Npast-Indic
 ‘They keep on going to pick fig fruits and similar fruits.’

G-XV 063 cuesban 06

- (288) bĕsto bĕstotsĕcquid tambisĕmpi nec
redup bĕsto-tsĕc-quid tambisĕmpi ne-e-c
 Distr cover-**Dim**-Agt.Nzr spiny.rat be-Npast-Indic
 ‘The spiny rats are ones that repeatedly cover (their den entrances with leaves).’
 A-IV 014 tambisĕmpi 04
- (289) dĕmush usun-quid ad-en dĕbiate shĕcuĕ-n
 nose.whisker insert-Hab like.that:Manr.Tr nose hole-Loc
posh poshcashun
redup poshca-shun
 Distr make.hole-after:S/A>A
 ‘They insert the nose whiskers, after repeatedly piecing many holes in their noses like that.’
 A-XIII 005 dĕmush 05

As mentioned in section 3.2.7, reduplication is not always iconic (i.e., indicating plurality, imperfective action, progressive aspect, iterativity, greater intensity, etc.). With verbs, there are two semantic types of reduplication³⁹: i) counter-iconic reduplication, meaning ‘hastily/incompletely/inadequately’ (reduction/de-intensification of time and/or quality) and always involving reduplication of only the bare root (290); and ii) iconic reduplication, meaning ‘Distributive/Plural/Iterative’ meaning (286-289, 291-293), often involving the reduplication of at least one aspect or directional suffix together with the root (e.g., 287).

- (290a) ac aquec (290b) ush ushosh
redup ac-e-c redup ush-o-sh
 hastily drink-Past-Indic hastily sleep-Past-3
 ‘He drinks hurriedly.’ ‘He slept only a short time.’
- (291) matses isash bĕstid bĕstidquequid bĕchun chĕshĕ
matses is-ash redup bĕstidque-quid bĕchun chĕshĕ
 Matses see-after:S/A>S Distr raise.eyebrows-Hab capuchin.monkey black
 ‘When the brown capuchin sees people, it raises its eyebrows repeatedly.’
 A-IV 046 bĕchun ushu 32

³⁹ Recall from section 2.8 that there are also two *formal* types of verb reduplication: full reduplication (where the entire verb root is reduplicated), and partial reduplication (only for verbs ending in ca or que, where the ca or que are not reduplicated along with the rest of the root). There is no association between the two formal type and the two semantic types of reduplication.

- (292) teshun dadān **bē** bēquid tsindoquin
te-shun dada-n **redup** bē-quid tsindo-quin
 cut-after:S/A>A man-Erg **Distr** bring-Hab stack-while:S/A>A
 ‘After cutting them, men bring [the fronds] making several trips, stacking them.’
 A-I 012 budēd 06

- (293) nidaidēn **bud** bushshun achun mactac
nidaid-n **redup** bud-shun achu-n mactac
 ground-Loc **Distr** descend-after:S/A>A howler.monkey-Erg mud
ac-e-c
 drink-Npast-Indic
 ‘After coming down to the ground one by one, [the howler monkeys] drink mud.’
 A-I 054 achu 32

The ‘hastily’ meaning often involves a criticism of the action (294), but otherwise is straightforward enough, and there is not much to say about it other than that it comes up considerably less frequently than the distributive meaning, and it does not seem to work with some roots, probably due to semantic incompatibility.

- (294) chud chudec ‘He has sex with her hastily (without satisfying her).’
redup chud-e-c
hastily/Distr copulate.with-Npast-Indic ‘He has sex with her all the time.’

The distributive meaning, however, calls for some explanation. First of all, I use ‘Distributive’ as an abstract term to also include ‘Iterative’ and ‘Plural’ meanings. On some occasions, all three meanings could be said to apply to the same instance (e.g., 287) but just as frequently, only one or two of these apply. Which meaning applies is affected by the transitivity and/or semantics of the reduplicated verbs, by any deictic suffixes on the verb, whether the deictic suffixes are reduplicated with the root or not, and sometimes simply by the extralinguistic context in which the sentence is used. In the following paragraphs I will try to tease apart some of these factors.

With intransitive verbs, reduplication can imply that a singular subject is performing an action repeatedly, as in (291), or it can imply that there are multiple subjects performing an action, but not as a collective group, as in (292). Note that (291) could be referring either to as single monkey or a whole troop of monkeys raising eyebrows repeatedly, but (295) must have a plural reading, and, for logical reasons, cannot involve the subjects each performing the action repeatedly.

- (295) aid matses uënësbud uënësbudac
aid matses redup uënës-bud-ac
 that.one Matses Distr die-Dur-Narr.Past
 ‘Those Matses have all died off one by one.’

+ K-XXII 005 chema 050

With the intransitive verb in example (293), while we could imagine that each monkey comes down more than once, this is not the message of the sentence. The message is that the howler monkeys do not come down as a single entity, but they come down in an apparently random and disorderly fashion, with some returning to the trees to keep watch before others come to the ground. When a verb is transitive, the action could be performed iteratively on a single entity (i.e., having a singular O), as in (289), where the object is the nose which is pierced multiple times. Or the transitive verb can have plural objects that are acted on separately during each repetition of the action, such as the limbs of the tree toad (286), or, as in (292), where different stacks of palms are acted upon each time. Reduplication is consistent with plural A arguments, but it never seems to specify this; as such, the plurality is an absolutive category.

Directional (spatial deictic) suffixes have a direct impact on the meaning of reduplication. In Matses, path is often specified using a series of directional verbal suffixes, such as -tan ‘go (and return),’ -uan ‘come (and return)’ (§5.5.3), which may be reduplicated along with the verb to make the reduplication apply to the whole path, rather

than just the action coded by the root. For example, in (296) it is the going-getting-and-returning series of actions that is done repeatedly, rather than somehow grabbing a log iteratively or grabbing many logs on one single trip. Comparison of (297a) and (297b) should make the difference in meaning clear.

- (296) icbon cueste uënēsaid bushcu bedtan bedtanquin
icbo-n cueste uënēs-aid bushcu redup bed-tan-quin
owner-Erg stick die-Pat.Nzr piece Distr grab-go-while:S/A>A
bētīn-e-c
close-Npast-Indic
‘...the owner closes the hole by going (back and forth) and bringing several pieces of dead logs.’

G-XV 001 shēcten 13

- | | |
|--|--|
| (297a) <u>poshcatan</u> <u>poshcatanosh</u> | (297b) <u>posh</u> <u>poshcatanosh</u> |
| <u>redup</u> <u>poshca-tan-o-sh</u> | <u>redup</u> <u>poshca-tan-o-sh</u> |
| Distr make.hole-go-Past-3 | Distr make.hole-go-Past-3 |
| ‘He kept on going back and forth to open holes.’ | ‘He went to open many holes |
| ‘They went one by one to make holes.’ | (and then returned).’ |

With verbs that already have a deictic meaning, such as cho ‘come’ and nid ‘go,’ it seems redundant to suffix them with -uan ‘come’ and -tan ‘go,’ respectively. But, at least with cho, using the root without -uan in a reduplication carries the implication that the subjects have not left yet at the time of the speech act. So, this entails that the subject be plural, since, for example, in (298), a single bat cannot be arriving repeatedly and at the same time be constantly present. In (299a), the plural reading is actually forced upon the subject, considering that personal names are not normally interpreted as plural. To get an iterative reading, one would need to either add a spatial deictic suffix (299b) or an inceptive suffix (299c).

- (298) adashic utsi-bo cho cho-e-c
ad-ash-bi-c utsi-bo redup cho-e-c
do.thus-after:S/A>S-Emph-Separ other-Pl Distr come-Npast-Indic
‘After that, other [bats] keep on coming.’

A-I 043 shĕcten 25

- (299a) debi cho choec ‘Davy (and his friends) are arriving one by one.’
debi redup cho-e-c
Davy Distr come-Npast-Indic

- (299b) debi chouan chouanec (299c) debi choan choanec
debi redup cho-uan-e-c debi redup cho-an-e-c
Davy Distr come-come-Npast-Indic Davy Distr come-**Incep**-Npast-Indic
‘Davy keeps on coming (and leaving).’ ‘Davy keeps on coming back.’

There is an idiomatic use of replication of verbs suffixed with -tan. All the idiomatic uses that I have found associated with idiomatic meaning involve bodily-function roots. The idiomatic meaning, ‘do verb repeatedly in undesirable places,’ always exists side-by-side with the literal meaning ‘go and do repeatedly’ (280).

- (300) debi isuntan isuntanec ‘Davy keeps on going out to pee.’ (literal)
debi redup isun-tan-e-c ‘Davy pees in any (improper) place.’ (idiomatic)
Davy Distr urinate-go-Npast-Indic

5.10 Verbalization

Nouns, adjectives, adverbs, and postpositions can be converted into verbs by two processes. Transitive verbs can be productively created by attaching the verbalizing suffix -ua to nouns and adjectives, which, at least in its productive usages, carries the semantics of ‘make’ (301b & 302b).⁴⁰ And intransitive verbs can be created by simply attaching verbal inflectional morphology to nouns, adjectives, some adverbs, and,

⁴⁰ Recall that there is also the derivational verbal suffix -ua ‘again’ (§5.5.2.5), which is identical phonologically to the verbalizing suffix, so an example like (302b) is actually ambiguous, also possibly meaning, ‘It became red again.’

marginally, to a few postpositions. I call this second process, which is not accompanied by any overt formal sign, “zero-verbalization.”

- | | |
|---|---|
| <p>(301a) [ʃu.bwáʔ] ‘It became a house.’
 <u>shubu-ac</u>
 house-Infer</p> | <p>(301b) [ʃu.bú.waʔ] ‘He made a house.’
 <u>shubu-ua-ac</u>
 house-Vzr:make-Infer</p> |
| <p>(302a) [pjuáʔ] ‘It turned red.’
 <u>piu-ac</u>
 red-Infer</p> | <p>(302b) [pjú.waʔ] ‘He painted/made it red.’
 <u>piu-ua-ac</u>
 red-Vzr:make-Infer</p> |
| <p>(303a) <u>enden-ac</u>
 before-Infer
 ‘He became just like he was before [e.g., poor].’</p> | <p>(303b) *<u>enden-ua-ac</u></p> |
| <p>(304a) ?<u>nuntan-ac</u>
 indoors-Infer
 ‘Now there is an indoors
 [e.g., after making the walls of a house].’</p> | <p>(304b) ?<u>nuntan-ua-ac</u>
 indoors-Vzr:make-Infer
 ‘He made the indoors.’</p> |

Zero-verbalization is quite common and unrestricted with adjectives (302a). With nouns, it is similarly unrestricted, but considerably less common and often requires a special context, due the real-life improbability of some entities coming into existence intransitively (301a). With adverbs, there are grammaticised restrictions to where only a about half of the adverbs can be zero-verbalized (303a). And with postpositions, zero-verbalization carries awkward semantics and is only marginally acceptable if at all for most postpositions (304a).

Zero-verbalization may appear superficially to be a case of inter-class polysemy, as with English *fall*, which is both noun and (intransitive) verb, or English *dry*, which is both adjective and (ambitransitive) verb. In Matses, by contrast, there are at least two major motivations for calling this a verbalization process rather than polysemy. First, the meaning of the newly-formed verb is always predictable: the product of

zero-verbalization is always an *inchoative* intransitive verb meaning ‘to become X’ (305a; cf. 305b formed with an intransitive verb).

(305a) uinsad-o-sh ‘It became scary.’ (305b) dacuəd-o-sh ‘He got scared.’
 frightening-Past-3 be.scared-Past-3

The second main reason for not wanting to call this a case of polysemy is that any non-polysemous verb must be overtly marked with a class-changing suffix (e.g., a nominalizer), to occur in a noun, adjective or adverb syntactic position, and verbs cannot occur in postposition slots at all. For example, all adjectives can occur in attributive constructions (N Adj noun phrases), while verbs cannot. Take for example some inchoative intransitive verbs like neish ‘get mad’ chodque ‘get soft, become infected’ and uimabud ‘get tired,’ which do not have adjectival properties, and even when adjectivalized cannot occur in all adjective syntactic positions. This suggests that what is going on is a synchronically productive, unidirectional process, rather than a pattern resulting from idiosyncratic semantics in the lexicon.

One might nevertheless object to describing some usages as class-changing, particularly in the case of some lexical roots that are used as intransitive verbs as often as they are used as adjectives. Three examples that come to mind are pisen ‘rotten,’ tanun ‘dry’ and sin ‘ripe,’ which mean ‘to rot,’ ‘to (become) dry’ and ‘to ripen’ when suffixed with verbal morphology. One might therefore suggest that due to their high frequency as intransitive verbs, these roots should be listed twice in the lexicon. However, this decision would have no morpho-syntactic basis, and the criterion for how frequently it would have to appear as a verb would involve picking an arbitrary cut-off point. To not be arbitrary, we could list all roots that can be used as inchoative intransitive verbs in the verb lexical class as well as in its own lexical class, but this would then involve most

non-verb roots in the open classes, including most nouns, and would defeat the purpose of classifying roots into lexical classes. Thus, I will adopt the notion of “zero-verbalization” as a useful descriptive tool, acknowledging that it is abstract and its cognitive status is at best questionable.

It is quite likely that the suffix -ua originated historically from a free (transitive) verb meaning ‘make.’ In fact the SIL missionaries have consistently represented this form as a phonologically free word (e.g., Kneeland 1979a). The discrepancy between their analysis and mine could represent a change in the language over the past 20-30 years, but most likely it represents an error in the missionaries’ analysis. Matses speakers, dealing with the contradiction that they hear a single word but SIL pedagogical material writes it as two words, somewhat randomly write -ua as either bound or free forms, as in composed essays in Romanoff *et al.* (to appear). Therefore, it is worth pointing out some of the evidence that it is a bound form. The main phonological evidence lies in the fact that it does not have its own stress pattern, but is stressed depending on whether the final syllable of the preceding word is stressed:

- | | |
|--|---|
| (306a) [bis.té.wa.nú]
<u>běsté-ua-nu</u>
shelter-Vzr:make-Intent:1
‘I’m going to make a shelter.’ | (306b) [da.jún.te.wá.nu]
<u>dayúnte-ua-nu</u>
climbing.ring-Vzr:make-Intent:1
‘I’m going to make a climbing ring.’ |
|--|---|

Furthermore, morphophonological rules apply at the morpheme boundary, even in the slowest speech.

- (307a) [pi.sídʔ] ‘woven palm mat’
 (307b) [pi.sí.r.wa.nú]/*[pi.sídʔ.wá.nu] ‘I’m going to make a woven palm mat.’

This is supported by grammatical evidence: Unlike all other verbs that may compose one-word sentences, -ua cannot occur without the overt noun or adjective that it is

associated with. Also, unlike other verbs, which have free word order, -ua must directly follow the noun or adjective that it is associated with. And unlike other verbs, -ua cannot be class-changed in the absence of the noun or adjective. Furthermore -ua cannot be prefixed; only the noun or adjective it is attached to may be prefixed (308).

- (308a) tēdi titado shēc-pada-ua-quin
 palmwood.spear peach.palm **spearhead-flat-Vzr:make-while:S/A>A**
tēdi chësh-quid matses-n
 palmwood.spear carve-Hab Matses-Erg
 ‘The palmwood spear...they carve the palmwood spear making peach palm wood flat at the head.’ [shēc-/shē- means ‘tooth, beak, pincer’ or ‘spear-/arrowhead’]
 A-XIII 033 tēdi 02

- (308b) *shēc-ua-quin

Example (309) gives some syntactic evidence: the fact that ushu ‘white’ is repeated, shows that the adjective-ua sequence behaves syntactically like a single verb word, otherwise we would not be able to account for the extra adjective in the clause.

- (309) adoac ushën ushumboshë ushuuaquid
ado-ac ushë-n ushu-mbo-shë ushu-ua-quid
 thus-when:O>S/A sun-Loc white-Aug-Aug white-Vzr:make-Hab
 ‘Then, in the sun they whiten them [the arrow canes] very white.’
 A-XIII 034 pia 08

Nouns verbalized with -ua often create ditransitive verbs. The properties of clauses with this type of verb is the topic of section 12.4.2.3.

CHAPTER 6

ADJECTIVES

6.1 Introduction

There are only 58 known adjective roots in Matses (Table 6.1). This would make it a closed class were it not for productive adjectivalization processes. Thus, adjectives are considered here an open lexical class, but keeping in mind that it differs from prototypical open classes like nouns and verbs in that there are few roots. This low number of roots is reflected in the lack of roots coding dimension and speed notions, which are coded instead by adverbs. The paucity of adjective roots is also compensated for by nouns and verbs coding attributive notions (Table 6.1).

The morphological possibilities of adjectives include prefixation, encliticization, and reduplication. The adjectives' repertoire of enclitics is similar than that of nouns and very similar to that of adverbs and postpositions. Adjectives occur in two main types of syntactic positions: as noun modifiers in noun phrases (attributive constructions; e.g., *red deer*), and as independent constituents in copular and similar clauses (predicative constructions; e.g., *the deer is red*). In predicative constructions, adjectives *must* be cliticized with one of a special subset of enclitics ("adjective-modifying enclitics"; §6.6.2), which could be considered the adjectival inflections. These enclitics code intensification or de-intensification, large vs. small size (a sort of "size-agreement" comparable to adjectival gender agreement in Romance languages), and derogatory vs. complimentary.

Table 6.1. Semantic classification of adjective roots (n = 58):

DIMENSION	most are adverbs (e.g., <u>ënapen</u> 'far, tall, long'; <u>nua</u> 'much, large') plus 2 noun phase enclitics : <u>-mpi</u> 'small' and <u>-dapa</u> 'large' (§4.6.2)				
PHYSICAL PROPERTY	<u>tsasi</u>	'hard'	<u>psi</u>	'stinky, rotten'	
	<u>pachi</u>	'soft'	<u>psen</u>	'rotten'	
	<u>padish</u>	'weak, fragile, frail'	<u>bata</u>	'sweet'	
	<u>dëdma</u>	'weak' (e.g., rope)	<u>muca</u>	'bitter'	
	<u>pema</u>	'weak' (potency)	<u>nuë</u>	'delicious'	
	<u>iuë</u>	'heavy'	<u>chimu</u>	'acid'	
	<u>shacad</u>	'light, loose'	<u>cuënu</u>	'sharp'	
	<u>chushi</u>	'rough'	<u>cuëdma</u>	'dull'	
	<u>ise</u>	'smooth, slick'	<u>shodo</u>	'deep'	
	<u>chunu</u>	'slippery'	<u>aspe</u>	'shallow'	
	<u>ote</u>	'tight'	<u>tiquidi</u>	'round'	
	<u>tanun</u>	'dry'	<u>cue</u>	'straight'	
	<u>chucu</u>	'wet'	<u>uinsad</u>	'frightening'	
	<u>chu</u>	'hot'	<u>paë</u>	'painful'	
	<u>daebud</u>	'cold'	<u>bush</u>	'fluffy'	
	<u>sin</u>	'ripe' (fruit)	<u>mado</u>	'bald'	
	<u>uis</u>	'ripe' (palm fruit)	<u>uisac</u>	'elongated'	
	<u>maspud</u>	'ripe' (tuber)	<u>casi</u>	'skinny'	
	<u>shu</u>	'unripe' (fruit)	<u>misin</u>	'thin' (plant, thing)	
	<u>matan</u>	'unripe' (palm fruit)	<u>micsin</u>	'bony' (human/animal)	
		plus many nouns ; e.g., <u>bëdi</u> 'spots, variegation,' <u>daun</u> 'stripe'			
	COLOR	<u>chëshë</u>	'black'	<u>ushu</u>	'white'
		<u>uisu</u>	'black'	<u>sed</u>	'white'
<u>umu</u>		'blue, bright green'	<u>piu</u>	'red'	
<u>tanun</u>		'gray, dull green'			
HUMAN PROPENSITY (also for animals)	<u>uidën</u>	'strong'	<u>unun</u>	'wary'	
	<u>dayac</u>	'hard-working'	<u>uisma</u>	'not wary'	
	<u>bëdad</u>	'fierce'			
	plus many verbs , e.g., <u>nëish</u> 'get mad,' <u>cuishonque</u> 'be happy' and nouns : <u>shonto</u> 'idiot,' <u>chishpi</u> 'coward'				
AGE	<u>chuca</u> 'new'	<u>shëni</u> 'old, worthless'	<u>buntac</u> 'young'		
	plus several nouns , e.g., <u>tsusio</u> 'old man,' <u>macho</u> 'old woman'				
VALUE	<u>bëda</u> 'good, attractive, heathy'		<u>icsa</u> 'bad, ugly, sick'		
SPEED	all are adverbs , e.g., <u>baded</u> 'quickly,' <u>bëdia</u> 'slowly, softly, quietly'				

Despite the fact that adjectives are morphologically simpler than nouns and verbs in terms of having fewer position classes, the description of adverbial morphology is in other ways more complex in that meanings vary depending on multiple interacting factors. Specifically, I have found that the meaning of a morphological process (prefixation, encliticization, or reduplication) is contingent upon the following three variables: i) semantic category of the adjective, ii) syntactic position, and iii) co-occurrence with other morphological processes. A large part of this chapter will be dedicated to sorting out these patterns. While the primary goal of this chapter is to present the adjectives and to describe all their morphological possibilities, its layout is organized around testing Dixon's (1982) hypothesis that semantic subcategories of adjectives are correlated with morpho-syntactic properties that vary within the adjective category. A third concern that comes up throughout the chapter is distinguishing adjectives from similar nouns, verbs, and adjectives. Section 6.2 gives an overview of how adjectives are distinguished from other lexical classes, and then I return to this topic in section 6.10 once all the morphological processes have been described. In section 6.3, I comment on the semantic categorization of adjectives based on Dixon's (1982) classification system (already summarized above in Table 6.1). The morphological possibilities of adjectives can sometimes be understood only with reference to the syntactic environment, so before describing the morphological possibilities of adjectives (prefixes, §6.5; enclitics, §6.6; and reduplication, §6.7), I will provide a very brief overview of adjective syntax in section 6.4, but full discussions of these constructions is reserved for the syntax chapters. In section 6.8, I describe adjectivalization of nouns and verbs, and the grammatical properties of these derived adjectives. Then, I return to the issue of sub-classification of adjectives, this time based on morpho-syntactic properties and see which, if any, of Dixon's (1982) categories are grammatically valid for Matses

(§6.9). Finally, in section 6.11, I summarize the functions of adjectives and adjective morphology. Declassification of adjectives is discussed in other chapters: verbalization in section 5.10 and adverbialization in section 7.8.1. Productive adjective nominalization appears not to exist, but see sections 4.7.1.4 and 4.7.4.2 for two possible cases.

6.2 Distinguishing adjectives from other word classes

Adjectives can be identified in Matses as a morpho-syntactically distinct class of stems. The roots (i.e., underived stems) that share these grammatical properties can be described notionally as concepts expressing qualities and attributes that modify time-stable entities, such as physical property, color, age, value, and human propensity. But here, morpho-syntactic properties rather than semantic characterizations are primary for identification of word class membership. Adjectives exhibit prototype category structure, with core and peripheral members, and no single property being in principle criterial.

No single morphological property can distinguish adjectives from all the other root classes, but adjectives do not share all their morphological properties with any other single class. The morphological characteristics that differentiate adjectives have already been mentioned in the chapters on noun and verb morphology (§§4.2, 5.2), and so I shall mention them only briefly here. Prefixes are limited to nouns, verbs, and adjectives, and so distinguish adjectives from adverbs, postpositions, and particles. Nouns take several noun-phrase enclitics that cannot occur on any other lexical classes (unless they are the final element in the noun phrase), including *-bo* ‘Plural,’ *-mpi* ‘small,’ and *-dapa* ‘large,’ while several adjective enclitics, *-patsēc* ‘Diminutive’ and *-pabi* ‘De-intensifier,’ can also occur on adverbs and postpositions, but not on nouns, verbs, or particles. The diminutive enclitic *-tsēc* occurs on all classes except adjectives and particles. Adverbs and postpositions exhibit adverbial transitivity agreement, while adjectives and the other classes do not. See Table 3.3 for a summary of these morphological distinctions. Also,

roots from all the lexical classes, save particles, can be reduplicated, but depending on the lexical class, reduplication codes different functions or meanings.

Adjectives can also be distinguished from all word classes syntactically.

Adjectives are distinguished from nouns in that adjectives cannot appear as arguments in active sentences (unless part of a noun phrase), cannot be possessed or possessors, and cannot be postpositional objects. Unlike verbs, adjectives cannot compose grammatically complete single-word sentences (but see §6.6.2.7). When modifying a noun in a noun phrase, the adjective must follow the head noun. This contrasts with nouns in that modifying nouns can occur before or head nouns (depending on the noun phrase type; §10.3.5), and adverbs in noun phrase can occur before, after, or apposed to the head noun, depending on the subcategory of adverb. Nouns can occur in copular constructions with the copula ne (1) while adjectives (and adverbs) only occur with the copula ic (2).

- (1) tambisëmpi [maca tanun] ne-e-c 'The water rat is a rat/mouse.'
 small.rodent rat gray be-Npast-Indic [water rat = lit 'gray rat']
 A-IV 015 maca tanun 03
- (2) tanete ise-mbo ic-e-c 'The electric eel is smooth/slick.'
 electric.eel smooth-Aug be-Npast-Indic

One readily applicable means of distinguishing adjectives from adverbs is that adjectives cannot occur as bare roots in copular constructions (i.e., as will be explained below, they must be “inflected” with an adjective-modifying enclitic). Since bare adjectives only occur in noun phrases, where they must follow the head noun, bare adjectives never occur as the first word in a sentence. This distinguishes adjectives as a class from all other word classes. Table 3.3 lists more syntactic distinguishing properties.

Adjectives and verbs are completely different both morphologically and syntactically, but a confounding factor is adjective verbalization. Obviously, when a root

is class-changed into another root, its morpho-syntactic properties change, but with verbalization there is no overt morphology signaling the class change (= zero-verbalization). Zero-verbalized words always become inchoative intransitive verbs, so this helps identify them (§5.10). But one could claim that adjectives are simply a subclass of intransitive verbs, having the ability to behave as intransitive verbs or as adjectives. The problem with such an analysis is that there are many inchoative intransitive verbs (e.g., nēish ‘get mad,’ tasnad ‘coagulate’ and tsēnēn ‘get fat’) that do not have adjectival properties. So, for example, the adjective icsa ‘bad’ and the inchoative intransitive verb tsēnēn ‘get fat’ appear similar in (3) and (4), due to the class changing processes of zero-verbalization (3a) and adjectivalization using and “adjective-modifying enclitic” (4b), but tsēnēn cannot occur as a noun modifier in a noun phrase (5b), unlike a true adjective (5a).

- (3a) icsa-Ø-ac ‘He/It got ruined.’ (3b) tsēnēn-ac ‘He got fat’
 bad-Vzr-Infer get.fat-Infer
- (4a) debi icsa-pambo-ec ic-e-c ‘Davy is being bad.’
 Davy bad-Aug-Advzr:Intr be-Past-Indic
- (4b) debi tsēnēn-pambo-ec ic-e-c ‘Davy is fat.’
 Davy get.fat-Adjzr:Aug-Advzr:Intr be-Past-Indic
- (5a) dada icsa cho-o-sh
 man bad come-Past-3
 ‘The bad/insane man came.’
- (5b) *dada tsēnēn cho-o-sh

Also, adjective-like nouns (like sēdēd ‘stripped pattern’ and pada ‘flatness’) appear like adjectives in some constructions. Particularly, in constructions like (6), since (unlike verbs; cf. 5b) nouns can occur as noun modifiers in NN noun phrases. But, nouns (unlike verbs; cf. 4b) cannot occur in constructions like (7a) (nouns have to be reduplicated to occur as adjectives).

- (6a) mani ushu
banana white
'banana plant with light-colored leaves'
- (6b) mani pada
banana flat
'banana plant with flat leaves'
- (7a) mani ushu-mbo ic-e-c
banana white-Aug be-Npast-Indic
'The banana/banana plant is light-colored.'
- (7b) *mani pada-mbo ic-e-c

The main syntactic difference with dimension adverbs (like nua 'large' or enapen 'long/tall') is that adjectives must be "inflected" with an adjective-modifying suffix to occur in a copular constructions (8), while verbs not have to be (9).

- (8a) icsa-mbo debi ic-e-c
bad-Aug Davy be-Npast-Indic
'Davy is bad'
- (8b) *icsa debi ic-e-c
- (9a) nua-mbo debi ic-e-c
large-Aug Davy be-Npast-Indic
'Davy is very big.'
- (9b) nua debi ic-e-c
large Davy be-Npast-Indic
'Davy is big.'

I continue this discussion at the end of the chapter (§6.10), after having presented the sometimes complex morpho-syntactic patterns of adjectives.

6.3 Semantic classification of adjectives

Many of the morphological processes that will be described below apply only to a subset of the adjective roots, and other processes result in different meanings with different adjective roots. These differences are sometimes a result of idiosyncratic semantics or conventionalized usage particular to some adjective roots, but other morpho-syntactic patterns can be described more efficiently by referring to subcategories of adjectives. As suggested by Dixon (1982), morpho-syntactic properties can be correlated with semantic characteristics of the adjectives. Table 6.1 above lists the all known roots in the adjective lexical class classified using Dixon's (1982) categories,

classed using only semantic criteria. I will refer to these tentative categories when describing the different morpho-syntactic processes that adjectives undergo, and then consider which are grammatically relevant at the end of the chapter (§6.9).

From looking at Table 6.1, we can already see some grammatical patterns that distinguish some of the different semantic classes recognized by Dixon (1982). First, we note that in Matses, there are no adjectives expressing speed, as there are in English—the notions ‘fast’ and ‘slow’ are expressed as adverbs in Matses. Second, we note that in Matses the category of ‘human propensity’ contains few roots (as opposed to English), these concepts being expressed mostly with verbs. By contrast, many ‘physical property’ and ‘age’ notions are expressed as nouns in Matses. And lastly and most surprisingly, we note that ‘dimension’ notions are not expressed by adjectives in Matses. The only case of intra-class polysemy/homophony among the adjectives is tanun ‘dry’/ ‘gray, dull green.’

6.3.1 Color terminology

The listing of color terms in Table 6.1 gave only a very superficial gloss of color terminology. Here, I rectify this by giving a more detailed description:

“basic” color terms:	<u>chëshë</u>	‘black, dark-colored’
	<u>uisu</u>	‘black, dark-colored’
	<u>ushu</u>	‘white, light-colored’
	<u>sed</u>	‘white, light-colored’
	<u>piu</u>	‘red, orange, pink, yellow, chestnut, rich brown’
	<u>tanun</u> ¹	‘gray, dull green’
	<u>umu</u> ²	‘blue, bright green, purple’
prefixed terms:	<u>bësh-piu</u> ³	‘yellow’
	<u>bësh-tanun</u>	‘light gray’
reduplicated terms:	<u>chëshë-chëshë</u>	‘dull brown’
	<u>uisu-uisu</u>	‘dull brown’

¹ Sociolinguistic variation: some speakers restrict tanun to gray, and use umu for all shades of green (and blue).

² Archaic variant: older speakers used to pronounce this ömu.

³ Some speakers use the Spanish borrowings amadichu ‘yellow,’ asud ‘blue’ and bede ‘green.’

	<u>ushu-ushu</u>	‘whitish’
	<u>piu-piu</u>	‘orange, pink, reddish’
	<u>tanun-tanun</u>	‘grayish, Army drab green’
	<u>umu-umu</u>	‘purple, bluish, greenish’
archaic term:	<u>shin</u> ⁴	‘red’

Matses violates some generally-accepted universals about color terminology and classification of colors. For one, one Matses basic color term, tanun ‘gray and dull green,’ is not found in Berlin and Kay’s (1969:2) “universal inventory of exactly eleven basic color categories,” and even if we interpret tanun liberally as the focal color “grey,” it nevertheless violates Berlin and Kay’s (1969) implicational hierarchy of color term evolution (i.e., grey is not expected to occur in the absence of basic color terms like brown and yellow, which Matses lacks). But Matses is only one of numerous languages that have already been shown to be inconsistent with Berlin and Kay’s principles (e.g., MacLaury 1987, 1991; Taylor 1995), so these findings are not so surprising. What I find to be novel and interesting about Matses color terminology is how the Matses talk about color in spontaneous speech. For example, in Matses, the augmentative enclitics -mbo and -quio can designate true or prototypical members of categories designated by nouns, and with adjectives they have a meaning usually translatable as ‘very.’ But with color terms, -mbo and -quio do not refer to central (prototypical/focal) exemplars of the color category, as might be expected (Heider [= Rosch] 1971), but rather to high levels of contrast with surrounding colors or unexpectedly bright tones. Thus, a term like piu-mbo does not specify ‘red’ (the expected prototype of the category), but instead can designate meanings like ‘contrastively yellow’ or ‘unexpectedly orange.’ For example, in (6), the speaker is not indicating that red brocket deer are fire-engine red, but rather that they are a color (reddish-brown) that is exceptional for mammals in general, and unique among

the local terrestrial mammal fauna. There is no morphological means of singling out the English category *red*; speakers can only make comparisons to things like Scarlet Macaws. Thus, other aspects of color may be more relevant to the study of Matses grammar than prototype structure.

- (10) senad piu-mbo-shë ic-quid ne-e-c 'Deer are "very red" ones.'
 deer red-Aug-Aug be-Agt.Nzr be-Npast-Indic

A-I 046 senad 03

6.4 Overview of adjective syntax

It is impossible to describe adjective morphology in Matses without reference to the different construction types that adjectives occur in. These construction types are amply described in the syntax chapter, but it is not necessary to understand all their details before reading this section. So here I will simply list the construction types and point out the features that need to be understood, and refer to the relevant sections where detailed description and illustration can be found (Table 6.2).

Table 6.2. Summary of different construction types involving adjectives.

Attributive adjective phrases:		
Noun-adjective noun phrases	N Adj	§10.3.3
Predicative adjective constructions:		
Copular clauses:		
attributive clause/predicate adjectives	Adj <u>ic</u>	§11.7.2
nominalized/relative clauses	Adj <u>ic-quid</u>	§§10.3.3, 12.2.1
locative clauses	Adj <u>ic-ac-no</u>	§12.2.5
Adverbial adjective constructions	Adj V	§11.8

⁴ In the archaic system, 'yellow' would have been covered by the term ushu, and not shin (unlike modern piu, which also covers 'yellow').

The relevant distinction to be made is between the group of syntactically related constructions that I have labeled “predicative constructions” (although they don’t all always perform a predicative function) and “attributive adjective phrases” (the terms “predicative” and “attributive” are adopted from Bolinger [1967]). Attributive adjective phrases, which I call **noun-adjective noun phrases**, are simply a noun phrase that includes an adjective as a modifier, as in the English *blue bike* (11).

- (11) shubu shēni an-diad-quid cuesban shubu nuntan
 house old under-hang-Hab bat house inside
 ‘Bats hang in **old houses**, inside the house.’

H-XVII 039 cuesban 12

The essential properties of this construction type are that: i) the noun-adjective word order is fixed; ii) unlike Spanish, the noun cannot be elided, as in *La Ø azul es mía* ‘The blue one is mine’; iii) the adjective must modify the noun with respect to an intrinsic and enduring property of the noun, often composing a lexicalized phrase; and iv) adjectives can occur as bare roots (i.e., not cliticized) in these constructions.

The opposing constructions, the predicative constructions, have as a prototype the predicate adjective clause, comparable to the English *The bike is blue* (12).

- (12) senta piu-mbo ic-e-c ‘Uakari monkeys are red.’
 red.uakari.monkey red-Aug be-Npast-Indic

A-I 057 senta 03

Other constructions in this category are non-finite derivatives of this clause type or ones closely related to it. The copular clause can be (participant) nominalized and embedded in a copular clause to serve a predicative function (13), or the nominalization can be used as relative clause to serve an attributive function (14). Or the copular clause can be action nominalized and used as the object of a locative postposition (15).

- (13) uidën-quoio-shë ic-quid bëui ne-e-c
strong-Aug-Aug be-Agt.Nzr tamandua be-Npast-Indic
 ‘The tamandua is a very strong one.’
 A-IV 026 bëui 32
- (14) isitodo cue-mbo ic-quid-n bud-ash abuc maca
liana straight-Aug be-Agt.Nzr-Loc descend-after:S/A>S high rat
 ‘After climbing down a straight vine, the spiny tree rat...’
 A-IV 016 abuc maca 09
- (15) bëda-pambo ic-ac-no poshto nadeque-quid
good-Aug be-Act.Nzr-Loc woolly.monkey bound.through.trees-Hab
 ‘Woolly monkeys jump around where it [the land] is good.’
 1-p56-B poshto 02

A final more complex variant of the predicate adjective copular clause is one where the adjective occurs with a non-copular verb that nevertheless allows the object to assign its property to an entity, usually the subject noun (16). I call these **adverbial adjective constructions** (after Ferris 1993), as in.

- (16) aton bacuë ushu-mbo tuashque-e-c ‘Its flowers bloom white.’
3Gen flower white-Aug bloom-Npast -Indic
 1-p05-B catsuin 06

The essential properties of predicate adjective constructions are: i) the noun (but not the adjective) can be zero-pronominalized; ii) word order is relatively flexible; iii) there is no restriction that the adjective designate a permanent or intrinsic property of the noun they modify (and these never from lexicalized phrases); and iv) the adjective cannot occur as a bare root, but must be “inflected” with an adjective-modifying enclitic (e.g., -mbo/-quoio ‘Augmentative,’ -patsëc ‘Diminutive,’ etc.; §6.6.2).

6.5 Prefixes

Matses prefixes are of two very different sorts. One kind, body-part prefixes, composes a set of 28 prefixes (Table 4.16; §4.5.1), most of which refer to body-parts, providing location or part-whole information. They occur also on nouns and verbs. The other type includes only one prefix, *bēsh-* ‘De-intensifier,’ which occurs productively on verbs (and marginally on nouns), can only occur on two (color) adjective roots.

6.5.1 Body-part prefixes

When an adjective is prefixed, the property designated by the adjective applies only to that part of the entity designated by the prefix; i.e., the prefix simply indicates the physical location that the adjective modifies (17 & 18). The prefix may occur instead of (17 & 18) or in addition to the body part word (19), or the prefix may be left out all together (20a).

- (17) ad-quid tac-piu-mbo ic-tsēc-quid sedudi
do.thus-Agt.Nzr **venter-red**-Aug be-Dim-Hab nine.banded.armadillo
‘That one, the nine-banded armadillo, is yellowish underneath.’
A-I 048 sedudi 14
- (18) bēui-n mapi dē-uisac-quo ic-e-c
tamandua-Gen head **nose-elongated**-Aug be-Npast-Indic
‘The tamandua’s head is long-nosed [i.e., it has an elongated muzzle].’
A-IV 026 bēui 04
- (19) mēcueste mēpu ania-tsēc-quo mē-micsin-quo ic-quid mēcueste
agouti **forearm** small-Dim-Aug **forearm-bony**-Aug be-Agt.Nzr agouti
ne-e-c
be-Npast-Indic
‘The agouti...the agouti is one that has thin and bony front legs.’
A-IV 012 mēcueste 03
- (20a) aton podo umu-mbo ic-e-c ‘Its fronds are green.’
3Gen **frond** grue-Aug be-Npast-Indic
1-p17-B shēcmaucudanmēs 05

As can be seen comparing (20a) and (20b), at least with adjectives, there is no semantic difference between the prefixed and full noun versions, but there is the discourse-relevant distinction that in (20b) the topic is the palm, while in (20a) the topic is the frond. With verbs, there is a more significant syntactic difference (§§5.4.1, 11.5.4).

(20b) pë-umu-mbo ic-e-c 'It is green-froned.'
frond-grue-Aug be-Npast-Indic

Prefixation of unreduplicated adjectives is restricted to color and a few physical property adjectives, and is not so commonly encountered in texts. Prefixation of *reduplicated* adjectives, by contrast, is quite common, and occurs with color and *most* physical property adjectives. Prefixation of reduplicated adjectives will be discussed in some detail in section 6.7.2. In contrast to adjectival enclitics, there seem to be no restrictions or changes in meanings of prefixes based on the construction type.

6.5.2 bësh- 'light'

The prefix bësh- is used commonly on verbs to mean 'lightly' or 'barely' as in to hit someone lightly, or to do something half-heartedly or superficially (§5.4.2). With adjectives, it occurs with only two roots, piu 'red' and tanun 'gray.' The term bësh-piu is almost always associated with the color yellow, but also occasionally to pinkish colors. The term bësh-tanun simply means a lighter shade of gray. Due to the lack of productivity with the other adjectives, including other color adjectives, it is tempting to call bëshpiu and bështanun lexicalized forms, but their semantics are predictable and there is no phonological alteration or other symptoms of lexicalization.

6.6 Adjectival enclitics

The total number of enclitics available to adjectives is meager compared to the verb's repertoire of suffixes (Table 6.3). The only (underived) multi-word adjective phrase that can occur is with the enclitic chedo 'too/et cetera' (position 3 on Table 6.3). All of the enclitics in Table 6.3 occur on other phrase types as well (some on nouns, all on adverbs and postpositions), where they may have multi-word phrases as their domain. Additionally, these occur with adjectivalized clauses (which can be composed of several words; §12.3), with the whole clause as their domain. See section 3.2.3 for more on distinguishing enclitics from affixes.

Table 6.3. Relative positions of adjective enclitic and particles.

	1 (inflection)	2	(3)	(4)	(5)	(6)	7	8	9	10	11
Adj	<u>-mbo/-quio</u> <u>-quimbo</u> <u>-pambo</u> <u>-patsēc</u> <u>-pabi</u> <u>-mbobi</u> <u>-tsēcquio</u> <u>-pa (?)</u> <u>-pen (?)</u>	<u>-shē</u>	<u>chedo</u>	<u>-tsen</u> <u>-ba</u>	<u>-uid</u>	<u>-bi</u>	<u>-di</u>	<u>-en</u> <u>-shenda</u>	<u>-penquio</u>	<u>-da</u>	<u>-mbi</u> <u>-bi</u>

1. Augmentative, Diminutive, etc.
2. 2nd-level Augmentative (follows 1)
3. et cetera/too
4. sequential ordering

5. only (followed by 1 or 6)
6. Emphasis
7. Same (follows 6)
8. Contrast, Mirative
9. Negative
10. Uncertainty
11. Pronouns

As with nouns and verbs, the relative positions of these position classes is not always fixed. One thing that is set is that position 1 enclitics precede all other enclitics, and that no other enclitics may be attached to an adjective without one of these position 1 enclitics. The position 1 enclitics may occur more than once on the adjective (the only

ones that may do so), once after the root, and once following -uid (which must always be followed either a position 1 suffix or the position 6 enclitic -bi ‘Emphasis.’ Other position classes that exhibit some freedom in relative order are enclosed in parentheses in Table 6.3.

Perhaps the most important thing to understand about adjectival enclitics is the contrast between cliticized and bare (= uncliticized, unreduplicated) adjectives. Bare adjective roots are restricted to a single syntactic position: postnominal position in noun-adjective noun phrases (= attributive adjective phrases; 21).

- (21) inchësh-n capu-e-c senad piu
 night-Loc locomote-Npast-Indic deer red
 ‘The red brocket deer walks around at night.’

1-p80-B senad piu 06

By contrast, cliticized adjectives can occur in all syntactic positions available to adjectives, and, in predicative constructions, adjectives *must* be cliticized—in the syntactic positions in (22-24), adjectives cannot occur as bare roots.

- (22a) tambisëmpi-n tacbid ushu-mbo-shë ic-quid
 spiny.rat-Gen venter white-Aug-Aug be-Hab
 ‘Spiny rats’ undersides are very white.’

A-IV 014 tambisëmpi 05

- (22b) *tambisëmpi-n tacbid ushu ic-quid

- (23) cuesban cuëte tanun-quo ic-quid-n da-diad-e-c
 bat dicot.tree dry-Aug be-Agt.Nzr-Loc trunk-hang-Npast-Indic
 ‘Bats hang on the trunks of trees that are dry.’

C-V 016 cuesban 10

- (24) bacuë piu-mbo sin-tsëc-quid tanac ne-e-c
 fruit red-Aug ripen-Dim-Agt.Nzr palm.species be-Npast-Indic
 ‘Tanac palms are ones whose little fruits ripen red.’

A-I 027 tanac 04

The essential point to make is that for an adjective to occur as an independent constituent (i.e., not as just a modifier in a noun phrase), it must be cliticized. The enclitics in question are those in position 1 in Table 6.3, which in this context, serve to mark the predicative relational position. Furthermore, adjectivalized (= reduplicated) nouns and adjectivalized verbs must bear one of these enclitics.⁵ Thus, composing a required position class, we can call these enclitics “inflectional,” and make a distinction from now on between inflected adjectives and uninflected adjectives. The inflectional adjectival enclitics make up the most complex class in terms of their highly context-dependent meaning, the inflectional contrasts they mark and their analyzability, and will be the topic of section 6.6.2. In section 6.6.2, I will only consider the meaning of these enclitics for underived and unreduplicated adjectives, then in sections 6.7 and 6.8, I will consider their meaning with reduplicated and derived forms. In addition to being very common on verbs, position 1 enclitics behave differently than with nouns, adverbs, and postpositions and will receive fairly detailed treatment in section 6.6.2. The other enclitics occur very rarely on adjectives, and they function essentially identically as with nouns, adverbs, and postpositions, so these will receive very brief treatment (§§6.6.3-6.6.8). I recently encountered the enclitic -pen, which seems to mark ‘Contrast,’ and is used in what appears to be a special verbless sentence type; I have tentatively listed it in position class 1 with the inflectional enclitics, but I discuss it separately in section 6.6.2.7. Before discussing the different enclitics, I briefly consider bare adjectives.

⁵ Thus, the ability to occur as a bare adjective in attributive noun phrases like (17) is a ready syntactic test for seeing if a root is a verb or an adjective.

6.6.1 Uncliticized adjectives

Uncliticized adjectives can occur in noun-adjective noun phrases as a simple adjective root (25a), prefixed (25b) or reduplicated (25c).⁶

(25a)	<u>cuesban piu</u>	(25b)	<u>cuesban pë-sed</u>	(25c)	<u>cuesban chëshë chëshë</u>
	bat red		bat wing-white		<u>cuesban redup chëshë</u>
	'red bat'		'white-winged bat'		bat Deintens black
					'brown bat'

Thus, we can talk about **bare adjective roots**, as in (25a), and **uncliticized adjectives** (25a-c). Although adjectives do not need to be cliticized to occur in noun-adjective noun phrases, they can be. This will be exemplified in the next section.

There is one apparent exception to the generalization that bare adjectives occur only in noun phrases. With reduplicated adjectives, the requirement that adjectives bear an enclitic in copular constructions is occasionally relaxed (26).

(26)	<u>cuesban inchëshën</u>	<u>capuquin</u>	<u>aton pete cute</u>	<u>bacuë</u>
	<u>cuesban inchësh-n</u>	<u>capu-quin</u>	<u>aton pete cuëte</u>	<u>bacuë</u>
	bat dark-Loc	locomote-while:S/A>A	3Gen food dicot.tree	fruit
	<u>pachi pachi</u>	<u>ictsëcquid</u>	<u>pequid</u>	<u>nec</u>
	redup pachi	ic-tsëc-quid	pe-quid	ne-e-c
	Deintens soft	be-Dim-Agt.Nzr	eat-Agt.Nzr	be-Npast-Indic
	'Bats are ones that eat their food, little soft fruits, as they fly around at night.'			
	B-VII 035 cuesban 02			

So the generalization is relaxed in terms of *uncliticized* adjectives, but not in terms of *bare* adjective roots.

⁶ Note that reduplicated forms generally compose one grammatical word, but two phonological words. I will usually provide a four-line analysis as in (25c) to illustrate reduplicated forms. Reduplication of adjectives is discussed below in section 6.9.

6.6.2 Adjective-modifying enclitics (inflectional enclitics)

The first thing to address about this set of enclitics is their analyzability. These enclitics are readily segmented into smaller units based on form, all of the parts occurring elsewhere as independent morphemes.

Table 6.4. Relative positions of adjective enclitic and particles.

Forms	Meaning	Analysis:	1	2	3	4	5
Analyzable forms							
<u>-quimbo</u>	'Augmentative'					<u>-quio</u>	<u>-mbo</u>
<u>-pambo</u>	'Augmentative/large'	<u>-pa</u>					<u>-mbo</u>
<u>-patsēc(-quio)</u>	'De-intensifier/small'	<u>-pa</u>	<u>-tsēc</u>				
<u>-pabi</u>	'De-intensifier/Complimentary'	<u>-pa</u>					<u>-bi</u>
<u>-mbobi</u>	'De-intensifier'					<u>-mbo</u>	<u>-bi</u>
<u>-tsēcquio</u>	'Derogative'			<u>-tsēc</u>	<u>-quio</u>		
Elements segmented out from above forms							
<u>-pa</u>	'Augmentative'	(occurs on adjectives only in special sentence types)					
<u>-tsēc</u>	'Diminutive'	(does not otherwise occur on adjectives)					
<u>-mbo/-quio</u>	'Augmentative'	(common on adjectives)					
<u>-bi</u>	'Emphatic'	(uncommon on adjectives)					

The question at hand is: have these combinations been reanalyzed as wholes, or do speakers treat them as systematic combinations? The analysis at the top of Table 6.4, where forms in five position classes are combined to form the attested enclitics, is an internal reconstruction based on the similarities to modern forms (listed at the bottom of the table) that most likely has etymological validity. However, it has a significant problem as a synchronic analysis: the meanings of most of these combinations simply don't add up. Additionally, not all the segmented elements occur productively on adjectives outside of the attested combinations, and some expected combinations, such as -tsēcui (-tsēc-bi), are not attested for adjectives. If one wished to force this analysis as a

synchronic segmentation, it would entail first a set of co-occurrence restrictions (which would not hold elsewhere in the language), and then a large number of idiosyncratic rules for deriving the meaning of each attested combination. If one accepts my analysis of these as the adverbial inflections, then it should be unsurprising to find fusional morphology, just as with Matses verbal inflections, and inflectional morphology in Romance languages and inflecting languages around the world. In the following subsections, I will describe each of these enclitics in detail, including their analyzability.

The next issue to address before delving into the descriptions of the individual enclitics is that of their status as inflectional enclitics. Once again, we must distinguish between attributive and predicative constructions. These position 1 enclitics cannot be considered inflectional in noun-adjective noun phrases, since they are not obligatory, and we find that of the position 1 enclitics, only *-mbo/-quio* can occur with adjectives in this attributive position. With all the different subtypes of predicative adjective constructions, the position 1 enclitic is required, as explained above. Some forms, however, can only occur with some subclasses of adjectives, and others only occur with reduplicated forms. The enclitics in this position class also function as adjectivalizers (§6.8.2). In Matses, there are no comparative or superlative enclitics for adjectives (such as English *-er* and *-est*), so such morphological comparisons are not possible (though *-pambo* and *-patsëc* can have a comparative function with adverbs). The inflectional contrast that Matses adjective inflectional enclitics code are augmentation ('very') vs. de-intensification ('not very'), large vs. small size (a sort of optional "size-agreement" similar to adjectival gender agreement in Romance languages), and derogative vs. complimentary.

6.6.2.1 *-mbo/-quio* 'Augmentative'

These two forms are the most commonly encountered adjectival morphology in the language, and all adjectives can occur with either *-mbo* or *-quio*. They are

phonetically conditioned allomorphs: -mbo follows vowels and -quio consonants (§2.6.8).⁷ Yet again, we must make reference to the distinction between attributive and predicative constructions—in the former -mbo/-quio has a clear augmentative meaning, but in the latter -mbo/-quio is essentially semantically empty. This difference is readily understood in light of the fact that in attributive position, adjectives can occur as bare roots, and therefore there is a clear contrast with bare adjectives: in this position -mbo/-quio intensifies the property designated by the adjective, and are roughly translatable into the English and Spanish adverbs *very* and *mu*y.⁸ Consider (27).⁸

- | | | | | | |
|-------|--|-------------------|-------|----------------------------|---------------------|
| (27a) | <u>shupud iuë-mbo</u> | <u>dedo-o-mbi</u> | (27b) | <u>shupud iuë</u> | <u>dedo-o-mbi</u> |
| | bag | heavy-Aug | | bag | heavy carry-Past-1A |
| | ‘I carried the very heavy bag.’ | | | ‘I carried the heavy bag.’ | |

The Matses sentence in (27a) is actually very similar to the English translation in that neither sounds odd, but both definitely sound marked. On the other hand, in predicative positions, such as copular clauses (28), relative clauses (29),⁹ and adverbial adjective constructions (30), where there is no contrast with bare adjectives, the augmentation meaning has been bleached.

- | | | | | | |
|-------|----------------------|-----------------------|-------|--------------|-----------------------|
| (28a) | <u>iuë-mbo</u> | <u>shupud ic-o-sh</u> | (28b) | * <u>iuë</u> | <u>shupud ic-o-sh</u> |
| | heavy-Aug | bag be-Past-3 | | | |
| | ‘The bag was heavy.’ | | | | |

⁷ Despite composing a single morpheme, due to their disparate forms, the difficulty in determining the basic allomorph, and the fact that only the form -quio (and not -mbo) occurs on verbs, I use either allomorph in the morpheme-by-morpheme lines in examples, and both forms together in the prose.

⁸ Because -mbo/-quio is also a noun-phrase enclitic, there is potential ambiguity as to the scope of -mbo/-quio in noun phrases. This issue is addressed in section 6.6.9.

⁹ Despite the identical English translations in (27b) and (29a), they are different: (27b) implies that the bag is made of heavy material, while (29a) could refer to an otherwise light bag that has been packed with heavy contents. This is explained in section 10.3.3.

(29a) shupud iuë-mbo ic-quid dedo-o-mbi
 bag heavy-Aug be-Agt.Nzr carry-Past-1A
 'I carried the heavy bag.'

(29b) *shupud iuë ic-quid dedo-o-mbi

(30a) ushu-mbo chênque-e-c
 white-Aug shine-Npast-Indic
 'It shines white.'

(30b) *ushu chênque-e-c

What seems to have happened with -mbo/-quio is that it became overused in some constructions and became obligatory in these constructions (as semantic extremes often do, such as English “do-support,” French double negation, etc.). In Matses, all adjectives that occur in predicative constructions rather than noun phrases now obligatorily require an augmentative enclitic, and when the unaugmented forms in this position are lost in this environment, the contrast that gives meaning to the augmentative enclitic is also lost (e.g., 31). As this process was ongoing, speakers who felt a need to really augment an adjective had to reinforce the prior augmentative with other morphological material, thus leading to the innovation of a whole series of reinforcing augmentatives: the other position 1 enclitics (e.g., -quimbo ‘Augmentative,’ next section). The fact that the other position 1 enclitics only occur on predicative constructions and cannot occur on adjectives in the attributive clauses lends credibility to this scenario.

(31) senta piu-mbo ic-e-c
 red.uakari.monkey red-Aug be-Npast-Indic
 'Uakari monkeys are (*very/bright) red.'

A-I 057 senta 03

6.6.2.2 -quimbo ‘Augmentative’

The enclitic -quimbo appears to be a combination of -quio and -mbo. It cannot be used in addition to -mbo or -quio. It only occurs in predicative constructions, where it

always intensifies the adjective, a meaning that seems predictable from the “doubling-up” of -mbo/-quio (32).

(32a) tanun-quimbo ic-o-sh
dry-Aug be-Past-3
'It was very dry.'

(32b) piu-quimbo sin-ac
red-Aug ripen-Infer
'It ripened **bright** red.'

However, this would be an etymological analysis, as there is no regular morphophonological rule that would predict the loss of the final o in -quio; and, unlike -quio, -quimbo can follow either vowels or consonants. The distribution of -quimbo is more restricted than that of -mbo/-quio: -quimbo cannot be used with reduplicated adjectives or noun adjectivalizations. Even in syntactic positions where either -quimbo or -mbo/-quio may occur, -quimbo is much less frequently encountered in the language, as would be expected of a true augmentative.

6.6.2.3 Size agreement: -pambo 'Augmentative' and -patsëc 'Diminutive'

Each of these enclitics codes two distinguishable meanings: intensification/de-intensification and physical size. These meanings may occur independently of each other or together. These are used mostly with reduplicated adjectives and adjectivalized nouns, where the intensification/de-intensification semantics (potentially along with the size semantics) obtain (§§6.7, 6.8). The only adjectives that take -pambo and -patsëc unreduplicated are the two value adjectives (bëda 'good/attractive/healthy', icsa 'bad/ugly/thickly vegetated/sick'), and with these only size semantics obtain (33).

(33a) icsa-patsëc ic-o-sh
bad-Dim see-Past-3
'S/he (e.g., a thin person) was ugly.'

(33b) icsa-pambo ic-o-sh
bad-Aug be-Past-3
'S/he (e.g., a fat person) was ugly.'

- (33c) icsa-pabi ic-o-sh
bad-**Deintens** see-Past-3
'S/he/it was somewhat ugly/bad.'
- (33d) icsa-mbo ic-o-sh
bad-**Aug** be-Past-3
'S/he/it was ugly/bad.'

It could be said that these do not assert information about the physical size of the entity being described. Rather, the enclitic -pambo is simply more appropriate with larger entities and -patsëc with smaller entities. Thus, I fancy calling it "optional size agreement" in analogy to the (usually obligatory) gender-and-number agreement on adjectives in the Romance languages. The enclitic rest of the enclitics would be size-neutral options (33c-d).

As with -quimbo, adjectives in noun-adjective noun phrases do not bear these enclitics; they occur only in the predicative construction types, including copular constructions (34), relative clauses (35), and adverbial adjective constructions (36). Thus, adjectives bearing these enclitics cannot be contrasted with bare adjectives; but they can be contrasted with adjectives bearing the semantically bleached adjectival enclitics -mbo/-quio, and with each other and other enclitics, as in (33).

- (34) shēmën adecbidi icsa-pambo ic-ac-no ush-quiv
olingo likewise:Intr thickly.vegetated-**Aug** be-Act.Nzr-Loc sleep-Agt.Nzr
ne-e-c
be-Npast-Indic
'Also, the olingo is one that sleeps where there are **large** vine tangles [lit., (in a large area) where it is thickly-vegetated].'

A-IV 030 shēmën 12

- (35) chido icsapatsëcquiv isombi 'I saw a (small/thin) ugly woman.'
chido icsa-patsëc ic-quiv is-o-mbi
woman bad-**Dim** be-Agt.Nzr see-Past-1A

- (36) bëda-patsëc isad-quiv-quio madu-n sipi ne-e-c
good-**Dim** appear-Agt.Nzr-Aug demon-Gen tamarin be-Npast-Indic
'Pygmy marmosets [tiny primates; lit 'demon's tamarins'] are truly ones that look cute.'

A-IV 006 madun sipi 03

6.6.2.4 *-pabi* 'De-intensifier'

Unlike the formally similar enclitics described in the preceding section, the enclitic *-pabi* seems to be neutral with respect to size (32c). It also only occurs on few adjective roots (but also occurs on adjectives and postpositions), but additionally is also very rare on reduplicated adjectives and nouns. Its modification of the adjective is de-intensification, usually translated by Matses speakers into Spanish as *más o menos* 'more or less' (37).

(37a)	<u>midapad</u>	<u>cun</u>	<u>nënë</u>	<u>ic-e-c</u>	(37b)	<u>paë-pabi</u>	<u>ic-e-c</u>
	how	1Gen	tobacco	be-Npast-Indic		strong-Deintens	be-Npast-Indic
	'How's my tobacco snuff?'					'It's kind of strong.'	

The de-intensification semantics tends to carry a positive connotation, often with the purpose of not criticizing something negatively. So in (37), the answer to the question might more be more elaborately translated as: 'It's not as strong as I would prefer it, but it's all right.'

This enclitic and the ones described in the preceding section all contain the element *pa*: *-pa* is an enclitic meaning: 'large: Characterizer' (as in *pucu-pa* 'big-bellied'; §4.6.2), and there is the verbal suffix *-pa* 'Comment' as well that occurs in some irrealis and emphatic constructions (§5.5.9). Also, *-pa* occurs in a limited way as an augmentative on adjectives in a special sentence type (§6.6.2.7). While consistent with the large size/augmentative meaning of *-pambo*, it is evident that *-pa* contributes no large size or augmentative semantics in *-patsëc* or *-pabi*, in fact quite the opposite: de-intensification and/or small size. And while the forms *-tsëc* 'Diminutive' and *-bi* 'Emphatic' are productive morphemes in Matses, they do not carry de-intensification semantics, and *-tsëc* does not occur independently on adjectives. So to segment *-patsëc*

and -pabi synchronically, one would have to account for the loss of large size/augmentative semantics and the genesis of deintensification semantics.

6.6.2.5 -mbobi 'De-intensifier'

The enclitic -mbobi de-intensifies the meaning of the adjective, similarly to -pabi, but without any positive or negative connotation:

- (38) cue-mbobi pudun pudun-quad běshuicquid ne-e-c
 straight-Deintens (redup=Distr) jump-Agt.Nzr saki.monkey be-Npast-Indic
 'Saki monkeys are ones that jump (more or less) straight through the trees.'
 A-I 055 bēshuicquid 29
- (39a) *bēda-mbobi 'more or less good/pretty' (39b) *piu-mbobi
 good-Deintens red-Deintens

This enclitic occurs only on a subset of the adjective roots (39). Unlike the other adjectival enclitics, this one apparently cannot occur on reduplicated adjectives. One would have expected this enclitic to mean 'really very' if it were a combination of -mbo/-quio 'Augmentative' and -bi 'Emphatic,' but the meaning is in fact the opposite.

6.6.2.6 -tsēcquio 'Derogatory'

This enclitic is more common with reduplicated adjectives (§6.7) and adjectivalized nouns (§6.8), and will be discussed in more detail in those sections. I have no text example of -tsēcquio with unreduplicated adjectives, but in elicited forms it has a derogatory connotation:

- (40) pachi-tsēcquio ic-e-c 'It is soft and worthless.'
 soft-Derog be-Npast-Indic (e.g., wood that is not good for construction).'

This is not surprising considering that -tsēc 'Diminutive' can have a derogatory connotation with verbs and nouns, a common pattern for diminutives cross-linguistically

(Payne 1997). However, the fact that *-tsēcquio* seldom has small size or other diminutive semantics independently of or in addition to the derogatory meaning, suggests that with adjectives, this suffix combination has been lexicalized into a unit that focuses on one of the marginal meanings expressed by *-tsēc*.¹⁰

6.6.2.7 *-pa* ‘Augmentative’ and *-pen* ‘Contrast’

While the enclitics *-pambo*, *-patsēc* and *-pabi* occur frequently enough in texts and overheard conversation, and within the co-occurrence restrictions, are used naturally in elicitation of “normal sentences.” By contrast, the bare form *-pa* seems to only occur in what younger speakers consider archaic speech in a special sentence type where the copula is elided:

- (41) *?bēda-pa* ‘It’s very good.’
 good-Aug

Similarly, the form *-pen*, probably a combination of *-pa* and *-en* ‘Contrast’ (§6.6.5), only occurs in this construction type:

- (42a) *bēda-pen* ‘(I don’t care what you think, I think) she’s good looking.’
 good-Contr
- (42b) *ise-pen* ‘(You say it’s not, but I say) it’s smooth enough.’ [e.g., a bow]
 smooth-Contr
- (42c) *chuca-pen* ‘(I assure you,) it *is* new.’
 new-Contr

I have not fully incorporated these forms or this construction type into the rest of the discussions on adjectives because they do not occur in any texts, I never overhear them being used, and are rejected by younger speakers.

¹⁰ With adverbs, *tsēc-quio* has not lexicalized; §7.6.4.5.

6.6.3 2nd level intensification: -shë 'Augmentative'

The enclitic -shë must follow another augmentative adjectival enclitic; i.e., -mbo/-quio, -quimbo, or -pambo (but not -patsëc, -pabi or -mbobi). Its function is to intensify an adjective further. With -mbo/-quio, if the adjective is part of a noun-adjective noun phrase, then -shë represents a second level of intensification (43), but in predicative constructions where the meaning of the -mbo/-quio is bleached, it represents only a single level of intensification (44 & 45). But with -quimbo, -shë does code a second level of intensification.

(43) shupud iuë-mbo-shë dedo-o-mbi (41b) *shupud iuë-shë dedo-o-mbi
 bag heavy-Aug-Aug carry-Past-1A
 'I carried the very, very heavy bag.'

(44) ubuëshë ushu-mbo-shë ic-quid achu ne-e-c
 testicles white-Aug-Aug be-Agt.Nzr howler.monkey be-Npast-Indic
 'The howler monkey is one that has a very white scrotum.'

A-I 054 achu 07

(45) piu-mbo-shë sin-quid aid ne-e-c
 red-Aug-Aug ripen-Agt.Nzr that.one be-Npast-Indic
 'Those [piushën titado palm fruits] are ones that ripen bright red.'

A-I 010 piushën titado 09

Adjectives cliticized with -patsëc can be further intensified with -quio (46a), and then with -shë (46b), but -shë cannot directly follow -patsëc. The enclitics -pabi and -mbobi never occur at all with -shë (46c & 46d)

(46a) icsa-patsëc-quio (46a) bëda-patsëc-quio-shë (46c) *bëda-pabi-shë
 bad-Dim-Aug good-Dim-Aug-Aug
 'very ugly' 'very, very good-looking' (46d) *bëda-pabi-quio

6.6.4 Phrasal particle: chedo ‘too/et cetera’

The particle chedo follows (inflected) adjectives, creating a two-word adjective phrase (47a). It is not commonly used with adjectives, perhaps due to semantic unusualness. More common is for the adjective to be made part of a nominalization before being followed with chedo (47b).

(47a) piu-mbo chedo ic-o-sh ‘It was red and turned several other colors.’
red-Aug too/etc be-Past-3

(47b) piu-mbo ic-quid chedo ic-o-sh
red-Aug be-Agt.Nzr too/etc be-Past-3
‘There were red ones and other-colored ones’/‘There were red ones, too.’

6.6.5 Less common enclitics

The enclitics described here do not occur very commonly with adjectives. These enclitics are fairly general in that they can attach to most constituents. There is a grammatical restriction precluding their occurrence on finite verbs and particles, but there is no such restriction with adjectives—they are simply not common for modifying adjectives for semantic reasons, and when they function at the clausal level, attachment to other constituents in the clause is preferred. These were all introduced in the noun chapter, and they are described in some detail in the adverb and postposition chapters. Here I will only provide a set of comparative examples using the adjective piu ‘red.’ These can all be considered non-inflectional enclitics, and they must occur following one of the (position 1) inflectional enclitics (-mbo ‘Augmentative,’ in these examples). These less common enclitics include: the sequential markers -ba ‘first’ and -tsen ‘next’ (48); the adverb-like enclitic -uid ‘only’ (49) (note duplicate use of -mbo/-quio); the emphatic enclitic -bi ‘Emphasis’ (50a) and the enclitic -di ‘Same,’ which only occurs following -bi (50b); the contrast marker -en (51); and the mirative enclitic -shenda (52).

- (48) piu-mbo-ba ic-o-sh adashic umu-mbo-tsen ic-o-sh
 red-Aug-first be-Past-3 then green-Aug-next be-Past-3
 ‘(The traffic light) was red, and then it was green.’
- (49) piu-mbo-uid-quio dashcute ic-o-sh ‘There were only red clothes.’
 red-Aug-only-Aug clothing be-Past-3 lit., ‘The clothes were only red.’
- (50a) piu-mbo-bi ic-o-sh (50b) piu-mbo-bi-di ic-o-sh
 red-Aug-Emph be-Past-3 red-Aug-Emph-Same be-Past-3
 ‘It was red.’ ‘It was likewise red.’
- (51a) piu-mbo-en ic-o-sh (51b) piu-mbo-en ic-chit-e-c
 red-Aug-Contr be-Past-3 red-Aug-Contr be-Uncert-Past-3
 ‘(No,) it was red.’ ‘Perhaps it is red.’
- (52) piu-mbo-shenda ic-o-sh ‘Oh! So it was red!’
 red-Aug-Mirat be-Past-3

6.6.6 -penquio ‘Negative’

This morpheme simply negates the constituent that it follows (see §9.3.3):

- (53) piu-penquio ic-e-c ‘It is not red.’ [lit. it is “non-red”]
 red-Neg be-Npast-Indic

It is usually pronounced as a bound morpheme, but some speakers sometimes pronounce it as a phonetically independent word (with stress on the first syllable). Unlike the other enclitics, -penquio can follow a bare adjective root or a cliticized adjective root in attributive clauses (53), relative clauses (54), or adverbial adjective constructions (55).

- (54) tsad-te tsasi-penquio ic-quid ne-e-c
 sit-Inst.Nzr hard-Neg be-Agt.Nzr be-Npast-Indic
 ‘The benches are ones that are not hard.’

2-p73-L tsadte 02

- (55a) piu-mbo-penquio sin-ac (55b) piu-penquio sin-ac
 red-Aug-Neg ripen-Infer red-Neg ripen-Infer
 ‘It didn’t ripen red.’ ‘It didn’t ripen red.’

This is not really an exception to the generalization that adjectives cannot occur in predicative construction without one of the position 1 enclitics (compare 55b and 56b) since this enclitic, though not really synchronically segmentable, contains the form -quio.

- (56a) piu-mbo sin-ac 'It ripened red.'
 red-Aug ripen-Infer
- (56b) *piu sin-ac

6.6.7 -da 'Interrogative'

The enclitic -da is a second-position enclitic that is an allomorph of the first-position particle ada 'Uncertainty' (§9.4.1). It is used mostly in yes-and-no questions and can follow adjectives when they are the first element in a copular clause (57) or an adverbial adjective construction (58). Unlike with -penquio, there is no exception: the adjectives must be cliticized in predicative constructions, as in non-interrogative clauses.

- (57a) piu-mbo-da ic-o-sh
 red-Aug-Uncert be-Past-3
 'Was it red?'
- (57b) *piu-da ic-o-sh
- (58a) piu-mbo-da sin-ac
 red-Aug-Uncert ripen-Infer
 'Did it ripen red?'
- (58b) *piu-da sin-ac

One might expect that there would be ambiguity in terms of scope when -da is attached to a noun-phrase-final adjective, as in (59a), as there often is with the enclitic -mbo/-quio (§6.6.9). However, this ambiguity never arises, because for the scope to be just the adjective, the adjective would have to be the first constituent in the clause (59b), which is only possible in predicative constructions.

- (59a) daschute chuca-da ic-o-sh (59b) chuca-mbo-da dashcute ic-o-sh
 clothing new-Uncert be-Past-3 new-Aug-Uncert clothes be-Past-3
 ‘Was there any new clothing?’ ‘Was the clothing new?’
 *‘Was the clothing new?’

The enclitic -da can co-occur with the enclitic -penquio ‘Negative’ (preceding section), always directly following it (60).

- (60a) piu-penquio-da sin-ac (60b) piu-mbo-penquio-da sin-ac
 red-Neg-Uncert ripen-Infer red-Aug-Neg-Uncert ripen-Infer
 ‘It didn’t ripen red?’ ‘It didn’t ripen red?’

6.6.8 *Pronominal enclitics*

Pronominal enclitics (§4.4.1) are not really part of the adjective class’s repertoire of morphology. Pronominal enclitics do follow several clausal enclitics, including ada ‘Uncertainty,’ in its free particle form as well as its bound enclitic form, -da (preceding section). Therefore, since -da can follow adjectives, in this one special situation, pronominal enclitics may appear attached to an adjective word.

- (61) piu-mbo-da-bi ic-e-Ø ‘Am I red?’ (e.g., sun burnt)
 red-Aug-Uncert-1S be-Npast-Interr:1/2

6.6.9 *Noun phrase enclitics*

When an adjective is part of a noun-adjective noun phrase, any of the noun phrase enclitics may be attached to it (§4.6, Table 4.17), and it is clear that the scope of the noun phrase enclitic is the whole phrase (62).

- (62a) dada icsa-bo cho-o-sh (62b) shunte bēdad-dapa cues-o-mbi
 man bad-PI come-Past-3 sloth fierce-large kill-Past-3
 ‘The worthless/insane men came.’ ‘I killed a big, fierce sloth.’

But with the enclitic -mbo/-quio, which can be a noun phrase or adjectival enclitic, ambiguity, in terms the enclitic's scope, can and does arise. For example, in (63) there could be two possible readings: in the first reading, cana tanun is interpreted as the lexicalized name for the Mealy Parrot (*Amazona farinosa*, which is actually bright green, not gray or dull green), and so -quio functions as a noun phrase enclitic that modifies the whole phrase; in the second reading, cana tanun is interpreted as an *ad hoc* descriptive phrase (hypothetically imagining a parrot from another land), and so here -quio functions as an adjectival enclitic whose scope is restricted to the adjective.

- (63) cana tanun-quio is-o-mbi
 parrot gray-Aug see-Past-1A
 'I saw a true Mealy Parrot.' [noun phrase enclitic reading]
 'I saw a very gray/dull green parrot.' [adjectival enclitic reading]

If the noun phrase is not a lexicalized term, the interpretation of -mbo/-quio as having the whole phrase as its scope is unlikely.

An unexpected morphological pattern is found in noun phrases that carry the noun phrase enclitic -n, which occurs polysemously as an ergative, instrumental, and genitive case marker and as a locative postposition (§§4.6.4, 11.2.3). As described in the noun chapter, -mbo/-quio follows case-marking and the postposition enclitics in the position class ordering, as in (64) (recall that the allomorph -mbo only follows vowels, so it cannot follow -n). What is unexpected is that the scope of the enclitic -n is always the whole noun phrase, while with *ad hoc* (i.e., non-lexicalized) noun phrases that end in an adjective, the scope of the augmentative enclitic is just the adjective (65 & 66). One would expect that the enclitic with the more restricted scope would go first.

- (64) mannanënquio caniquid isan dachianmës nec
manan-n-quio cani-quid isan dachianmës ne-e-c
 hill-**Loc-Aug** grow-Agt.Nzr palm.species curse.causer be-Npast-Indic
 ‘The isan dachianmës palm is one that grows deep in the hills [i.e., upland forest].’

A-I 041 isan dachianmës 13

- (65a) opa piu-n-quio pe-o-sh-i (65b) *opa piu-mbo-n pe-o-sh-i
 dog red-**Erg-Aug** bite-Past-3-1O dog red-**Aug-Erg** bite-Past-3-1O
 ‘A very red dog bit me.’
- (66) chështe shëni-n-quio ta-cues-ad-o-bi
 machete old-**Inst-Aug** foot-hit-Rflx-Past-1S
 ‘I cut myself on the foot with a very old machete.’

With lexicalized noun phrases (67a), the scope of -mbo/-quio is always the whole noun phrase, and so we do not find this unexpected pattern where a morpheme with phrasal scope is closer to the root than a morpheme whose scope is only the final root.

- (67a) chishcan piu-n-quio pe-o-sh-i
 dolphin red-**Erg-Aug** bite-Past-3-1O
 ‘A **true** pink Amazon river dolphin bit me.’
 ‘**It really** was a pink Amazon river dolphin that bit me.’

I take this opportunity to illustrate the difference between using -quio on a noun phrase vs. on the verb (cf. 67a & 67b; §5.5.6).

- (67b) chishcan piu-n pe-quio-o-sh-i
 dolphin red-**Erg** bite-**Aug-Past-3-1O**
 ‘A pink Amazon river dolphin **really did** bit me.’
 ‘A pink Amazon river dolphin bit me **really hard/severely**.’

6.7 Adjective Reduplication

Reduplication in Matses results in a single grammatical word composed of two phonologically independent words (§§2.8.1, 3.2.3, 3.2.7). Prefixes are reduplicated along with adjective root, but enclitics occur once, following the second reduplicated element.

Like with unreduplicated adjectives, we find that reduplicated adjectives in noun-adjective noun phrases do not need to be cliticized; but here it seems that the occurrence of reduplicated adjectives in noun phrases seems to be restricted to color adjectives and only acceptable for a few speakers (68). But unlike unreduplicated adjectives, reduplicated adjectives sometimes occur in predicative constructions with (69) or without (70) one of the inflectional enclitics.

- (68) ?senad piu piu isombi ‘I saw the reddish deer.’
senad redup piu is-o-mbi
 deer **Deintens red** see-Past-1A
- (69) taui umu umumbo ictsec ‘The stem is greenish.’
taui redup umu-mbo ic-tsęc-e-c
 stem **Deintens grue-Aug** be-Dim-Npast-Indic
- (70) piu piu yacno nidtsin ‘Plant it where it is reddish.’
redup piu ic-ac-no nidtsin-Ø [i.e., in red soil]
Deintens red be-Act.Nzr-Loc plant-Imper

A-I 036 shęcmaucudanmės 03

Adjective roots may be reduplicated alone (henceforth **simple reduplication**) or together with a body-part prefix (henceforth **prefixed reduplication**). Reduplication carries different meanings for simple reduplication vs. prefixed reduplication, so these two types of reduplication will be described separately in the following two subsections.

6.7.1 Simple reduplication

The semantics associated with the reduplication of unprefixed adjectives is de-intensification, which can be translated into English as “somewhat X,” “kind of X,” or “X-ish.” When adjectives are not cliticized, this meaning is transparent, as in (68) and (70) above. Similarly, with adjectives in predicative construction bearing -mbo/-quio, the

de-intensification reading of the reduplication is clear because the ‘Augmentative’ meaning of -mbo/-quio is bleached in these positions (71 & 72).¹¹

(71) shupud iuë iuëmbocquid dedombi
shupud redup iuë-mbo ic-quid dedo-o-mbi
 bag **Deintens heavy-Aug** be-Agt.Nzr carry.on.back-Past-1A
 ‘I carried a somewhat heavy bag.’

(72) chuca chucambo iquec ‘It’s kind of new.’
redup chuca-mbo ic-e-c
Deintens new-Aug be-Npast-Indic

With the other inflected enclitics that accompany reduplication, -pambo, -patsëc, -pabi, and -tsëcquio (-quimbo and -mbobi do not occur with reduplicated forms), the de-intensification reading of the reduplication is obscured, as might be expected considering that some of these are themselves de-intensifiers or are semantic opposites (intensifiers). There is a bit of variation depending on the adjective class, so I will exemplify the patterns with color adjectives, which seem to be the class of adjective that occurs most often in simple reduplication. With color adjectives, -pambo is generally only used with large entities, and the de-intensification meaning of the reduplication may or may not obtain (73 & 74a).

¹¹ The form in (72) should not be confused with the phonetically similar form in (72’), which involves adverbialization and is described in section 7.8.1.

(72’) chuca chucamboec iccosh ‘There were many new ones.’
redup chuca-mbo-ec ic-o-sh
 Distr new-Aug-Advzr:Intr be-Past-3

- (73) adquidi piu piupambo icquid memupaid
ad-quid-bi redup pambo ic-quid memupaid
 like.that-Agt.Nzr-Emph **Deintens red-Aug** be-Agt.Nzr capybara
ne-e-c
 be-Npast-Indic

‘That same one, the capybara (a very large rodent) is an orangish one.’

A-IV 009 memupaid 10

- (74a) chëshë chëshëpambo (74b) chëshë chëshëpatsëc
redup chëshë-pambo redup chëshë-patsëc
 Deintens black-Aug Deintens black-Dim
 ‘blackish/black (and big)’ ‘blackish [any size]’/‘black (and small).’

The enclitic -patsëc is more appropriate for small or medium entities (75), although it is not obligatorily used when an object is small, even if very small (76); when -patsëc is used with an object that is not particularly small, then the de-intensification semantics of the reduplication is always present (perhaps even more de-intensified than with just -mbo/-quio), but when the entity is small, then the de-intensification meaning of the reduplication may not show up at all (74b). Therefore, it seems that one function of adjective reduplication is just to allow the size agreement markers to be used.

- (75) achu camunën incuente chëshë chëshëpatsëcquid
achu camun-n incuente redup chëshë-patsëc ic-quid
 howler.monkey jaguar-Gen tail **Deintens black-Dim** be-Agt.Nzr
nec aton dada piu piumbo icnubi
ne-e-c aton dada redup piu-mbo ic-nuc-bi
 be-Npast-Indic 3Gen body **Deintens red-Aug** be-while:Diff.Ref-Emph
 ‘The bush dog’s [lit. ‘howler monkey(-colored) cat/dog] (short, little) tail is blackish, while its body is reddish.’

A-IV 035 achu camun 03

- (76) tanun tanunquio madun sipi ictsëcquid
redup tanun-quio madu-n sipi ic-tsëc-quid
Deintens gray-Aug demon-Gen tamarin be-Dim-Hab
 ‘The little pygmy marmosets [tiny primate; lit. ‘demon’s tamarins] are grayish.’

A-IV 006 madun sipi 08

Reduplication with the enclitic -tsēcquo ‘Derogatory’ with reduplicated adjectives can have a de-intensification, distributive, and/or derogatory meaning (77). The enclitic -pabi (which does not occur with most reduplicated adjectives) seems to reiterate the de-intensification semantics of the reduplication (78).

(77) chëshë chëshëtsēcquo
redup chëshë-tsēcquo
 Deintens black-Derog
 ‘with small black/blackish spots.’
 ‘barely blackish’
 ‘worthless because blackish/spotted’
 ‘small and spotted’

(78) bëda bëdapabi
redup bëda-pabi
 Deintens good-Deintens
 ‘kind of good’

Reduplicated adjectives cliticized with -mbo or -pambo can also take the augmentative enclitic -shë with an augmentative meaning (79).

(79a) chëshë chëshëmbo
redup chëshë-mbo
 Deintens black-Aug
 ‘blackish/brown’

(79b) chëshë chëshëmboshë
redup chëshë-mbo-shë
 Deintens black-Aug-Aug
 ‘dark blackish’ (something not expected to be dark-colored)

(79c) chëshë chëshëpamboshë ‘very big and black’
redup chëshë-pambo-shë
 Deintens black-Aug-Aug

6.7.2 *Prefixed reduplication*

If an adjective is prefixed, then the prefix will be reduplicated along with the adjective root. A reduplicated adjective cannot have a prefix that is not also reduplicated. With bësh-, there is no change in meaning. With body-part prefixes, the meaning associated with the reduplication of prefixed adjectives is that only a fraction of the body part designated by the prefix has the characteristic specified by the adjectives, i.e., ‘partly X on its Y’ where X is the adjective and X is the body part (80 & 81a). This contrasts

with unreduplicated prefixed adjectives, which imply that the adjective applies to the entire body part designated by the prefix (81b). This also contrasts with simple reduplicated adjectives, which have a de-intensification (i.e., ‘somewhat X’ or ‘X-ish’) meaning (81c), while prefixed reduplication does not entail that the attribute designated by the adjective is de-intensified (although this can be specified by using the such enclitics as *-patséc*, see below). For example, in (81a) we note that the nose and the central part of the face of the black spider monkey (*Ateles chamek*) can be quite red, not necessarily reddish (the rest of its face is black).

- (80) tambis macue macuembo icquid ‘The paca is partly elongated headed.’
tambis redup ma-cue-mbo ic-quid
 paca partly head-long-Aug be-Hab

A-IV 010 tambis 05

- (81a) bētanteteno bëpiu bëpiumbo chëshëid icquid
bētantete-no redup bë-piu-mbo chëshëid ic-quid
 face-Loc partly face-red-Aug spider.monkey be-Hab
 ‘Spider monkeys have red on part of their faces’

+ A-I 053 chëshëid 03

- (81b) bētantete-no bë-piu-mbo chëshëid ic-quid
 face-Loc face-red-Aug spider.monkey be-Hab
 ‘Spider monkeys have red faces’

- (81c) bētanteteno piu piumbo chëshëid icquid
bētantete-no redup piu-mbo chëshëid icquid
 face-Loc Deintens red-Aug spider.monkey be-Hab
 ‘Spider monkeys have reddish faces’

An example that illustrates this contrast within a single sentence is (82), where one adjective is reduplicated along with the prefix, and without a prefix in the other instance. This is because this the saddleback tamarin’s (*Saguinus fuscicollis*) face is not entirely black (it has a white rostrum), while its tail is uniformly dark brown or blackish. This

contrasts with the description of the titi monkey (*Callicebus cupreus*) in (83),¹² whose tail is pure white only at the tip, and thus accordingly the prefix *in-* ‘tail’ occurs in the reduplication.

- (82) bëchësh bëchëshquio iquec cabëdi cabëdimbo
redup bë-chëshë-quo ic-ec redup ca-bëdi-mbo
partly **face-black-Aug** be-while:S/A>S Adjzr back-variegation-Aug
iquec sipi icquid incuenta chëshë chëshëmbo
ic-ec sipi ic-quid incuenta redup chëshë-mbo
be-while:S/A>S tamarin be-Hab tail **Deintens black-Aug**
‘Tamarins are black on part of their faces, are spotted on part of their backs, and have blackish tails.’

A-IV 005 sipi 15

- (83) incuenta inush inushquio icquid uadë nec
incuenta redup in-ushu-quo ic-quid uadë ne-e-c
tail partly **tail-white-Aug** be-Agt.Nzr titi.monkey be-Npast-Indic
‘The titi monkey is one that has a whitish tail tip.’

A-IV 002 uadë 10

The preceding examples of prefixed reduplication have all been with *-mbo/-quo*. These forms were presented first because *-mbo/-quo* is bleached in these syntactic positions, making the meaning of reduplication easier to see. Also, while adjectives can take *-mbo/-quo* both reduplicated and unreduplicated, allowing us to contrast prefixed reduplicated forms with unreduplicated prefixed adjectives (84), the other enclitics (*-pambo*, *-patsëc*, and *-tsëcquo*) cannot occur with most adjectives unless they are reduplicated and thus cannot be contrasted with forms that differ only with respect to reduplication (85).

- | | |
|---|--|
| <p>(84a) <u>insed insedquio</u>
 <u>redup in-sed-quo</u>
 partly tail-white-Aug
 ‘having a white tail tip (or other part of tail)’</p> | <p>(84b) <u>insedquio</u>
 <u>in-sed-quo</u>
 tail-white-Aug
 ‘white-tailed’</p> |
|---|--|

¹² Note that examples (76) and (77) illustrate the alternation between *chëshë* and *chësh*, and between *ushu* and *ush* discussed in section 2.6.6.3.

- (85a) insed insedpatsēc
redup in-sed-patsēc
 partly tail-white-Dim
 ‘having a whitish tail tip.’
 ‘(small animal) having a white tail tip (or other part of tail)’
- (85b) *insedpatsēc

As elsewhere, with prefixed adjective reduplication, -pambo and -patsēc carry somewhat variable semantics, but the meaning specifying that the adjective refers to only a section of the body part remains constant. Reduplication with the enclitic -pambo indicates that the entity being described is large (86). Reduplication with the enclitic -patsēc indicates: i) that the entity being described is small (87); ii) de-intensification of the adjective; or iii) both (88).

- (86) nēishamē pased pasedpambo iquequi
nēishamē redup pa-sed-pambo ic-ec-bi
 tapir partly ear-white-Aug be-while:S/A>S-Emph
tanush tanushpambo nēishamē icquid
redup tan-ushu-pambo nēishamē ic-quid
 partly cheek-white-Aug tapir be-Hab
 ‘The tapir’s [a donkey-sized mammal] ear tips are white and part of its cheeks are white.’

A-I 045 nēishamē 03

- (87) incuentebi bushcutsēc ictsec insed insedpatsēc
incuenta-bi bushcu-tsēc ic-tsēc-ec redup in-sed-patsēc
 tail-Emph short-Dim be-Dim-while:S/A>S partly tail-white-Dim
ictsēcquid tsatsin nec
ic-tsēc-quid tsatsin ne-e-c
 be-Dim-Agt.Nzr acouchi be-Npast-Indic.
 ‘The little acouchi’s tail itself is very short and has a white tip.’

A-IV 013 tsatsin 12

- (88) achu camun piu piumbo iquequi incuente
achu camun redup piu-mbo ic-ec-bi incuente
 howler.monkey jaguar Deintens red-Aug be-while:S/A>S-Emph tail
inchësh inchëshpatsēcquid nec
redup in-chëshě-patsēc ic-quid ne-e-c
partly tail-black-Dim be-Agt.Nzr be-Npast-Indic
 ‘The bush dog is one that is reddish while having a blackish tail tip [its tail is very short compared to a domesticated dog’s].’

A-IV 035 achu camun 28

The enclitic *-tsēcquio* does not have a derogatory implication as elsewhere (§6.6.2.6), but like *-patsēc* is preferred with small entities, like pygmy squirrels.¹³

- (89) cacsi pased pasedtsēcquio ictsēcquid paush paushquio
cacsi redup pa-sed-tsēcquio ic-tsēc-quid redup pa-ushu-quio
 pygmy.squirrel **partly ear-white-Derog** be-Dim-Hab partly ear-white-Aug
 ‘Pygmy squirrels have a white spot on their ears... white on part of their ears.’

A-IV 007 cacsi 11

6.8 Adjectivalization

Both noun and verb roots can be adjectivalized. Both processes involve attaching one of the adjective-modifying/inflectional (position 1) enclitics, in the case of nouns, the root must first be reduplicated. Nouns cannot be reduplicated except as part of this class-changing process.

6.8.1 Noun adjectivalization

Bare nouns can modify head nouns prenominally as locatives (90a), as part-whole “possessors” (90b), as the material that the object is made from (90c), or postnominally as a component that characterizes that head noun (90d-f). These noun phrase types are all described in section 10.3.5.

¹³ It might be a better analysis to say that *-tsēcquio* ‘Derogatory’ is lexicalized with simple adjectives, but with adjectivalized and reduplicated ones it is just not lexicalized (because the

- | | |
|--|---|
| (90a) <u>acte cuesban</u>
river bat
'river bat' [a bat that roosts over the river] | (90b) <u>piush mapi</u>
tortoise head
'tortoise head'/'idiot' |
| (90c) <u>tanac shubu</u>
palm.species house
'house thatched with <u>tanac</u> palms' | (90d) <u>nidaid pada</u>
land flatness
'flat land' |
| (90e) <u>nuëquid tsëdëc</u>
fish stripes
'striped fish' [name for a type of fish] | (90f) <u>acte bacush</u>
water foam
'beer' [lit, 'foamy water'] |

The noun phrases in (90d-f), which could easily be confused for noun-adjective noun phrases, are formed most readily with a set of nouns that code attributive properties, such as 'flatness' and 'stripes' in (90d) and (90e); section 6.10.2 below gives the practical means for distinguishing these adjective-like nouns from true adjectives. Nouns that designate more prototypical entities generally must be adjectivalized through reduplication to modify other nouns (91 & 92).

- (91) sedudin shui cuidi cuidimbo icquid
sedudi-n shui redup cuidi-mbo ic-quid
 nine.banded.armadillo-Gen penis Adjzr branch-Aug be-Hab
 'The nine-banded armadillo's penis is bifurcate (lit. 'branched').'

A-I 048 sedudi 18

- (92) ëshë ëshëmbo chimutsëcquid shëcten nec
redup ëshë-mbo chimu-tsëc-quid shëcten ne-e-c
 Adjzr seed-Aug defecate-Dim-Agt.Nzr collared.peccary be-Npast-Indic
 '...the collared peccary is one that poops out seed-like feces.'

A-I 043 shëcten 12

Adjectivalized nouns are restricted to predicative constructions. Nouns are almost never adjectivalized with just reduplication—the construction in (93) is the only one I have

meaning has not shifted); however, there is still the complication that, unlike with adverbs, -tsëc never occurs without -quio on adjectives.

encountered, in texts or elicitation, where the reduplicated noun does not bear an enclitic.¹⁴ When -mbo/-quio is attached to reduplicated (adjectivalized) nouns, their augmentative meaning is bleached, as it always is in this construction type (91 & 92). Other enclitics that are used with adjectivalizations do carry some meaning, albeit subtle: -pambo is more appropriate with adjectivizations that modify large entities (94), and -patsēc with those that modify small entities (95).¹⁵

- (93) mactac mactac yacno caniquid
redup mactac ic-ac-no cani-quid
 Adjzr mud be-Act.Nzr-Loc grow-Hab
 ‘They [shubu quēdē palms] grow where it is muddy.’

A-I 028 shubu quēdē 06

- (94) pinchuc pinchucpambo dada iquec
redup pinchuc-pambo dada ic-e-c
 Adjzr thorn-Aug trunk be-Npast-Indic
 ‘The trunk [of the itia pinchuc palm] is (large and) thorny.’

A-I 039 itia pinchuc 05

- (95) pinchuc pinchucpatsēc iquec piushën titado
redup pinchuc-patsēc ic-e-c piush-n titado
 Adjzr thorn-Dim be-Npast-Indic tortoise-Gen peach.palm
 ‘The piushën titado palm is (small and) thorny.’

A-I 010 piushën titado 07

Adjectivalized, reduplicated noun roots can also bear the enclitic -tsēcquio (96 & 97), where it carries no derogatory or diminutive semantics, but is unexpectedly bleached.

- (96) pinchuc pinchuctsēcquio iquec ‘It is very thorny.’
redup pinchuc-tsēcquio ic-e-c
 Adjzr thorn-Derog be-Npast-Indic

¹⁴ This construction is actually quite enigmatic, if taken as an adjectivalization (i.e., ‘where it is muddy’), it would be the only case where an adjectivalized noun does not bear an adjectivalized enclitic, and if taken as a locative clause (i.e., ‘where there is mud/muddiness’) it would be the only case I know of non-class-changing noun reduplication (cf. 64 above)

¹⁵ Note that the itia pinchuc palm (*Mauritialla stenocarpa*) is the size of a small tree and the piushën titado palm (*Bactris pliniana*) is a small understory treelet palm.

- (97) itia tayun bacush bacushtsēcquo itia icquid
itia tayu-n redup bacush-tsēcquo itia ic-quid
 swamp.palm base-Loc Adjzr foam-Derog swamp.palm be-Hab
 ‘At the base of swamp palm trees, (fallen) swamp palm (fruits) are foamy.’

A-I 029 itia 08

At this point, we can point out a parallel between adjectives in noun-adjective noun phrases, and postnominal modifying nouns in noun-noun noun phrases. Both of these can occur as bare roots following nouns, and must compose a lexicalized phrase, or a phrase describing a durable property of the head noun and referring to a well-known entity/class of entities (98a & 99a; §§10.3.3-10.3.4). Similarly, both of these constructions contrast with relative clauses and copular clauses (predicative constructions), which can refer to more transient properties and require additional morphology, namely, cliticization and/or reduplication for adjectives (98b), and reduplication *and* cliticization for nouns (99b). Forms like (98a) and (99a) have semantic, but not phonological properties of typical compounding.

- | | |
|---|---|
| <p>(98a) <u>acte paë</u>
 water strong
 ‘rum’ [lit, ‘strong water’]</p> | <p>(98b) <u>sicaid paëmbocquid</u>
 <u>sicaid paë-mbo ic-quid</u>
 strained.drink strong-Aug be-Agt-Nzr
 ‘drink that is strong’ [e.g., that has fermented]</p> |
| <p>(99a) <u>acte bacush</u>
 water foam
 ‘beer’ [lit, ‘foamy water’]</p> | <p>(99b) <u>acte bacush bacushtsēcquiocquid</u>
 <u>acte redup bacush-tsēcquo ic-quid</u>
 water Adjzr foam-Derog be-Agt.Nzr
 ‘water that is foamy’ [perhaps temporarily]</p> |

Prefixed nouns can also be adjectivalized through reduplication plus cliticization. As with reduplicated adjectives, the prefix must be reduplicated together with the noun root. Unlike with prefixed reduplicated adjectives (§6.7.2), however, the semantics of the reduplication does not change when prefixed nouns are adjectivalized. When prefixed,

the adjectivalized noun then becomes an adjective that modifies the subject, but only with respect to the body part specified by the prefix (100).

- (100) tëbu tëbupambo iquec shuinte mapi
redup të-bu-pambo ic-e-c shuinte mapi
Adjzr crown-hair-Aug be-Npast-Indic two.toed.sloth head
 ‘Shuinte mapi palms have fibrous crowns.’

A-I 015 shuinte mapi 11

In addition to changing the noun’s morpho-syntactically defined word class, noun reduplication carries a meaning: the newly-formed adjective specifies that the entity being described is characterized by *possessing* the entity designated by the original noun root. For example, if the noun is ‘thorn,’ then the adjective is ‘thorny’ (94 & 95); if the noun is ‘branch,’ the adjective is ‘branched’ (91). The meaning is not that what is being described simply possesses some of the *attributes* associated with the original noun, but actually possesses/contains what the noun root designates (101a). The notion of sharing attributes is expressed in Matses using comparative postpositions (-bi ‘like’ or pad ‘same as’; §8.3.3), as in (101b).

- (101a) sia siapambo iquec ‘It is peppery.’
redup sia-pambo ic-e-c [i.e., it has a chili peppers in it.]’
Adjzr chili.pepper -Aug be-Npast-Indic *‘It is like (it has) chili pepper.’

- (101b) sia-bi-mbo-ec ic-e-c ‘It is like a chili pepper.’
 chili.pepper-like-Aug-Manr:Intr be-Npast-Indic

Sometimes it appears as if adjectivalization is used to innovate a metaphorical comparison, as in (92) above. However, this is evidently not the case. For example, in (102; cf. 94 & 95), the information being given is not that the porcupine is as if it had thorns, but rather the word pinchuc is polysemous, meaning ‘thorn’ or ‘quill.’ In other

words, any metaphorical extension is made prior to reduplication, and is a part of the definition of the root.

- (102) pinchuc pinchucpambo isa iquec The porcupine is spiny/quilly.
redup pinchuc-pambo isa ic-e-c
 Adjzr thorn-Aug porcupine be-Npast-Indic

1-p93-B isa 05

Noun reduplication/adjectivalization carries a somewhat different meaning when cliticized with -pabi 'De-intensifier' (introduced in §6.6.2.4). Here the meaning associated with the newly-formed adjective is not that what is being described is characterized by possessing or containing the original noun, but rather that what is being described is a poor example of what the noun originally designates (103). But note that the function of this construction is still not that of comparison with a different kind of entity, i.e., (103) does not mean something was dog-like, or badly resembles a dog, but rather that the dog was a worthless dog.

- (103) opa opapabi iccosh 'It was a poor excuse for a dog.'
redup opa-pabi ic-o-sh
 Adjzr dog-Deintens be-Past-3

6.8.2 *Verb adjectivalization*

Adjectivalized verbs, like adjectivalized nouns, can only occur in predicative constructions (and not attributive constructions/noun-adjective noun phrases). In the simplest (and least productive) instances, the verb is simply cliticized with one of the adjective modifying/inflectional enclitics (104). More commonly (but still restrictedly), the inceptive suffix -an may precede the enclitic, introducing causation semantics (105). And the most productive situation is for the adjectivalized root to be further class-changed into an adverbs by adding one of the adverbializing enclitics, -ec or -en (106).

- (104) nëid chonoad-te chonoad-tsëcquio ic-e-c
 this.one work-Inst.Nzr work-**Derog:Adjzr** be-Npast-Indic
 ‘This job is unpleasant and too much work (lit., “workful”).’
- (105) bëdi dacuëd-an-pambo ic-e-c
 jaguar be.scared-**Incep-Aug:Adjzr** be-Npast-Indic
 ‘Jaguars are frightening.’ (lit., “scare causing”)
- (106) tanca-mbo-en shëcten-n pe-quid
 make.crushing.noise-**Adjzr-Advzr:Tr** collared.peccary-Erg eat-Hab
 ‘Collared peccaries eat loudly (lit., “noisefully”).’

A-I 043 shëcten 19

While adjectivalizations like the one in (104) are common with only a few verbs, and awkward or disallowed with most other verbs, two variations of this type of adverbialization are very common and applicable to all verbs: abilitative construction (§12.3.1) and negative constructions (§12.3), which I discuss in the complex sentences chapter. As with any class-changing process that decategorizes verbs, whole clauses, including the verb’s arguments and any obliques, can become subordinate clauses. This aspect of verb adjectivalization is described in section 12.3; see also section 12.4.1. It appears as if adjectivalization was more productive in the past, and over time has become less productive, except for with certain verbs (e.g., nibëd ‘not be,’ uënës ‘be sad, to miss’), with special constructions (abilitative/desiderative and negative constructions), and with certain suffix combinations (i.e., with -an and -ec/-en).¹⁶

Since zero-verbalization, as described in section 5.10, involves simply attaching verbal morphology to a non-verb root, one might wonder why I do not call the process described in this section “zero-adverbialization.” There is some motivation for this terminology, considering that unlike with verb nominalization there are no special morphologically distinct adjectivalizing suffixes/enclitics, nor is a process like

¹⁶ The situation is as it would be if in English *-ful* lost productivity, while *-ful-ly* did not.

reduplication required, as with noun adjectivalization. Or one might argue the other way: since I treat the “adjective-modifying enclitics” (those in position 1) as adjective inflection when they occur on adjectives and as adjectivalizers where they occur with verbs, why not similarly treat verbal inflectional suffixes as doubling as verbalizers? The difference essentially has to do with stem formation: when an adjective-modifying enclitic occurs with a verb, one could argue that a new stem has been formed, and any additional adjectival morphology follows the stem (107). By contrast, verbal inflectional morphology (including nominalizers) occur as the last verbal suffixes on a word, with any additional verbal suffixes occurring between the root and the inflectional morphology, so if we called -ac in (108) an verbalizer, we would not be able to identify a contiguous stem.

- | | |
|--|------------------------------------|
| (107) <u>ancad-quio-bi-di</u> <u>ic-e-c</u> | (108) <u>shēni-Ø-bud-ac</u> |
| open- Adjzr -Emph-Same be-Npast-Indic | old-Vzr:Incho-Dur- Infer |
| ‘It is likewise open (e.g., a seed).’ | ‘It got old over time.’ |

The solution would be to say all verbal suffixes are potentially verbalizers, and that the first one that occurs on the verb serves the verbalizing function and creates a stem. While there is no theoretical argument against this analysis (considering there are theoretical problems associated with zeros, as well), it is not descriptively very helpful. Furthermore, inchoative semantics are associated with the process of zero-verbalization, so to keep this description one would have to say that all verbal suffixes are potentially verbalizers and potentially carry inchoative semantics. So basically, for the sake of ease of description, and secondarily to highlight the differences between the two processes, I refer to the creation of inchoative intransitive verbs as “zero-verbalization” and for verb adjectivalization I describe the adjective-modifying suffixes as having dual functions. But at the same time I recognize that the processes are somewhat alike, and the source of

the differences could be narrowed down to the fact that the inflectional morphology occurs in final position with verbs, and first position with adjectives.

6.9 Morpho-syntactically-based classification of adjectives

Having described all the morphological processes that adjectives participate in (and introduced the syntactic constructions that adjectives participate in), we are in a position to evaluate which semantic sub-categories are useful for the description of adjective morpho-syntax. A useful category is one that is correlated with morpho-syntactic patterns that can be used both to characterize the group of roots, and to distinguish them from other adjective categories. The procedure I followed was to make a table with one row for each adjective and one column for each enclitic, one column for prefixation, one column for reduplication and one column for each of the five construction types listed in Table 6.2. Then I searched for all co-occurrences in the text database, putting a + sign in the relevant box. And then all the gaps were checked in elicitation, putting either a + or - in the relevant box in response to speakers' acceptance or rejection of the combination.¹⁷ Once I noticed that reduplication affected whether an adjective could take certain enclitics, I made two tables, one for unreduplicated instances and one for reduplicated instances. Some grammatical processes were not useful, either because they worked consistently for all adjectives, or because they seemed to work idiosyncratically. Other grammatical patterns identified groups of adjectives as grammatically cohesive groups. These results are presented below in section 6.9.2, after first summarizing all the adjectival morphological processes in the preceding sections.

¹⁷ A similar procedure was followed for adverbs and postpositions.

6.9.1 Summary of adjective morphological processes:

Prefixation.— The meaning of prefixes is essentially independent of other morphological processes; i.e., a prefix always designates the body-part/area that it codes. The only variation is that with adjective reduplication, only a section of the body-part/area is referred to.

Reduplication.— The meaning associated with reduplication varies as follows:

- i) simple (unprefixed) reduplication = de-intensification ('somewhat X, X-ish')
- ii) prefixed reduplication = only a section of the prefixed body part is described by the adjective ('partly')
- iii) noun reduplication = noun changed to adjective; entity being described is characterized by possessing/containing the entity coded by the reduplicated noun ('-y' or '-ed', as in *thorny* or *striped*)

Enclitics.— First, it should be noted that not all morphological processes occur in every construction type. In Table 6.5, we can see these differences are essentially limited to the inability of most enclitics to occur in noun-adjective noun phrases. Table 6.6 shows all the different meanings that are associated with the different adjectival enclitics when combined with other morphological processes.

Table 6.5. Distribution restrictions of adjectival morphological processes.

	Attributive phrases (N-Adj NPs)	Predicative constructions
<u>-mbo/-quio</u>	yes	yes
<u>-quimbo</u>	no	yes
<u>-pambo</u>	no	yes
<u>-patsēc</u>	no	yes
<u>-pabi</u>	no	yes
<u>-mbobi</u>	no	yes
<u>-tsēcquio</u>	no	yes
<u>-shē</u>	yes	yes
<u>-penquio</u>	yes	yes
all other enclitics	no (only with NP's as scope)	yes
prefixation	yes	yes
reduplication	yes	yes

Table 6.6. Summary of meanings associated with enclitics in different environments.

	Unreduplicated	Simple reduplication	Prefixed reduplication	Adjectivalization
<u>-mbo/-quio</u>	Aug or empty	empty	empty	empty
<u>-quimbo</u>	Augmentative	—————	—————	—————
<u>-pambo</u>	large	large	large	large
<u>-patsēc</u>	small	Deintens and/or small	Deintens and/or small	small
<u>-pabi</u>	Deintens and complimentary	Deintens	Deintens	Derogative
<u>-mbobi</u>	De-intensifier	—————	—————	—————
<u>-tsēcquio</u>	Derogative	Derogative	small	empty
<u>-shē</u>	Augmentative	Augmentative	Augmentative or Emphatic	Augmentative
<u>-penquio</u>	Negative	Negative	Negative	Negative
<u>-da</u>	Uncertainty	Uncertainty	Uncertainty	Uncertainty

Note: variable meanings in a single boxes are due to the influence of construction type or semantics of the adjectives.

6.9.2 Using morpho-syntactic criteria for subcategorizing adjective roots

Table 6.7 contains those morpho-syntactic process that turned out to be useful for distinguishing groups of adjectives from each other.

Table 6.7. Grammatical properties that distinguish sub-categories of adjective roots.

grammatical property	Semantic adjective categories				
	physical property	color	human propensity	age	value
can bear <u>-pambo</u> or <u>-patsēc</u> without reduplication	none	none	none	none	all
adverbializable with <u>-ec/-en</u> without reduplication	none	none	none	none	all
prefixable	most	all	none	none	none
reduplicable without enclitic	some	all	none	none	none

Looking at Table 6.7 we can see which semantically-based adjective subcategories are useful. The value subcategory is clearly the most useful: roots in this category share the unique grammatical properties of taking the enclitic -pambo and -patsēc without having to be reduplicated, and taking the (manner) adverbializing enclitics -ec/-en (this also makes these the most adverb-like of the adjectives; see §6.10.1). The fact that this category contains only two roots (bēda ‘good’ and icsa ‘bad’), makes this pattern less improbable. The other category that seems useful is color. However, the properties that distinguish color adjectives from human propensity, age, and value adjectives, do not distinguish color adjectives from physical properties categorically. Therefore, color is of limited utility. Human propensity and age are clearly not different and should be combined. Physical property adjectives might best be further subcategorized into smaller groups, but the distribution patterns of enclitics, etc., are not regular enough to do this in a neat or obvious way.

6.10 Adjective-like words

Looking at Table 6.1 at the beginning of this chapter, the first thing we notice in comparison to Dixon’s (1982) semantic classification of adjectives, is that there are no dimension or speed adjectives in Matses. It is common for speed notions to be coded by adverbs in a language (Dixon, 1982), and in Matses, speed adverbs, along with other

manner adverbs, share few properties with adjectives (§7.3.1). By contrast, the fact that the Matses language includes dimension notions with adverbs (most closely allied to the quantifier adverbs) is more surprising, and the morpho-syntactic properties distinguishing adjectives from dimension adverbs are fewer and more subtle. Therefore, I dedicate a short section to distinguishing dimension adverbs from adjectives (§6.10.1), but a full treatment of dimension adverbs can be found in the chapter on adverb morphology (§7.3.6).

The other thing that we notice in Table 6.1 is that whereas Dixon's (1982) characterization of adjectives has very large numbers of roots in the physical property and the human propensity subcategories, in Matses all the subcategories have a reduced number of roots. In fact, if there were not productive adjectivalization processes and incipient borrowing of Spanish roots into the adjective lexical class, it would be hard to justify calling adjectives an open word class in Matses based solely on the number of primitive adjectives. What we find is that many physical property notions are coded by nouns, and many human propensity notions are coded by verbs in Matses. I briefly discuss these adjective-like nouns in section 6.10.2. Verbs coding human propensity-type notions (e.g., *cuishonque* 'be/become happy,' *nēish* 'get angry,' *dacuēd* 'be afraid') are not easily confused with adjectives, but see sections 5.10, 6.2, and 6.8.2 for some comment.

6.10.1 Dimension adverbs

In addition to the expectation that dimension notions (size, length, etc.) should be adjectives, one may confuse dimension adverbs as adjectives due to the fact that they share some morphology and several syntactic positions with adjectives (109 & 110).

- (109) dada bushcu cho-e-c 'Short Man is coming.'
man short come-Npast-Indic
- (110) sedudi-n mapi ania-mbo ic-tsēc-quid
nine.banded.armadillo-Gen head small-Aug be-Dim-Hab
'...but the nine-banded armadillo's head is very small.'

A-I 048 sedudi 03

However, several morphological and syntactic properties distinguish dimension adverbs from adjectives. For example, the enclitic -tsēc 'Diminutive' does not occur on adjectives. Dimension words, particularly those that designate a diminutive notion, can freely take -tsēc (111 & 112; §7.6.4.5).

- (111) tacchish bushcu-tsēc ic-quid 'The stilt roots [of the niste palm] are short.'
stilt.root short-Dim be-Hab

A-I 031 niste 07

- (112) nua-mbo cuesban ic-nuc-bi utsi-bo ania-tsēc
large-Aug bat be-while:Diff.Ref-Emph other-Pl small-Dim
tsad-quid cuesban ne-e-c
be:Pl-Agt.Nzr bat be-Npast-Indic
'Bats are ones that while some bats are large, others are small.'

A-I 051 cuesban 19

Also, while reduplication of adjectives has de-intensification semantics, reduplication of dimension words produces an iterative/distributive reading (113 & 114), as with reduplication of any adverb or of adverbialized adjective (115; §§7.7, 7.8).

- (113) shupud pictsēc pictsēc icquid dedombi
shupud redup pictsēc ic-quid dedo-o-mbi
bag Distr small be-Agt.Nzr carry.on.back-Past-1A
'I carried many small bags.' / *'a smallish bag'

- (114) aidi quënëuaquid bushcutsēc bushcutsen
aid-bi quënë-ua-quid redup bushcu-tsēc-en
 that.one-Emph enclosure-Vzr:make-Hab **Distr** **short-Dim-Manr:Tr**
nacte-shun
 cut-after:S/A>A
 ‘They make walls from that one after cutting many short pieces.’

A-I 032 pēdi 07

- (115) chuca chucamboec iccosh ‘There were many new ones.’
redup chuca-mbo-ec ic-o-sh
Distr new-Aug-Advzr:Intr be-Past-3

IV-144 L18

Furthermore, while -patsēc and -pambo are associated with intensification/de-intensification and size semantics when attached to adjectives (§6.6.2.3), with dimension adverbs they can have a comparative meaning (116; §7.6.4.2).

- | | |
|---|--|
| (116a) <u>ėnapen-patsēc</u> <u>te-∅</u> | (116b) <u>ėnapen-pambo</u> <u>te-∅</u> |
| long- Dim cut-Imper | long- Aug cut-Imper |
| ‘Cut is somewhat long!’ | ‘Cut it long!’ |
| ‘Cut it a bit longer!’ | ‘Cut it longer!’ |

Also, dimension adverbs do not have to bear enclitics to occur in copular constructions (117) or constructions analogous to adverbial adjective constructions (118). This is one of the more practical properties for distinguishing adjectives from adverbs.

- (117) ad-quid-bi podo nua ic-e-c ‘That one’s fronds are large.’
 like.that-Agt.Nzr-Emph frond **large** have-Npast-Indic

A-I 036 shėcmaucudanmės 06

- (118) bacuė nua diad-quid ‘The [compound] fruit hangs large from it.’
 fruit **large** hang-Hab [i.e., ‘The hanging fruit is large.’]

A-I 033 pėdimpi 05

All subclasses of adverbs have the ability to take transitivity agreement enclitics, while no adjective can show any type of transitivity agreement. The intermediate status of dimension adverbs between adjectives and manner adverbs is illustrated by the fact that

they can marginally take the intransitive agreement enclitic -ec (119a), but not the transitive counterpart, -en (119b)

- | | |
|---|---|
| (119a) ? <u>ënapen-ec</u> <u>capu-e-c</u>
long-Manr:Intr walk-Npast-Indic
'It moves by becoming long.' (e.g., inchworm) | (119b) * <u>ënapen-en</u> <u>is-o-sh</u>
long-Manr:Tr see-Past-3
'(He looked by stretching out.)' |
|---|---|

One could argue that in (119a), ënapen-ec is an adverbialized adjective, by analogy to the way value adverbs (bëda 'good' and icsa 'bad') are adverbialized with the formally identical adverbializing enclitics -ec/-en. But dimension terms would still differ from value terms by the fact that value adjectives must be cliticized first by -mbo/-quio before taking -ec/-en (120) and that value adjectives can take either -ec or -en (121).¹⁸ Besides value adverbs, which as mentioned above are the most adverb-like adjectives, no other adjectives can take -ec or -en.

- | | |
|---|-------------------------|
| (120a) <u>bëda-mbo-ec</u> <u>capu-e-c</u>
good-Aug-Advzr:Intr walk-Npast-Indic
'He walks well.' | (120b) * <u>bëda-ec</u> |
| (121a) <u>icsa-mbo-en</u> <u>na-o-sh</u>
bad-Aug-Advzr:Tr do-Past-3
'He did it badly.' | (121b) * <u>icsa-ec</u> |

Dimension adverbs, like all adverbs, cannot be prefixed, but this is not such a useful property for distinguishing them from adjectives since several categories of adjectives cannot be prefixed. Table 6.8 summarizes the properties that distinguish dimension adverbs from adjectives, and allies them with the rest of the adverbs.

¹⁸ Older speakers allowed the form in (120b). I have not checked (121b) with older speakers.

Table 6.8. Grammatical properties that distinguish sub-categories of adjective roots.

grammatical property	All adjectives	Dimension adverbs	Other adverbs ^a
can take <i>-tsēc</i>	no	yes	yes
<i>-patsēc</i> & <i>-pambo</i> = comparative	no	yes	yes
reduplication = de-intensification	yes	no	no
reduplication = iterative/distributive	no	yes	yes
bare roots in copular constructions	no	yes	yes
transitivity agreement	no	yes	yes
must follow noun in noun phrase	yes	no	no
prefixation	yes (some)	no	no

^a Not “all other adverbs”; i.e., these properties are possessed by at least some adverbs, but not necessary all members of the adverb lexical class.

In the end, it must be said that dimension adverbs are not drastically different from adjectives, especially from the value adjectives, but they clearly pattern morpho-syntactically more closely with the adverbs than with adjectives.

6.10.2 Adjective-like nouns

Some nouns appear to be adjectives not only because of their semantics, but also because they are often found in syntactic positions and take morphology that nouns and adjectives share, such as prefixation and postnominal position in noun phrases. Take for example the lexicalized names for two species of tamarins (squirrel-like primates), which are structurally identical except for the fact that the name for the saddle-back tamarin (*Saguinus fuscicollis*) is modified by a noun (122a) and the name for the mustached tamarin (*Saguinus mystax*) is modified by an adjective (122b).

(122a) *sipi* ca-bēdi
 tamarin back-variation
 ‘spotted-backed tamarin’

(122b) *sipi* ēc-sed
 tamarin lip-white
 ‘white-lipped tamarin’

Similarly, in other constructions where nouns must be adjectivalized to function as adjectives (123a), one could easily confuse the reduplicated form for a de-intensified adjective (123b).

- (123a) aton bacuë senadën bacuë bëdi bëdipatsëc icquid
aton bacuë senad-n bacuë redup bëdi-patsëc ic-quid
 3Gen offspring deer-Gen offspring Adjzr variegation-Dim be-Hab
 ‘It’s young, the deer’s young, are spotted.’

A-I 046 senad 04

- (123b) senadën bacuë piu piupatsëc icquid
senad-n bacuë redup piu-patsëc ic-quid
 deer-Gen offspring Deintens red-Dim be-Hab
 ‘The deer’s young are reddish.’

Several important morpho-syntactic properties of adjectives distinguish these nouns from adjectives. These include the lack of de-intensification semantics associated with reduplication (123a & 124a), the inability to take -mbo/-quio in copular constructions when not reduplicated (124b), and the inability to take most of the other adjectival enclitics when not reduplicated/adjectivalized (124c & 124d).

- (124a) tsise incuente sëdëc sëdëcquio iquec tsise
tsise incuente sëdëc redup-quio ic-e-c tsise
 coati tail stripe Adjzr-Aug be-Npast-Indic coati
 ‘The coati’s tail is striped...the coati.’ /*‘kind of striped’

A-IV 028 tsise 03

- (124b) sëdëc-quio ic-e-c
 stripe-Aug be-Npast-Indic
 *‘It is striped.’
 ?‘There is a true stripe.’
- (124c) *sëdëc-pambo
- (124d) *sëdëc-pabi

In addition to not sharing these adjectival properties, nouns have many grammatical properties of their own that adjectives do not have, such as taking enclitics like -mpi ‘small,’ possessibility, ability to be arguments, etc. (more in §6.2 & Table 3.3).

6.11 Summary: functions of adjectives and adjective morphology

We notice that adjectives have different functions in the different constructions. In noun-adjective noun phrases, and in noun phrases with adjectives in relative clauses, the adjective always serves an attributive function, while in copular clauses, adjectives have a predicative function (see Bolinger 1967 and Thompson 1988 for definitions of these terms). Relativized copular clauses use predicative syntax clause-internally to perform an attributive function, modifying a head noun. Furthermore, we note that in noun-adjective noun phrases, adjectives always assign a characteristic (permanent) property to the noun, while in relative clauses and copular clauses, the adjective may designate either a characteristic or an occasional (transient) value (Bolinger 1967). In adverbial adjective constructions, the function of the adjective seems to predicate some property to some entity indirectly via the verb, rather than to modify the action, as a manner adverb would.

The most common adjectival enclitics function to modify adjectives. This modifying morphology has come also function to mark the predicative position for all adjectives. In this latter function, this position class has become inflection-like, exhibiting the following properties typical of inflectional morphology: i) obligatory status; ii) semantic bleaching of the most common forms; iii) fusional forms (i.e., quasi-segmentable portmanteau enclitics); iv) paradigmatic contrast; and v) (size) agreement.

CHAPTER 7

ADVERBS

7.1 Introduction

Adverbs are considered here an open lexical class because there exists productive adverbialization in the language: adjective and verb roots can be adverbialized through suffixation. However, the adverb lexical class differs from prototypical open classes like nouns and verbs in that there is a small number of adverb roots. So far I have only encountered 51 different roots (Table 7.1), only 6 fewer roots than adjectives.

Adverbs in Matses, as with most languages, cannot be characterized semantically with a single prototype: adverbs typically consist of concepts that modify verbs and adjectives, or provide locative, temporal, or circumstantial information at the clausal level. Matses has the typologically unusual feature (according to Schachter's [1985] characterization) that some adverbs are noun modifiers. Despite their varied semantic properties, adverbs can nevertheless be identified as a cohesive group of roots by the morpho-syntactic properties they share. But even so, the adverb category contains several distinct subclasses, such as quantifiers and interrogative adverbs, that another linguist might have divided up and placed in additional lexical classes. Similarly, the postposition and adverb classes could have been combined. Two guiding principles led to my present categorization: i) number of shared vs. distinguishing morpho-syntactic properties; and ii) practicality and efficiency for grammatical description, which is directly associated with the first principle.

Table 7.1. Classification of adverbs based solely on semantic properties (n = 51).

Manner adverbs:			
<u>baded</u>	'quickly'	<u>natia</u>	'intensely, many, in vain'
<u>cumapen</u>	'intensely'	<u>ac(-quimbo)</u>	'intensely'
<u>buêd</u>	'intermediately'	<u>bêdia^a</u>	'softly'
<u>otacquo</u>	'quietly'	<u>(i)sesembo</u>	'often'
<u>padpide</u>	'again'	<u>iu</u>	'for a long time'
Adjective-modifying adverb:		<u>bêdia^a</u>	'De-intensifier'
Locative and temporal adverbs:			
deictic adverbs:			
<u>nê</u>	'here, now, soon, near'	<u>a</u>	'there (by 2 nd person), still, then'
<u>u</u>	'there (distal to 1 & 2), far'	<u>ano</u>	'there (invisible), that day'
<u>ëna</u>	'here, near'	<u>uanno</u>	'apart, far'
<u>ënapen^a</u>	'far'	<u>uque</u>	'another place'
<u>abiuc</u>	'right'	<u>opioc</u>	'left'
<u>ënden^a</u>	'earlier, yesterday, long ago'		
non-deictic locative adverbs:			
<u>abuc^a</u>	'high, up'	<u>mapictsêc^a</u>	'low'
<u>nimêduc</u>	'in primary forest'	<u>anshantuc</u>	'in a swamp'
<u>mananuc</u>	'in upland forest'	<u>tsimpiduc</u>	'in a valley'
non-deictic temporal adverb:		<u>ënden^a</u>	'early'
Noun-modifying adverbs:			
dimension adverbs:			
<u>nua</u>	'big, wide, thick, much,'	<u>ania</u>	'small, thin, narrow, sm. amount'
<u>ënapen^a</u>	'long, far, tall'	<u>pictsêc</u>	'small, small amount'
<u>abuc^a</u>	'tall'	<u>mapictsêc^a</u>	'short (vertical)'
<u>bushcu</u>	'short (general)'	<u>amê</u>	'large'
quantifiers:			
<u>abentsêc</u>	'one, alone'	<u>daêd</u>	'two'
<u>dadpen</u>	'many'	<u>dadempa</u>	'many'
<u>daêdpatsêc</u>	'few'	<u>abichobi</u>	'entire'
<u>têma</u>	'few'	<u>abitedi</u>	'all/every'
noun-identifying adverbs:		<u>utsi</u>	'another'
Proadverbs:			
<u>nad</u>	'like this'	<u>ad</u>	'like that'
Interrogative (and indefinite) adverbs:			
<u>mitsi/mida</u>	'where'	<u>tentsi/tenda</u>	'how large'
<u>tedtsi/tedta</u>	'how many'	<u>tionsi/tionda</u>	'how long'

^a Listed twice; i.e., polysemous.

The morpho-syntactic properties unifying the adverb category and separating it from other lexical classes is the topic of the following section. The rest of the chapter is organized around the hypothesis that a semantic classification of Matses adverbs (as in Table 7.1) will correlate with a morpho-syntactic classification of adverbs. I will first describe the semantics and usage of all the individual adverbs in section 7.3. After reading section 7.3, the reader will note that several functions performed by adverbs in English are absent in Matses roots: the morphological and other grammatical means of coding adverbial notions in Matses are described in section 7.4. Section 7.5 describes some of the formal patterns present in the adverb roots (e.g., endings in uc), and considers whether these formal patterns correlate with any semantic classes of adverbs. Then I describe all the morphological properties available to adverbs, including all the different enclitics (§7.6) and reduplication (§7.7). Section 7.8 describes the different adverbialization processes. This being a morphology chapter, description of adverb syntax is reserved for the syntax chapters; here I only briefly list the syntactic properties of adverbs that are relevant to their morpho-syntactic categorization (§7.9). Then I finally classify the adverbs according to the described morpho-syntactic patterns and compare the categories to the semantically-based classification.

7.2 Distinguishing adverbs from other lexical classes

As mentioned above, despite containing several different classes, adverbs share many morphological and syntactic properties that identify them as a class and distinguish them from other roots in the language. Table 3.4 in section 3.3 summarizes all the grammatical properties that distinguish root classes from each other, and in the preceding chapters I have described the differences among nouns, verbs, and adjectives and the other lexical classes, including adverbs, so here I will just highlight the more important points.

A general statement can be made that adverbs take no affixes: they take enclitics, but no affixes. As defined in section 3.2.3, suffixation is restricted to verbs. Prefixation occurs only on nouns, verbs, and adjectives, so the lack of affixes is a general characteristic that distinguishes adverbs from the other open lexical classes. Most adverbs either can or must take transitivity agreement enclitics (-ec, -en, -uësh, -shun; §7.6.1). Transitivity agreement is a property that is completely unique to **adverbials** (adverb words, adverbial phrases, adverbial clauses, and postpositional phrases). Adverbs differ from nouns in that they cannot take case-marking enclitics, cannot occur with postpositional enclitics, and cannot occur with plural enclitics (e.g., -bo ‘plural’) or size-marking nominal enclitics (e.g., -mpi ‘small’ and -dapa ‘large’). Nouns and adjectives can be fairly readily zero-verbalized (semantics permitting), but adverbs (and postpositions and particles) are always awkward to zero-verbalize. Reduplication of adverbs always carries distributive semantics, while reduplication of adjectives carries a de-intensification meaning, and reduplication of nouns has an adjectivalization function. Reduplication of verbs has multiple meanings, including iterative, distributive and ‘hastily,’ and reduplication of postpositions has the same semantics as adverb reduplication.

Syntactic properties of adverbs are also useful for distinguishing them from other lexical classes. Their most unique property can be characterized as “syntactic independence.” Unlike nouns, adverbs are never obligatory core arguments of verbs, and unlike verbs and postpositions, they do not code obligatory participants (A, S, O, or postpositional object). Particles either must occur in a fixed location in a phrase or clause, or must occur at sentence margins. Adjectives are syntactically similar to adverbs, but unless part of a noun phrase, they occur in a more limited number of

construction types (copular constructions and adverbial adjective constructions); adverbs can occur in pretty much any clause type.

The membership of some roots in the adverb category may be controversial, or at least surprising. One example is roots denoting dimension (size) concepts, which might be expected to form a subcategory of adjectives (Dixon, 1982). Accordingly, of the different subcategories of adverbs, dimension adverbs are most similar morpho-syntactically to adjectives; however, the multiple properties that distinguish dimension notions from adjectives and at the same time ally the dimension notions to the adverbs are laid out in detail in the adjective chapter (§6.10.1). Another example is the class of quantitative adverbs, which look like (and some of which are obviously derived from) pronouns. The distinctions between these and nouns are discussed in section 7.3.7 below. The subclass of manner adverbs is the most distinct morpho-syntactically from the other lexical classes, yet noun-modifying adverbs (including quantifiers and dimension adverbs) are actually more similar to manner adverbs than are locative adverbs.

While I stand firm behind my classification of quantitative and dimension adverbs, I have often wavered on my decision to exclude postpositions from the adverb category. Adverbs are distinguished from postpositions essentially by a single (but very significant) property: postpositions can all take a noun as a postpositional object, while adverbs cannot. And complicating matters, some postpositions can have covert third-person postpositional objects, and a few actually occur polysemously as adverbs. Essentially, I look at it as postpositions not really being adverb-like, but as elements that create postpositional phrases, and postpositional phrases having essentially the same grammatical properties as any adverbial (adverb word, adverb phrase, adverb clause or

postpositional phrase). More on my justifications to exclude postpositions will be found in sections 3.3 and 8.2.

It should be mentioned before moving on that what makes adverbs an open class is the productive process of creating *manner* adverbs, whereas there is no productive process for creating any of the other subcategories of adverbs.

7.3 Semantic description of adverbs

It is possible to classify adverbs based solely on semantics. The function of an adverb is not unrelated to its meaning, and so it is reasonable to predict that a semantic classification of adverbs will match a morpho-syntactic classification of adverbs. At the end of this chapter I will classify the adverbs based on grammatical patterns of adverbs described in this chapter and in the syntax chapters. But for now, for the sake of initial presentation of the Matses adverbs, I will introduce them following the semantic classification in Table 7.1. Polysemy patterns encourage the present classification over other possible ones, but in the end how one classifies adverbs based solely on semantics involves some arbitrary decisions (e.g., number of categories). In the subsections of the present section, I will introduce all of the adverbs in the language, briefly presenting their meanings and exploring the polysemy patterns that exist among them.

7.3.1 *Manner adverbs*

Manner adverbs share the semantic property of describing *how* an action was carried out. Matses manner adverb roots modify an action by specifying the intensity, speed, (aural) volume, or aspect (e.g., iterativity, repetition) with which the event was carried out. We find polysemy that is worth sorting out among the intensity, speed, and volume meanings in a subset of the manner adverbs (Table 7.2).

Table 7.2. Polysemy in some manner adverbs; basic meanings in **bold**.

	Intensity	Speed	Volume	Quantity	Modality
<u>baded</u>		'quickly'			
<u>natia</u>	'intensely'	'quickly'	'loudly'	'many'	'futilely'
<u>cumapen</u>	'intensely'	'quickly'	'loudly'		
<u>ac</u>	'intensely'	'quickly'	'loudly'		
<u>buëd</u>	'intermediately'	'intermediately'	'intermediately'		
<u>bëdia</u>	'softly'	'slowly'	'quietly'		
<u>otacquio</u>			'quietly'		

I recognize two distinct types of polysemy in Table 7.2: i) **context-dependent polysemy**, where there is a clear basic meaning, and the other meanings that occur are fully predictable from the semantics of the matrix verb; and ii) **context-independent polysemy**, where it is difficult to pick a single meaning as basic, and the meaning that the adverb will have with a particular verb is apparently idiosyncratic. The first pattern is instantiated by the adverbs cumapen, ac, buëd, and bëdia. With most verbs, these adverbs refer to the intensity of force with which the event is carried out (1-4).¹

(1a) cumapen-en cues-o-sh
intensely-Manr:Tr hit-Past-3
 'He hit him **hard**.'

(1b) bëdia-tsëc cues-o-sh
softly-Dim hit-Past-3
 'He hit him **softly**.'

(2a) ac-quo-en bushca-Ø
intensely-Aug-Manr:Tr blow-Imper
 'Blow (the tobacco snuff) **hard**.'

(2a) buëd-patsëc bushca-Ø
intermediately-Deintens blow-Imper
 'Blow it **so-so** (intermediately).'

¹ It may be confusing to the reader at this point that some manner adverbs occur with the manner transitivity agreement suffixes (-ec and -en). For now, suffice it to say that some manner adverbs require them, while other manner adverbs cannot occur with them. The form of these adverbs and the function of -ec/-en will be described in sections 7.5.3 and 7.6.1.1.

- (3) ac-quimbo-ec-shë ichad-quid ad-quid-bi
intensely-Aug-Manr:Intr-Aug **stink**-Hab like.that-Agt.Nzr-Emph
shëcten ne-e-c
 collared.peccary be-Npast-Indic
 ‘It stinks very **strongly**; that is how the collared peccary is.’

A-I 043 shëcten 10

- (4) ac-quimbo-ec tëccuaisque-an-quid
intensely-Aug-Manr:Intr **make.water.turbid**-Antpass-Hab
cho-ec-bi
 come-while:S/A>S-Emph
 ‘[The armadillo] **forcefully** makes the water turbid as it comes out.’

A-I 047 tsaues 24

With verbs denoting the production of sound, these adverbs refer to the volume (5-7).

- (5a) bëdia-tsëc onque-o-sh (5b) buëd-pambo onque-o-sh
softly-Dim talk-Past-3 **intermediately**-Aug talk-Past-3
 ‘He talked **quietly**.’ ‘He talked a **bit loudly**.’

- (6) adembidi memupaid-n pe-quid cumapen-ec
 likewise:Tr capybara-Erg eat-Hab **intensely**-Manr:Intr
sosque-quin
make.gnawing.sound-while:S/A>A
 ‘The capybara also eats [palm nuts], making a **loud** gnawing sound.’

C-III 001 shëcten 03

- (7) adashicmatses-n cuen-me-quid ac-quimbo-en
 then Matses-Erg run.off-Caus-Hab **intensely**-Aug-Manr:Tr
cuëd-quin
 call-while:S/A>A
 ‘Then Matses make [the jaguar] run off by yelling **loudly**.’

A-IV 036 bëdi dapa 35

And with verbs that involve locomotion (spatial displacement of the subject) they refer to speed (8).

- (8a) cumapen-ec titinqe-o-sh (8b) bëdia-tsëc titinqe-o-sh
intensely-Manr:Intr run-Past-3 **softly**-Dim run-Past-3
 ‘He ran **quickly**.’ ‘He ran **slowly**.’ (possibly not softly)

It is not unusual for more than one of these meanings to apply naturally with a verb, and thus we find cases where more than one of the possible meanings could apply alternatively (9) or simultaneously (10).

- (9a) cumapen-ec capu-e-c (9b) bëdia-tsëc capu-e-c
intensely-Manr:Intr locomote-Npast-Indic **softly**-Dim locomote-Npast-Indic
 ‘He walks **strongly** (e.g., stomping)/**fast**.’ ‘He walks **softly/slowly**.’
- (10) nëishamë cues-quid-n-quo matses-n bëdia-tsëc-quo nid-shun
 tapir kill-Agt.Nzr-Erg-Aug Matses-Erg **softly**-Dim-Aug go-after:S/A>A
ue-sho istuid-tanquin matses-n cues-quid
 lie.down-when:S/A/O>O find-after:S/A>A Matses-Erg kill-Hab
 ‘The good tapir killers walk **softly/slowly/quietly** and come upon them while they are still lying down (i.e., before they run off), and then kill them.’

C-III 001 shëcten 24

These distinctions in the polysemous meanings are not just an artifact of the English translations, as can be seen by contrasting these polysemous adverbs with the non-polysemous adverbs baded ‘quickly’ and otacquo ‘quietly,’ which have a single, context-independent, invariant meaning, restricted to the temporal and aural domains, respectively. While baded and otacquo could be substituted for cumapen in (8a) and for bëdia in (5a), respectively, without a significant change in meaning at all, similar substitutions in pairs like (11) and (12) would result in quite different meanings.

- (11a) baded-quo ush-o-sh
quickly-Aug sleep-Past-3
 ‘He went to sleep **quickly** (i.e., early).’
- (11b) cumapen-ec ush-o-sh
intensely-Intr sleep-Npast-3
 ‘He slept **deeply**.’/*‘quickly’
- (12b) otacquo chonoad-e-c
silently work-Npast-Indic
 ‘He works **silently**.’
- (12b) bëdia-tsëc chonoad-e-c
softly-Dim work-Npast-Indic
 ‘He works **lethargically**.’/*‘silently’

The adverb natia instantiates the second polysemy pattern, context-independent polysemy, where the meaning of the adverb is generally not predictable from the

semantics of the verb. The adverb natia can mean ‘intensely’ (13 & 14), ‘many’ (15 & 16), or ‘futilely’ (17).

- (13) natia mani bun-quid ‘They **strongly** desire plantains.’
intensely plantain want-Hab
H-XVII 039 cuesban 14
- (14) natia-mbo pisad-e-c mapiocos
strongly-Aug stink-Npast-Indic common.opossum
‘The common opossum stinks **strongly**.’
A-IV 045 mapiocos 04
- (15) cuesban inchësh-n natia-mbo-shë mamën-an-e-c
bat dark-Loc **many**-Aug-Aug laugh-Incep-Npast-Indic
‘At night, **many** bats begin laughing.’ (*‘laughing intensely/loudly’)
A-I 051 cuesban 03
- (16) natia shayaque-e-c ucosh ucosh ucosh
many locomote:Pl-Npast-Indic flapping.noise flapping.noise flapping.noise
‘They fly in **big groups**: [bat flapping imitations].’ (*‘flap loudly/intensely’)
G-XV 063 cuesban 03
- (17) natia-mbo uëdësca-o-sh
futilely-Aug dig-Npast-3
‘He dug **in vain** (e.g., the digger thought he could dig an armadillo out of its burrow, but it was futile).’ (*‘many diggers,’ *‘dug intensely’)

Sometimes two of these meanings apply, alternatively (18 & 19) or simultaneously (20).

- (18) natia-mbo capu-e-c ‘He walks energetically/quickly.’
intensely-Aug locomote-Npast-Indic ‘They walk around in a group.’ (*‘in vain’)
- (19) natia-mbo ubi cuëd-o-sh ‘He yelled at me very loudly.’
intensely-Aug 1Abs call-Past-3 ‘He insulted me severely.’ (*‘in vain’)
- (20) natia-mbo titinqe-o-sh ‘He ran quickly (so it would be futile
intensely-Aug run-Npast-3 to race him).’ (*‘many ran’)

It can be predicted that if the ‘intensely’ meaning applies, with verbs like run, the temporal domain meaning (‘quickly’; 18) will obtain; similarly in (19) the ‘loud’

meaning is expected to obtain, so this part of the pattern is not completely random. But I have not found any principle that would predict whether the ‘intensely,’ ‘many,’ or ‘futilely’ meaning(s) will apply with any particular verb based on the semantic class or grammatical classification (e.g., transitivity) of the verb. It seems that with this type of polysemy, the meanings of adverbs like natia must be learned individually for each verb.

The three remaining manner adverbs refer to aspectual properties of the event, two of these to the repetition of an event. One, padpide, simply denotes that the action is repeated once again (21 & 22), while the other, (i)sesembo,² indicates that the action is done repeatedly many times (23 & 24). Thus semantically they are quite similar.

- (21) ad-shun padpide-en anshonca-quiv
do.thus-after:S/A>A **again**-Manr:Tr bother.poking-Hab
‘After that they bother it **again** poking inside the hole.’

A-I 047 tsaues 06

- (22a) ad-shun matses-n chua-en-quiv ic-quiv se-quiv
do.thus-after:S/A>A Matses-Erg miss-Neg-Aug Aux-Agt.Nzr shoot-Hab
acate-n se-ad-shun
tree.toad.poison-Inst pierce-Pass-after:S/A>A
‘After that, Matses do not miss when they shoot (arrows), after having themselves pierced with tree toad poison.’

A-XIII 019 acate 17

- (22b) ashic padpide-ec acate-n-bi matses dē-ne-ad-quiv
then again-Manr:Intr tree.toad.poison-Inst-Emph Matses nose-blow-Pass-Hab
‘Then, **next time**, Matses have that same tree toad poison blown up their noses.’

A-XIII 019 acate 18

- (23) sesembo-en nēnē-n dē-ne-ad-e-c
often-Manr:Tr tobacco-Inst nose-blow-Pass-Npast-Indic
‘They are always having tobacco snuff blown up their noses.’

- (24) isesembo-ec shubi-o-sh ‘He cried frequently.’
often-Manr:Intr cry-Past-3

² isesembo and sesembo seem to be sociolinguistic alternants.

Note in the text sequence in (22) that padpide is appropriate in (22b) even though the first action (22a) involves piercing, and the second blowing—a situation in which English speakers would not likely use *again*. The last manner adverb is similar to padpide and (i)sesembo in that it also provides temporal aspectual information with respect to the matrix verb (25).

- (25) iu-en abuc cado-quin tënësh-e-c
 for.a.while-Manr:Tr high lift-while:S/A>A strangle-Npast-Indic
 ‘He strangles it [the peccary], lifting it high for a long time.’

G-XV 001 shëcten 20

Although this adverb does not have polysemous meanings, it could be marginally categorized also under the dimension adverb subcategory because it refers to a temporal distance (i.e., a span of time). Similarly, because it contains temporal information, it could be said to be a non-deictic temporal adverb. Here I include iu only with the manner adverbs, as the other categorizations are not really consistent with its meaning.

7.3.2 Adjective-modifying adverbs

Adjectives are modified principally by encliticization and reduplication. For example, English adverbs like *very* and *somewhat* are translated into Matses using an enclitic (26; §6.6.3) and as reduplication (27; §6.7), respectively.

- (26) iuë-mbo-shë (27) iuë iuëmbo ‘somewhat heavy.’
 heavy-Aug-Aug redup iuë-mbo
 ‘very heavy.’ **Deintens** heavy-Aug

There is, however, one adverb which *can* be used to modify adjectives. This is the adverb bëdia ‘De-intensifier’ which occurs polysemously as a manner adverb meaning ‘softly’ (see preceding section). It alters the meaning of the adjective it modifies somewhat differently from reduplication (at least for some adjectives). In example (28),

the use of both bēdia and reduplication appears redundant, but as can be seen in (29), bēdia means something more like ‘less of’ and reduplication something like ‘less prototypical.’

- (28) bēdia piu piumbo ictsēcquid uadē nec
bēdia redup piu-mbo ic-tsēc-quid uadē ne-e-c
 Deintens Deintens red-Aug be-Dim-Agt.Nzr titi.monkey be-Npast-Indic
 ‘The little titi monkeys are ones that are a little reddish.’

A-IV 002 uadē 03

- (29a) bēdia-mbo piu-mbo
 Deintens-Aug red-Aug
 ‘barely/lightly red’
- (29b) piu piumbo
redup piu-mbo
 Deintens red-Aug
 ‘reddish’ (i.e., orange, pink, etc.)

One might expect that the semantic opposites of bēdia, natia ‘many/intensely/futilely,’ cumapen ‘intensely,’ or acquimbo ‘intensely,’ would also function to modify adjectives. But they do not. Also, no adverbs can be used to modify manner adverbs. When two manner adverbs occur in series, as in (30), they both modify the verb, rather than one modifying the other.

- (30) debi cho-o-sh bēdia-mbo otacquo ‘Davy came slowly and quietly’
 Davy come-Past-3 Deintens-Aug quietly *‘Davy came a bit quietly.’

7.3.3 Deictic and demonstrative adverbs

I adopt the definition of **deictics** in Anderson and Keenan (1985:259), “Following standard usage, we consider as *deictic expressions* (or *deictics* for short) those linguistic elements whose interpretation in simple sentences makes essential reference to properties of the extralinguistic context of the utterance in which they occur.” In other words, morphemes that have different referents depending on unspoken factors, such as the circumstances of the speech act. Rather than specifying a particular referent, these words

or affixes specify how to identify the referent in relation to a **deictic center** (or **deictic reference point**), which happens to usually be, by default, the speech act. We can talk about three types of deixis with speech act circumstances defining the deictic centers: spatial (deictic center: location of speech act), temporal (time of speech act) and person (speaker and addressee). Here, I will describe those roots that primary code spatial and temporal deixis, which happen to be adverbs in Matses; roots coding person deixis (personal pronouns) are described in section 4.4.1. Other important means of coding spatial deixis are verbal directional suffixes (e.g., -tan ‘moving away from speech act’; §5.5.3) and locomotion verbs with an incorporated direction meaning (e.g., cho ‘come,’ bë ‘bring’). Another important means of coding temporal deixis is tense inflectional suffixes (§5.6). Postpositions (next chapter) provide spatial and locative orientation, but with respect to a specified Ground, rather than an extralinguistic reference point (though some have implicit secondary reference points).

Most of the adverbs in Matses that refer to spatial or temporal location are deictic in nature, and most deictic adverbs have polysemous spatial and temporal meaning. In light of these polysemy patterns, it makes sense to group temporal/locative/deictic adverbs into a single semantic category. At the same time, since this forms the largest category of adverbs, it is interesting to subcategorize it, both for ease of description, and to see if semantic differences are associated with grammatical differences or reveal patterns in the polysemy. The most logical subdivision, between spatial and temporal adverbs, turns out to be impractical as there is but one temporal adverb that is not polysemously spatial (enden ‘earlier, early’). The tripartite classification of this group of adverbs that I adopt here, i) deictic adverbs (this section), ii) non-deictic location adverbs (next section), and iii) non-deictic temporal adverbs (§7.3.5), is guided by the interesting observation that while most deictic adverbs exhibit polysemy with meanings in both the

spatial and temporal domains, non-deictic locative adverbs do not exhibit such cross-domain polysemy. Since my classification minimizes cross-categorization, it simplifies the semantic description of these adverbs, which follows directly.

The first set of deictic adverbs that I will describe are demonstrative adverbs. Demonstrative expressions are those that, in addition to referencing a deictic center (always the speech act, in Matses), are accompanied by (or at least quite compatible with) pointing with a hand, chin, direct gaze or some more subtle means, such as simply timing in response to a person or entity entering the scene. In Matses, demonstrative adverbs treat the speech act as having within it two locative deictic centers: the location of the speaker and the location of the addressee, which, in most situations, are at least a bit apart. There are three basic demonstrative adverb roots (Table 7.3), which form a “person oriented three-term system” for expressing spatial deixis (as opposed to a *distance* oriented three-term system, like Spanish *este*, *ese*, and *aquel*; Anderson and Keenan 1985:282).

Table 7.3. The three basic demonstrative adverb roots and their polysemous meanings.

Root	Demonstrative spatial meanings	Non-demonstrative spatial meanings	Temporal meanings
<u>nĕ</u>	‘here (near 1 st person)’	‘near’	‘now, today, soon’
<u>a^a</u>	‘there (near 2 nd person)’	—	‘presently, then’
<u>u</u>	‘there (not near 1 st or 2 nd person)’	‘far’	—

^a Note that there exists a third-person personal pronoun form a (see §§ 4.4.1 & 4.4.4).

I will first outline all the meanings associated with each of the demonstrative deictic roots. The root nĕ has the basic (demonstrative) spatial deictic meaning of ‘location near the speaker,’ similar to the English *here* or the Spanish *aquí*. Whether the entity being pointed to (or simply verbally referred to) is also near the hearer or a third

person is not relevant—proximity to the first person takes precedence and the form në is used regardless of proximity to another person or entity. The other spatial deictic meaning of në, ‘near/nearby/not far’ is also understandable in terms of proximity to the first person, but not in a demonstrative sense. In its non-demonstrative use, the location of the speech act is the default deictic center (31a), but unlike the demonstrative use of në, a deictic center other than the location of the speech act can be specified (31b).³

(31a) mayan-n sebad në-bi ic-o-sh
 demon-Gen clearing near-Emph be-Past-3
 ‘The demon’s swidden [a rainforest habitat type] is near (here).’

(31b) mactac ic-ac-no-uësh mayan-n sebad në-bi ic-o-sh
 mineral.lick be-Act.Nzr-Loc-Intr demon-Gen clearing near-Emph be-Past-3
 ‘The demon’s swidden is not far from the salt lick.’

This can be considered a type of “relative deixis” in that it involves a shift in deictic centers such that a different perspective point is established by the discourse, and the location of the utterance is no longer relevant, but the same form is nevertheless used. It is perhaps unsurprising, but I will mention that I have found that in Matses, shift to a non-speech-act deictic center is limited to non-demonstrative meanings.⁴

The temporal deictic use of në is easily linked to its spatial use: ‘now’ can be easily interpreted as ‘a point in time temporally proximate to the speech act,’ the speech act being produced by the speaker (first person). The ‘now’ meaning in Matses is more ample than that of the term *now* in English, containing as well the more temporally extended time periods of ‘today’ (32) and ‘nowadays’ (33). The ‘soon’ meaning of në is parallel to its ‘near’ meaning: ‘a short temporal distance away from the speech act’ (34),

³ This is a good example of the distinction between adverbs and postpositions: if nëbi was polysemously a postposition, it would take mactac as its postpositional object, but it can’t.

⁴ With the exception of quotation, which is always direct and therefore the perspective of the quoted person is adopted in terms of person, space, and time (§12.5.1).

or ‘a short temporal distance away from some other specified temporal deictic center’

(35).

(32) nē-bi-da nid-e-Ø ‘Are you going to leave today?’
today-Emph-Uncert go-Npast-Interr:1/2

(33) chompian-n cues-e-c nē-bi ‘Nowadays they kill them with shotguns.’
shotgun-Inst kill-Npast-Indic now-Emph

1-p56-B poshto 09

(34) nē-bi cho-e-c ‘He will be here soon.’
soon-Emph come-Npast-Indic

(35) ad-sho podo an-se-ac nē-bi
do.thus-when:S/A/O>O arm inside-pierce-when:O>S/A soon-Emph
uēnēs-quid nēishamē
die-Hab tapir
‘When that happens to it, if it pierces it under the front leg, the tapir dies right
away (after getting pierced).’

A-XIII 023 nēishamē dectante 21

The demonstrative spatial meaning of a encompasses only a portion of the meaning of the English *there*: it refers to a location near the second person but not near the first person (comparable to Portuguese *aí*). The spatial deictic adverbial use of a is more restricted than that of nē, as a does not have a non-demonstrative deictic spatial use (e.g., ‘far,’ ‘near’). The temporal demonstrative meaning associated with a is somewhat unexpected: a has an imperfective aspectual meaning translatable as something like ‘presently ongoing (i.e., during the speech act)’ (36a) or ‘still’ (36b).

(36a) a-bi cho-e-c
presently-Emph come-Npast-Indic
‘He is (now) coming’

(36b) a-bi capu-e-c
still-Emph hunt-Npast-Indic
‘He still hunts.’ [e.g., an old man]

Both nē and a can refer to the same tense (present), but there is always an aspectual difference. For example, in (37), nē codes inchoative aspect (potentially along with contrastive semantics), while in (38), a marks continual aspect.

- | | | | | | |
|------|------------------|------------------------|------|--------------------|------------------------|
| (37) | <u>nē</u> -bi | <u>cuishonque-e-bi</u> | (38) | <u>a</u> -bi | <u>cuishonque-e-bi</u> |
| | now-Emph | be.happy-Npast-1S | | still-Emph | be.happy-Npast-1S |
| | ‘Now I’m happy.’ | | | ‘I’m still happy.’ | |

These meanings might just as easily have both been consigned to nē, as they refer to a temporal period proximal to the speaker. But in retrospect, it can be understood that the temporal proximity is not just to the speaker, but to the speech act, in which the hearer is similarly directly linked. Thus, the temporal meanings of a could be described as ‘temporally near the hearer.’ This accounts for the tense meanings satisfactorily, but I can only speculate about the aspect-person associations: perhaps a connection is the speech act as speech emanating from the speaker = starting = inchoative.

The root a has additionally a discourse function: it can refer to a location (39) or a time period (40) that was previously mentioned by the speaker (regardless of its actual proximity to the hearer), roughly translatable into English as ‘there’ and ‘then.’

- (39) cho-e-c que-shun cain-quad a-shun-quo-bi
 come-Npast-Indic say-after:S/A>A wait-Hab **there**-Ev.Init:Tr-Aug-Emph
 ‘They say, “(the armadillo) is coming!” and then they wait right **there** (beside the armadillo burrow).’

A-I 047 tsaues 28

- (40) a-mbo chiesh-do-o-bi ‘That’s when I really got mad.’
 then-Aug get.mad-Incep-Past-1S

The basic demonstrative deictic spatial meaning of u consists of the other portion of the English *there*: it refers to an entity that is not near the first or the second person (41a) (comparable to the Portuguese *lá*). This root can also mean ‘far’ (41b), a

non-demonstrative spatial meaning that is also deictic, and does not necessarily take the speech act as the deictic center (42). Note that this is another instance of deictic shift occurring only with the non-demonstrative meaning.

(41a) u ic-e-c
there be-Npast-Indic
 'There it is!'

(41b) u ic-e-c
far be-Npast-Indic
 'It is far away.'

(42) u u nid-quid bēdi-dapa u acte utsi-n
far far go-Hab jaguar-large **far** river other-Loc
 'Far! Far! Jaguars travel far, to another river.'

A-IV 036 bēdi dapa 27

The other spatial function associated with the root u can be only marginally considered a polysemous form since it occurs in the form udi, which is not really synchronically analyzable, as the enclitic -di 'Same' (§7.6.9.1) does not otherwise occur without the emphatic enclitic -bi (§7.6.8). Nevertheless, it is worth mentioning here, since udi is clearly semantically related to u: udi functions as a postposition meaning 'further than' (43; §8.3.2.4).

(43) mactac itia udi ic-o-sh
 salt.lick palm.swamp **further.than** be-Past-3
 'The salt lick was further than the palm swamp.'

It is not surprising to find temporal meanings associated with the deictic adverbs nē and a, as it is apparently common for spatial terms to be extended into the temporal domain (Langacker 1987). It should be pointed out, however, that this extension is not a simple or a completely productive one. Rather, often one of the spatial meanings of a root is closely associated with a particular enclitic, and the temporal meaning with another. For example, the demonstrative deictic spatial and discourse uses of nē and a are generally accompanied by the enclitic -mbo/-quio 'Augmentative,' while the temporal

and non-demonstrative spatial meanings are always accompanied by the enclitic -bi 'Emphatic' (44 & 45).

- (44a) në-mbo/në 'here'/*'now, *'today'/*'near'/*'soon'
 (44b) në-bi 'now,' 'today'/'soon'/'near'/'here (only in old people's speech)'
 (45a) a-mbo 'there (by 2nd person)'/ 'anaphoric reference'/'then'/*'presently'/*'still'
 (45b) a-bi 'presently'/'still'/*'there (by 2nd person)'/ 'anaphoric reference'/*'then'
 (45c) a 'there (by 2nd person)'/ 'anaphoric reference'/*'then'/*'presently'/*'still'

Once again, we are faced with an issue of synchronic segmentability vs. lexicalization. Here the result has a significant impact on our descriptions: segmentability would imply simple direct importation of spatial terms into the temporal domain, while analyzing these as separate lexical items would imply that there is a distinct (two-term; 'now'/'then') system for temporal demonstratives, a relatively rare situation across languages, according to Anderson and Keenan (1985). As with the personal pronouns, we have encountered these forms in the middle of the lexicalization process, but unlike the personal pronouns, these are not so far along, so I do segment demonstrative adverbs.

One could claim that nëbi and abi should not be treated as synchronically analyzable words, but as lexicalized forms. This analysis is supported by the fact that -bi and -mbo/-quio are semantically empty directly following the root, but not elsewhere in the adverb word (46 & 47).

- (46a) në-bi-mbo-bi now-**Emph-Aug-Emph**
 'right exactly now'
 (46b) në-mbo-bi here-Aug-Emph
 'right here'

- (47) në-mbo-bi enden tied ic-pa-onda-sh në-mbo-mbo-bi
 here-Aug-Emph before swidden be-Comment-Dist.Past-3 here-Aug-Aug-Emph
 ‘A long time ago our swiddens were **right** here, **really right** here [in Peru].’
 + K-XXII 001 chema 001

However, as shown in (44b), the form në-bi can mean ‘here’ in old people’s speech, and it can occur as a bare root to attract someone’s attention while handing them something (48), or to request that the hearer look at a gesture that the speaker is making (49).⁵

- (48) në chompish podo que-quin mene-ban-quin
 here small.two.toed.sloth arm say-while:S/A>A give-Iter-while:S/A>A
pe-quid matses-n
 eat-Hab Matses-Erg
 ‘Matses eat [small two-toed sloths] handing out parts of it saying, “**Here!** a small two-toed sloth arm!”’

A-IV 024 chompish 17

- (49) ashic aid umbi bed-bo-ac-bi aton champi në-tsēc
 then that.one 1Erg grab-Prior-when:O>S/A-Emph 3Gen daughter here-Dim
ic-onda-sh bacuë-mpi në capu-tsēc-ec
 be-Dist.Past-3 child-small here locomote-Dim-Advzr:Intr
 ‘Also, that one, (the woman) whom I had just captured had a little daughter (like) **this [holding hand at height of a small child’s head]**, a little kid (like) **this [honding up hand again]** that could already walk.’

+ K-XXII 011 chema 103

Thus, it is perhaps premature to call nëbi a completely lexicalized form. The case for calling abi a synchronically unsegmentable form is more compelling, but due to the current productivity of both a and -bi elsewhere in the language, a lack of phonological alteration,⁶ and for the sake of having an analysis parallel to that of nëbi, for the time being I chose to segment a-bi.

⁵ In this example, në is followed by the diminutive enclitic -tsēc, but it occurs as a bare root in this construction type as well. Evidently në-tsēc only occurs in this sort of environment.

⁶ Note that the fourth/third-person absolutive pronoun, abi [a.bi] (§4.4.1) does exhibit phonological alternation (generally monosyllabic roots keep their stress; §2.6.5), while the adverbial form is pronounced [á.bi].

My analysis is different for another form that is obviously related to a. The adverb ano is used to refer to a location near the second person, but invisible to the speaker (50), to a location previously mentioned in the discourse and invisible to the speaker (51), or to a day previously mentioned in the discourse (52).

- (50) ano-bi-da diad-e-Ø papa ca-onda-sh
there-Emph-Uncert **hang-Npast-Interr: 1/2** **father** **say-Dist.Past-3**
 ‘He asked him, “Are you hanging there (in your hammock), father?”.’
 + K-XXII 007 chema 066

- (51) adecbidi padpide-ec cho cho-shun
 likewise:Intr again:Manr:Intr (redup=Distr) come-after:S/A>A
ano-shun-bi-di pe-quid onina ne-e-c
there-Ev.Init:Tr-Emph-Same **eat-Agt.Nzr** **giant.otter** **be-Npast-Indic**
 ‘Likewise, the giant otters are ones that all come and eat right there in the same place again.’

A-IV 031 onina 10

- (52) [a.nó tʃoʃ] ‘That’s the day that he came.’
ano cho-o-sh
 there come-Past-3

The form ano seems to be segmentable as the deictic adverb a plus the postpositional enclitic -no ‘Locative/Directional’. But this analysis is complicated by irregular phonetic alteration: there is a shift in stress from the expected odd-stressed/root-stressed pattern (see phonetic transcription line in 52; cf. footnote 6). Furthermore, the semantics of ano would not be completely predictable from the meanings of its composite parts: -no does not otherwise have a discourse function instead of or in addition to its usual spatial locative function; and the demonstrative meaning of a refers to a location near the second person that is *visible*. Thus, there is plenty of motivation to *not* segment ano: i) irregular phonetic alteration; ii) novel semantic shift of -no; and iii) meaning contradicts central meaning of a.

In addition to particular enclitics being associated with particular meanings, reduplication is associated with only certain meanings of the deictic pronouns. Reduplication seems to only work with the non-demonstrative meanings of the deictic adverbs (53 & 54). Since a has no non-demonstrative spatial meaning associated with it, we find that a cannot be duplicated at all (55).

- (53) nēbi nēbien udquin pequid
 redup nē-bi-en ud-quin pe-quid
 Distr near-Emph-Manr:Tr root-while:S/A>A eat-Agt.Nzr
sedudi nec
sedudi ne-e-c
 nine.banded.armadillo be-Npast-Indic
 ‘The nine-banded armadillo is one that eats while rooting around in **places close to each other.**’

1-p48-B sedudi 09

- (54) u umbo
 redup u-mbo
 Distr far-Aug
 ‘in places far apart from each other’
- (55a) *a ambo
 (55b) *ambo ambo
 (55c) *a abi
 (55d) *abi abi

Other morphological possibilities are described below in sections 7.6 and 7.7.

Having discussed the forms nē, a and, u, it is interesting to mention here the demonstrative pronouns, nēid ‘this one,’ aid ‘that one (by 2nd person), and uid ‘that one (far from 1st and 2nd person).’ I refer the reader to section 4.4.4, where these related (but synchronically unsegmentable) forms are discussed in detail.

Older speakers occasionally use the deictic adverb ēna instead of nē. The meanings of the two do not completely overlap: ēna only means ‘here (near the first person)’ and ‘nearby,’ lacking meaning extensions into the temporal domain (56).

- (56) ēna-da ca-pa-o-sh ‘Could this be the place where he told us?’
 here-Uncert say-Comment-Past-3

Another deictic adverb, uanno, takes a first, second or third person entity as its deictic center, and specifies that the subject is spatially distant (but not too far away) from the location of the deictic center (57 & 58). The adverb uanno is partly an antonym of në and a, in that it specifies the location referred to is *distal* to the deictic center (59).

(57) senta _____ uanno ic-e-c 'Uakari monkeys can be far from here.'
red.uakari.monkey **apart** be-Npast-Indic

A-I 057 senta 24

(58) uanno tsad-e-bi 'I'm going to sit a bit far from where I am now.'
apart sit-Npast-1S 'I'm going to sit a bit far from you.'
'I'm going to sit a bit far from him/her/it/them.'

(59a) në-mbo tsad-e-bi (59b) a-mbo tsad-e-bi
here-Aug sit-Npast-1S there-Aug sit-Npast-1S
'I'm going to sit here (by where I am).' 'I'm going to sit there (by you).'

By the same token, the meaning of uanno and u are similar in many respects, the main difference being that u generally refers to locations that are far, and uanno to locations that are not all that far. Additionally, u can refer to a location that is visible or invisible from the vantage of the speech act, while uanno refers to entities that are not visible from the location of the speech act.⁷ Because uanno is not a postposition (like the English *far from*), it does not take the deictic reference point as its object, and the deictic reference point is either understood (60a) or mentioned as a locative clause (60b).

(60a) min chështe uanno ic-o-sh
2Gen machete **apart** be-Past-3
'Your machete was not near (where you said it was).'

(60b) min chështe mimbi ic-o-sh ca-boc-no uanno ic-o-sh
2Gen machete 2Erg be-Past-3 say-Past.Act.Nzr-Loc **apart** be-Past-3
'Your machete was not near where you said it was.'

⁷ The adverbs ano and uanno in their demonstrative (invisible) meaning are roughly antonyms and would be ideal for playing "hide the button" replacing the English terms *hot* and *cold*.

One potentially confusing property of this adverb is that the location of the subject and the deictic reference point can refer to two separate points in the path of a single moving entity. For example, in (61), the deictic reference point taken by uanno is the deer's previous location, and the locative phrase itself refers to the deer's subsequent location. The message of the sentence is basically that to eat at another salt lick, the deer travels a significant distance, *somewhat far from where it previously was*.

- (61) uanno capu-ash mactac utsi che-e-c
apart locomote-after:S/A>S mud other eat.unchewed-Npast-Indic
 'After traveling far, it (the deer) eats mud [from] another [mineral lick].'
 A-I 046 senad 17

Reduplication of adverbs carries a distributive, plural, or iterative meaning (§7.7), and when uanno is reduplicated, it means 'separate from each other' (62). It seems that a temporal meaning of uanno only obtains with reduplications.

- (62a) uanno uannoec poshto ushec
redup uanno-ec poshto ush-e-c
Distr apart-Manr:Intr woolly.monkey sleep-Npast-Indic
 'Woolly monkeys sleep spread out here and there.'
 1-p56-B poshto 05

- (62b) uanno uannoec chonoadec
redup uanno-ec chonoad-e-c
Distr apart-Manr:Intr work-Npast-Indic
 'He works on and off.'

Perhaps uanno is more appropriately described as referring to a spatial configuration (i.e., 'apart') than to a deictic location. There is something about uanno and ano that make me hesitate to include them with nē, a, and u as basic demonstrative adverbs, but it must be

recognized that they do have a demonstrative function. Thus, it is possible to describe Matses spatial demonstratives as making a five-way distinction, as in Table 7.4.

Table 7.4. Spatial demonstrative distinctions.

Root	Translation	Deictic center	Proximity	Visibility
<u>ně(-mbo)/ěna</u>	‘here’	1 st person	proximal	visible
<u>a(-mbo)</u>	‘there’	2 nd person	proximal	visible
<u>ano</u>	‘there’	2 nd person	proximal	invisible
<u>u</u>	‘there’	1 st & 2 nd person	distal	visible
<u>uanno</u>	‘apart’	1 st , 2 nd or 3 rd person	distal	invisible

Another locative deictic adverb is ěquë ‘elsewhere’. It simply specifies that the locality being specified is not the same as the deictic center. It is semantically most similar to uanno’s non-demonstrative sense, differing in that while uanno can refer to a specific or a vague location, uquë only refers to a vague location, as in (63). The adverb ěquë occurs polysemously as a postposition meaning ‘on the other side of’ (§8.3.2.4).

- (63) uanno ic-ash ěquë ic-ash ěquë-tsëc
apart be-after:S/A>S **another.place** be-after:S/A>S **another.place-Dim**
ic-ash que-quid-quio abuc checa ne-e-c
be-after:S/A>S do-Agt.Nzr-Aug high opossum be-Npast-Indic
‘The woolly opossum is one that lives far, then at another place, then at another place close by.’

A-IV 044 abuc checa 18

The locative deictic adverbs abiuc ‘right’ and opioc ‘left’ are not polysemous at all in that they do not contain non-deictic meanings or temporal meanings. The speaker is not the default deictic center, but rather it is the subject of the sentence (64) or an entity that has other entities at either side (65). For example, in (65), if the speaker has two people sitting on either side, then he/she is the deictic center, and if the second person or a third person has two people sitting on either side, then that person is the deictic center.

Such deictic centers must be taken from the context, as there is no way to specify it within the clause (66).⁸

- (64) debi opioc-shun te-o-sh (65) abiuc tsad-quid ne-o-sh
 Davy left-Ev.Init:Tr cut-Past-3 right sit-Agt-Nzr be-Past-3
 ‘Davy cut it using his left hand.’ ‘It was the one sitting on the right side.’
- (66a) *min opioc (‘your left’) (66b) *mibi opioc (‘to the left of you’)
 2Gen left 2Abs left

These only refer to spatial orientation between entities or to body parts; not to direction:

- (67a) u-mbo-shun bë-o-sh (67b) opioc-shun bë-o-sh
 far/there-Aug-Ev.Init:Tr bring-Past-1A left-Ev.Init:Tr bring-Past-1A
 ‘He brought it from far/there.’ ‘He brought it carrying it on his left.’
 ‘He brought it with his left hand.’
 *‘He brought it from the left.’
- (68a) *abiuc-uësh cho-o-sh (‘He came from the right.’)
 right-Ev.Init:Intr come-Past-3 [corrected with 68b]
- (68b) abiuc podqued nid-quid-n-uësh cho-o-sh
 right path go-Agt-Nzr-Loc-Ev.Init:Intr come-Past-3
 ‘He came from the path that goes to the right (of the other path forming the fork).’

The adverb abuc ‘up/high’ can be considered a deictic adverb in its meaning of ‘up’ (above the speaker/hearer). It is discussed in the next section along with the non-deictic locative adverbs.

The temporal adverb enden has as one of its meanings a deictic use. It refers to a time preceding the deictic reference point. The default deictic center is the speech act (69 & 70), but it can be some other temporal reference point (71). The point in time can be temporally distant (70) or proximal (69 & 71) to the deictic reference point.

⁸ Therefore, these are better translated as ‘on the left’ rather than ‘(on the) left of’.

- (69) ënden cuen-ac chema 'Chema had run off earlier.'
earlier run.off-Infer man's.name
+ K-XXII 007 chema 070
- (70) ënden pisin tsiu-onda-sh 'Long ago, they wore penis strings.'
long.ago penis.string wear.on.waist-Dist.Past-3
A-XIII 016 pisin 16
- (71) udi shëcuë-n-shun pe-shun ambi ënden
further.than hole-Loc-Ev.Init:Tr eat-after:S/A>A 4Erg **earlier**
pe-boc-no-shun ambi udi-shun
eat-Past.Act.Nzr-Loc-Ev.Init:Tr 4Erg further.than-Ev.IntiTr
pe-shun que-quin pe-quid ne-e-c
eat-after:S/A>A do-while:S/A>A eat-Agt.Nzr be-Npast-Indic
'Giant otters are ones that eat far away, at their burrow, and then they eat where
they had just eaten **earlier**, and then they eat far away again.'
A-IV 031 onina 20

The temporally distant use of ënden could be arguably interpreted as non-deictic if uses like that in (70) were translated as 'in the old days' rather than 'long ago (before the present).' Other uses of ënden are clearly non-deictic, however, such as in (72).

- (72) ënden isucun-e-c 'He wakes up early.'/ 'He will wake up early.'
early wake.up-Npast-Indic

Since ënden can be classified based on semantics as both a deictic temporal adverb and a non-deictic temporal adverb (§7.3.5), there are but two adverbs that have both deictic and non-deictic meanings (abuc 'up/high' and ënden 'earlier/early').

7.3.4 (Non-deictic) locative adverbs

These roots all provide spatial orientation information without reference to a deictic reference point. The adverb roots that have non-deictic locative meanings can be divided into two subgroups, based on semantics and polysemy patterns. The first subgroup consists of abuc and mapictsëc, which could be considered antonyms and both also occur polysemously as dimension adverbs (Table 7.4). The other four adverbs all

refer to rainforest habitats and occur polysemously as both locative adverbs and as nouns (note that no deictic adverbs occur polysemously as nouns).

Table 7.4. Adverb roots carrying non-deictic locative meanings.

Root	Non-deictic locative meanings	Polysemous meanings
<u>abuc</u>	'up/high'	'tall,' 'above'
<u>mapictsĕc</u>	'low'	'short'
<u>nimĕduc</u>	'in primary forest'	'primary forest'
<u>anshantuc</u>	'in a swamp'	'swamp'
<u>mananuc</u>	'in upland forest'	'upland forest,' 'out of [body of water]'
<u>tsimpiduc</u>	'in a valley'	'valley,' 'at the foot of [a hill/high land]'

The adverb abuc, in addition to occurring as a locative adverb and a dimension adverb, also occurs as a locative postposition. Discussion of its dimension meanings belongs below in section 7.3.6, and of its postposition function in chapter 8, but here I will introduce all the meanings and functions associated with this form in order to distinguish them. The deictic locative (73) and non-deictic locative (74) meanings of abuc are exemplified below. The dimension meaning of abuc is exemplified in (75), where it refers to height, rather than location.

(73) abuc is-Ø 'Look up!'
up look-Imper

(74) abuc capu-ash-bi _____ nidaid-n capu-ash-bi
high locomote-after:S/A>S-Emph ground-Loc locomote-after:S/A>S-Emph
bĕui ne-e-c
tamandua be-Npast-Indic
'Tamanduas are ones that climb around **high up** and walk around on the ground.'
A-IV 026 bĕui 22

(75) abuc cani-esa _____ mio _____ ne-e-c
high grow-Neg.A.Nzr palm.species be-Npast-Indic
'The mio palm is one that does not grow high (tall).'

The form abuc also occurs as a locative postposition that takes as its reference point an overtly mentioned postpositional object (76 & 77).

- (76) mimbi is-boc-no abuc ic-e-c
 2Erg look-Past.Act.Nzr-Loc above be-Npast-Indic
 ‘It’s higher up than where you are looking.’
- (77) poshto mechodo abuc tsad-e-c
 woolly.monkey termite.nest above sit-Npast-Indic
 ‘The woolly monkey is sitting higher up than the termite nest’

The adverb that could be considered the antonym of abuc, mapictsēc ‘low,’ likewise occurs polysemously as a location adverb (78) and as a dimension adverb (79). Because it never takes a deictic center, as a postpositional object or otherwise, it cannot be classified as having a deictic adverbial meaning or a postpositional function.

- (78) mapictsēc capu-ash abuc capu-ash que-quid
 low locomote-after:S/A>S high locomote-after:S/A>S do-Agt.Nzr
běshuicquid ne-e-c
 saki.monkey be-Npast-Indic
 ‘Saki monkeys are ones that travel low and travel high up.’

A-I 055 běshuicquid 31

- (79) mapictsēc-bi cani-quid maněcte ne-e-c
 low-Emph grow-Agt.Nzr palm.species be-Npast-Indic
 ‘The maněcte palm is one that actually grows short.’

A-I 038 maněcte 03

The Matses have a rainforest habitat classification system in which they recognize 47 different named types of forest (Fleck and Harder 2000). All of these 47 terms are nouns or noun phrases, but four of these terms also occur polysemously as locative adverbial phrases; i.e., they are unique in that they do not require a locative postpositions (such as -n ‘Locative/Temporal’ -no ‘Locative/Directional,’ nantan ‘within, amidst, in,’

etc.) to occur as a locative adverbial phrase in a sentence. For example, the word nimëduc ‘(in) primary forest,’ occurs as a noun in (80) and as a locative adverb in (81).

- (80) sëdëdëquid-n-shun nimëduc is-o-mbi
 airplane-Loc-Ev.Init:Tr **primary.forest** see-Past-1A
 ‘I saw the primary forest from the airplane.’
- (81) nimëduc cani-esa titado ne-e-c
primary.forest:Loc grow-Neg.A.Nzr peach.palm be-Npast-Indic
 ‘The peach palm is one that does not grow in primary forest.’

A-I 008 titado 10

Two of these locative adverb habitat terms, mananuc and tsimpiduc, also occur polysemously as postpositions, as described in section 8.3.2.2. See section 7.5.1 below for a discussion of the ending uc as a locative formative.

7.3.5 (Non-deictic) temporal adverbs

All of the adverb roots in Matses that carry a temporal meaning are listed in Table 7.5. Only two of these carry non-deictic meanings.

Table 7.5. Adverb roots carrying temporal meanings.

Root	Non-deictic temporal meanings	Deictic temporal meanings	Other polysemous meanings
<u>në</u>		‘now, today, soon’	‘here, near’
<u>a</u>		‘presently, still, then’	‘there’
<u>ano</u>		‘that day’	‘there’
<u>ënden</u>	‘early’	‘earlier, yesterday, long ago’	
<u>iu</u>	‘for a while’		

The first four of these were already discussed in section 7.3.3 since they can be classified as deictic adverbs. Only ënden has both deictic and non-deictic meanings. The adverb iu, which was introduced in section 7.3.1 as a manner adverb, does contain temporal

information, but rather than provide temporal grounding or orientation for the event, like the other temporal adverbs, it rather modifies the verb by providing aspectual information. Thus, enden is the only adverb that can be said to have a non-deictic temporal meaning.

7.3.6 Dimension adverbs

Dimension notions are those that refer to a physical quality of an entity such as size, length, thickness, width, etc. Because they semantically modify nouns rather than verbs or clauses, one might expect that dimension notions should be adjectives (e.g., Dixon 1982), particularly considering that there is an open class of adjectives in the language. However, it is clear from morpho-syntactic patterns that roots denoting dimension notions line up more closely with the adverbs than with the adjectives, as discussed in the preceding chapter (§6.10.1).

It is interesting to compare dimension antonym pairs in English and in Matses. Table 7.6 shows all of the Matses dimension adverbs (and a few non-dimension adverbs) in comparison with English dimension adjectives.

Table 7.6. Comparison of English and Matses dimension antonym pairs.

<u>nua</u> , <u>amë</u>	<i>big, large</i>	<u>ania</u> , <u>pictsëc</u>	<i>little, small</i>
<u>nua</u>	<i>thick, fat</i>	<u>ania</u>	<i>thin</i>
<u>nua</u>	<i>wide</i>	<u>ania</u>	<i>narrow</i>
<u>nua</u>	<i>much</i>	<u>pictsëc</u>	<i>a little (amount)</i>
<u>ënapen</u>	<i>long</i>	<u>bushcu</u>	<i>short</i>
<u>ënapen</u>	<i>tall</i>	<u>bushcu</u>	<i>short</i>
<u>ënapen</u> , <u>u</u> ^a	<i>far</i>	<u>në(-bi)</u> ^a	<i>near</i>
<u>abuc</u> ^b	<i>high</i>	<u>mapictsëc</u> ^b	<i>low</i>
<u>dadpen</u> , ^c <u>dadempa</u> ^c	<i>many</i>	<u>daëdpatsëc</u> ^c , <u>tëma</u> ^c	<i>few</i>

^a deictic locative adverb

^b non-deictic locative adverb

^c quantitative adverb

One thing that we notice looking at Table 7.6 is that Matses dimension adverbs cover more semantic space than their English counterparts. While a few Matses dimension adverbs cover the same semantic space as their English counterparts (e.g., *bushcu* and *short*), no Matses dimension terms have more specific meanings than their corresponding English adjectives. For example, while English uses different terms for superlative and diminutive dimensions of general size (*big, large, little, small*), width of a solid object (*thick, thin*), width of a human or animal (*fat, thin*), or of a flat or hollow space (*wide, narrow*), and amount of a mass noun (*much, a little*), the single Matses term *nua* can refer to all of the superlative versions of these notions (83, 85 & 87), and *ania* can refer to most of the diminutive versions of these (82 & 84).

- (82) ania-tsēc dada ic-quid-bi ubuëshē-dapa nua-mbo ic-tsēc-quid
small-Dim body be-Agt.Nzr-Emph testicles-large large-Aug be-Dim-Hab
cacsi
 pygmy.squirrel
 ‘The little pygmy squirrels have **small** bodies, but very **large** testicles.’
 A-IV 007 cacsi 15
- (83) antin cani-e-c acte nua ic-quid cuēma-n
 palm.species grow-Npast-Indic river large be-Agt.Nzr edge-Loc
 ‘Antin palms grow along **wide** (big) rivers.’
 2-p28-L antin 01
- (84) dada ania-tsēc ic-tsēc-e-c ‘The [toncate palm] trunk is very **thin**.’
 trunk small-Dim be-Dim-Npast-Indic
 A-I 018 toncate 09
- (85) iu-en-quo dabiun-ac nua bitsi
 long.time-Manr:Tr-Aug coat-when:O>S/A large skin
ic-an-ac-sho ën-quid
 be-Incep-Infer-when:S/A/O>O leave-Hab
 ‘After coating it for a long time, after its coat becomes **thick**, they leave it.’
 2-p49-L shictoadte 02
- (86) nua-mbo-shē bēchi cho-quid nēishamē ‘Tapirs have a **lot** of fat.’
 large-Aug-Aug fat have-Hab tapir
 A-I 045 nēishamē 09

The term nua even refers to low pitch, as in (87), or in the description of a person's deep (as opposed to high) voice; the terms ania-tsēc and pictsēc (sometimes pronounced pistsēc) refer to high pitch.

- (87) nua-mbo cuəd-e-c cuesban
 large-Aug call-Npast-Indic bat
 'Bats' [flapping] sounds low [when heard in hollow tree].'

E-XI 049 cuesban 27

Some (deictic) location adverbs such as u 'far' or ně-bi 'near' may seem to be simultaneously denoting dimension notions. However, I do not consider these true dimension notions because they refer to a location in space, rather than to the property of an entity (say, a path or a river). One could deduce from an English sentence like *He walked far/Her house is far* that the path or road in question must be a long one, but this information is not contained in the meaning of *far* (similarly, *the road is far* is a reference to the location of the road, not its length). Thus, despite the semantic link between length and deictic spatial location in the domain of travel, there is a clear difference in function between these: dimension adverbs modify entities (nouns) and deictic spatial location adverbs locate an entity or event in space, often in relation to a deictic center (such as the speech act). Nevertheless, in Matses the term ėnapen (but not u 'there/far') encompasses both dimension ('long' & 'tall') and location ('far') meanings, embracing the semantic similarity between these meanings and ignoring the difference in function (88-90).

- (88) shaė-n dėbiate ėnapen ic-e-c dė-uisac-quo
 giant.anteater-Gen nose long be-Npast-Indic nose-long-Aug
 'The giant anteater's snout is very long, very elongated-nosed.'

A-IV 027 shaė 08

- (89) ënapen u-mbo nid-quid 'Far! They [collared peccaries] go very far.'
 far far-Aug go-Agt.Nzr

C-III 001 shëcten 17

- (90) debi ënapen ic-e-c 'Davy is tall.' / 'Davy is far away.'
 Davy long/far be-Npast-Indic

By contrast, the existence of separate terms for the diminutive antonyms of ënapen, bushcu 'short' and nëbi 'near' (Table 7.6) is arguably a response to the difference in function, rather than just the minor semantic difference between 'near' and 'short distance.'

The adverb amë 'large' is infrequently used. It also means 'father' and occurs phonologically bound to noun roots in some lexicalized terms (§4.6.2).

7.3.7 Quantifiers

Like dimension adverbs, quantifier adverbs are semantically similar to adjectives in that they modify noun phrases, but they resemble nouns or pronouns more than adjectives formally and morpho-syntactically. Several appear to be derived from pronouns (§7.5.3), but as will be shown in this section, they behave morpho-syntactically like adverbs. Unlike pronouns, quantifiers modify nouns (91), and unlike adjectives, quantifiers can occur anywhere in a sentence and still modify a head noun, even from positions that are not adjacent to the noun phrase (92 & 93).

- (91) abitedi cuëte bacuë che-quid senad ne-e-c
 all dicot.tree fruit eat.unchewed-Agt.Nzr deer be-Npast-Indic
 'Deer are eaters of all types of dicot tree fruits.'

A-I 046 senad 32

- (92) abitedi-shun tsanca-mpi matses-n pe-e-c
 all-Manr:Tr squirrel.monkey-small Matses-Erg eat-Npast-Indic
 'All Matses eat squirrel monkeys.'

A-IV 004 tsanca 09

- (93) dadpen-quo capu-quad cuesban nuntan-bi
 many-Aug locomote-Hab bat inside-Emph
 ‘Many bats fly around right inside the house.’

D-X 057 cuesban 06

As with any adverb, quantifiers often occur with clauses that lack explicitly-mentioned third-person core arguments (A, S, and/or O). And because quantifiers modify noun phrases, in the absence of the core argument noun phrase it modifies, the quantifier may appear syntactically essentially like it itself is the core argument (94 & 95).

- (94) tsise-n abitedi pe-e-c ‘Coatis eat **everything**.’
 coati-Erg all eat-Npast-Indic

A-IV 028 tsise 09

- (95) ad-en se-ac-sho abitedi-shun nēishamē pe-quad
 do.thus-Advzr:Tr pierce-Infer-when:S/A/O>O all-Ev.Init:Tr tapir eat-Hab
 ‘After it is pierced like that, **everyone** eats the tapir.’

A-XIII 023 nēishamē dectante 12

Sentences like (94) and (95) suggest the possibility that quantifier adverbs may occur polysemously as pronouns. Thus, there are two competing analyses: The first is that quantitative adverbs can occur polysemously as pronouns that can substitute full noun phrases in a sentence; in this case, the event-initiation transitivity agreement enclitic in (95) would likewise be polysemous, doubling as an ergative marker (§7.6.1.2). The second analysis is that sentences like (94) and (95) contain a covert third person zero pronoun (Ergative/Absolutive and Singular/Plural; §11.2.4), and that the quantifiers are modifying these zero pronouns. So sentences like (94) and (95) could be translated more literally as ‘Coatis eat **it all**’ and ‘After it is pierced like that, **they all** eat the tapir.’ For the time being, I choose this second analysis, primarily because of a lack of shared morphological properties with pronouns, and also to avoid the conclusion there are two different ergative case markers in the language. However, as I will illustrate below in

section 7.6.1.2, the language seems to be moving in a direction that will eventually force the first analysis.

In addition to the seven quantitative adverbs in the language, quantitative postpositional phrases (which behave syntactically like adverbs) can be formed using the postpositions ted ‘as many as’ and daëd ‘both’ (Table 7.7; §8.3.4).

Table 7.7. Quantitative adverbs and postpositions.

adverbs:	<u>abentsëc</u>	‘one, alone’	<u>daëd</u>	‘two’
	<u>dadpen</u>	‘many’	<u>dadempa</u> ^a	‘many’
	<u>daëdpatsëc</u>	‘few’	<u>tëma</u> ^a	‘few’
	<u>abichobi</u>	‘entire’	<u>abitedi</u>	‘all, everyone’
postpositions:	<u>tedi</u>	‘all of’	<u>daëdi</u>	‘both’

^a These forms are less frequent and possibly older than their synonyms.

Note the difference between the formally-related adverb daëd ‘two’ (96) and the postposition daëdi ‘both’ (97).

(96a) cuididi daëd pudued-o-sh
brat two enter-Past-3
‘Two naughty kids came in.’

(96b) daëd cuididi pudued-o-sh
two brat enter-Past-3
‘Two naughty kids came in.’

(97a) cuididi daëdi pudued-o-sh
brat both enter-Past-3
‘Both naughty kids came in.’

(97b) *daëdi cuididi pudued-o-sh

This semantic difference between the adverb daëd and the postposition daëdi can be very subtle. In (98b), the subject is a married couple, a pair of brothers or two people that always travel together, while in (98a) it is any two people who happen to be traveling together this time.

(98a) ubi daəd nid-e-c
 1Abs two go-Npast-Indic
 ‘Two of us (1+3) are going.’

(98b) ubi daədi nid-e-c
 1Abs both go-Npast-Indic
 ‘Both of us (1+3) are going.’

The Matses language has very few true numerals. The only two words that could be considered numerals are abentsēc ‘one’ and daəd ‘two.’ But even these are polysemous forms, meaning also ‘alone’ and ‘proliferate,’ respectively. The term for ‘three’ is not semantically transparent, and the meaning ‘four’ is not exactly predictable from the reduplication of daəd (Table 7.8). So these could be said to be lexicalized phrases. All other terms for talking about numbers are complex and are semantically transparent and regular, showing no signs of lexicalization. In modern times, the Peruvian Matses have adopted the Spanish number system, using the Matses terms abentsēc and daəd interchangeably with the corresponding borrowed Spanish terms in conversation, but only Spanish terms for counting or doing mathematics (e.g., in school). The other Matses number terms in Table 7.8 are now only used occasionally by older speakers.

Table 7.8. The Matses counting system.

Number	Term	Literal/Polysemous Meaning
1	<u>abentsēc</u>	‘alone’
2	<u>daəd</u>	‘to increase in number’
3	<u>abentsēc choec</u>	‘one (more) comes’(?), ‘has one (more)’ (?)
4	<u>daəd daəd</u>	‘two (plus) two’ (?)
5	<u>mədante aoc abentsēc</u>	‘as many as on one hand’
6	<u>mədante utsiuc bēdanec</u>	‘starting on the other hand’
10	<u>mədante tedi</u>	‘as many as on the hands’
20	<u>mədante ted taë ted</u>	‘as many as on hands and as many as on feet’

Note: there are multiple variants of the phrases for 5-10.

Borrowed Spanish numbers are often integrated into Matsigenka conversation using the postposition ted 'as many as' (99).

- (99) ad-nuc-bi _____ tëma-tsëc ic-quid _____ tëdenta bente
do.thus-while:Diff.Ref-Emph few-Dim be-Agt.Nzr thirty twenty
ted-tsëc-bi _____ shëctenamë _____ ne-e-c
as.many.as-Dim-Emph white.lipped.peccary be-Npast-Indic
'Meanwhile, [other] white-lipped peccary [herds] are ones that are few, having only twenty or thirty.'

A-I 044 shëctenamë 09

There are two quantifier adverbs that mean 'few': tëma (99) and daëdpatsëc (100). It seems that these two forms are identical in meaning, with the difference being that younger speakers prefer daëdpatsëc to tëma. The fact that daëdpatsëc is a lexicalized form containing productive morphemes (§7.5.3), suggests that this form is newer than the unanalyzable tëma.

- (100) në-bi _____ poshto _____ daëdpatsëc-quo _____ ic-an-ash
now-Emph woolly.monkey few-Aug be-Incep-Specul:3
'Now, there have probably started to be very few woolly monkeys.'

A-I 052 poshto 30

7.3.8 Noun-identifying adverb: utsi 'other'

The only adverb in this semantic category, utsi 'another, other,' may appear to be an adjective, but unlike other adjectives, it does not have to follow a noun to modify it (101). In order to have an analysis parallel to that of the quantifier adverbs, we could posit that in sentences like (102), the adverb utsi is modifying a third-person zero pronoun.

- (101a) uicchun utsi _____ is-o-mbi _____
bird another see-Past-1A
'I saw another bird/species of bird.'
- (101b) utsi _____ uicchun is-o-mbi _____
another bird see-Past-1A
'I saw another bird/species of bird.'

- (102) utsi is-o-mpi 'I saw another one.'
another see-Past-1A

However, utsi would differ from all of the adverbs in that it can be case-marked (103) and takes the enclitic -bo 'Plural' (103 & 104), which is otherwise restricted to nouns.

- (103) utsi-bo-n-bi-en ac-chit-e-c isan dachianmës
other-Pl-Erg-Emph-Contr drink-Uncert-Npast-Indic palm.species curse.causer
 'Others probably drink isan dachianmës [mashed fruit drink].'
 A-I 041 isan dachianmës 05

- (104) padnuen sinnad utsi-bo mannan-n-quio cani-quid
 by.contrast palm.genus **other-Pl** hill-Loc-Aug grow-Agt.Nzr
 'By contrast, other kinds of sinnad palms grow deep in the hills.'
 A-I 009 sinnad 12

Thus it seems that we must describe utsi as occurring polysemously as an adverb and as a noun. In sentence (105), it is evident that the words matses and utsi-n compose a noun phrase, rather than a noun plus an adverb because the ergative case marker always goes on the last element of the noun phrase.

- (105) tsaues incuente matses utsi-n bed-quid
 long.nosed.armadillo tail **Matses** **other-Erg** grab-Hab
 'Another person [who didn't catch the armadillo] takes the armadillo tail.'
 A-I 047 tsaues 33

At the same time, we cannot say that utsi is an adjective, because it does not have to follow a noun to modify it, so my analysis is that matses utsi-n in (106) is a noun phrase composed of either two nouns or a noun plus an adverb, with utsi modifying the head noun, matses (both are attested noun phrase types; §10.3; see §10.3.4 for more on noun phrases containing utsi). It is tempting to say that utsi is only a noun and never an adverb. However, as will be shown in sections 7.6 and 7.7, utsi has adverb

morphological possibilities that nouns would not be expected to have (primarily suffixation with *-ec/-en*, and reduplication meaning ‘Distributive’)

The term *utsi* can refer to another species (106), another type or group of something (107), or to another single entity (108).

- (106) utsi bëshpiu bëshpiu-pambo ic-nuc-bi
other (redup=Deintens) yellow-Aug be-while:Diff.Ref-Emph
utsi chishcan ushu ic-quid
other dolphin white be-Hab
 ‘Some dolphins are yellow, and there is another kind, white dolphins.’
 A-IV 042 chishcan 13
- (107) poshto utsi tanun tanun-pambo ic-nuc-bi
 woolly.monkey **other** (redup=Deintens) gray-Aug be-while:Diff.Ref-Emph
utsi piu piu-mbo poshto tsad-quid
other (redup=Deintens) red-Aug woolly.monkey sit-Hab
 ‘While some woolly monkeys are grayish, other woolly monkeys are reddish.’
 A-I 052 poshto 08
- (108) quëuëte-ua-shun toncodo cuës-quid cuëte utsi-n-shun
 hook-Vzr:make-after:S/A>A tree.species gather-Hab dicot.tree **other**-Loc-Tr
 ‘They make a hook and then gather toncodo pods from another tree (i.e., by climbing an adjacent tree).’
 A-XIII 008 quëuëte 14

The position of *utsi* relative to the noun phrase it modifies (e.g., before the noun phrase [106], after the noun phrase [107, 108], not adjacent to the noun phrase [107], or with a zero third person pronoun [106]), does not affect the species vs. type/group vs. individual meaning, but rather this information is obtained from the context. When used as a manner adverb (i.e., when suffixed with *-ec/-en*; §7.6.1.1), it means ‘differently’ or ‘different’ (109 & 110).

- (109) ad-quid-bi utsi-ec aton podo isad-e-c
 do.thus-Agt.Nzr-Emph **other**-Manr:Intr 3Gen frond appear-Npast-Indic
 ‘It’s like that [like the itia palm], but its fronds look different.’
 1-p31-B bumpac 03

- (110) chishcan utsi-ec-bi-di incuenta ic-e-c
 dolphin other-Manr:Intr-like-Emph tail have-Npast-Indic
 ‘The dolphin has a tail that is different [from that of fish].’

A-IV 042 chishcan 06

The form utsi also occurs as a noun meaning ‘brother,’ and occurs in several special phrase types (e.g., 111). Basically, utsi is a frequently-used word that has been put to many uses across lexical classes.

- (111) min tsusio utsi ‘another old man, just like you’
 2Gen old.man other (lit. ‘your other old man’)

7.3.9 “Proadverbs”

The roots nad and ad are very general pro-forms. They can substitute for verbs, adjectives, adverbs, other adverbials (e.g., postpositional phrases), whole descriptions, non-linguistic vocalizations (e.g., imitations of animals) or even gestures. As pro-verbs, nad means ‘do this’ (112) and ad means ‘do that’ (113); as “proadverbs” they mean ‘like this’ (114) and ‘like that’ (115), respectively.

- (112) nad-tsia-sh ‘He would do this.’ (followed by gestures or description).
do.this-Npast:Cond-3

- (113) ad-shun tiante shëta-ua-quid pia
do.that-after:S/A>A bamboo arrowhead-Vzr.make-Hab arrow
 ‘After doing that [fletching the arrow] they make the arrow’s bamboo arrowhead.’
 A-XIII 034 pia 12

- (114) nad utsi ic-e-c podo cho-quid utsi cuesban ca-aid
like.this other be-Npast-Indic wing have-Agt.Nzr other bat say-Pat.Nzr
 ‘There is another one that is like this, another winged one called “bat”.’
 G-XV 063 cuesban 01

- (115) batachued ad ic-quid ‘The tayra is like that.’ [said following
 tayra like.that be-Hab a description of tayra natural history]
 A-IV 033 batachued 13

These can even function to substitute both a verb and adverb together, meaning something like ‘do like this/be like this’ (116) and ‘do like that/be like that’ (117).

(116) nad-Ø ‘Do it like this!’ (showing how to do it, or followed
do.like.this-Imper by a verbal description)

(117) ad-quiv-quo tsanca ne-e-c
be.like.that-Agt.Nzr-Aug squirrel.monkey be-Npast-Indic
‘Squirrel monkeys are ones that are truly like that.’

A-IV 004 tsanca 07

The forms nad and ad function morpho-syntactically as verbs in (112), (113), (116), and (117), but they behave as adverbs in (114) and (115). These “proadverbs” can substitute for most adverbs, deictic/locative/temporal adverbs being the exception. They can substitute for adjectives in a very similar fashion in some syntactic positions (specifically copular constructions and adverbial adjective constructions). For example, the question in (118) can be said in response to any of the statements in (119), substituting ad for adverbs in (119a)-(119c) and for adjectives in (119d) and (119e).

(118) ad-da capa ic-o-sh a-mbo
like.that-Uncert squirrel be-Past-3 there-Aug
‘Is that what squirrels are like over there?’

(119a) nua capa ic-o-sh
large squirrel be-Npast-3
‘The squirrels were large.’

(119b) tema-tsēc capa ic-o-sh
few-Dim squirrel be-Npast-3
‘There were few squirrels.’

(119c) utsi utsi-ec capa ic-o-sh
(redup=Distr) other-Manr:Intr squirrel be-Npast-3
‘There were different kinds of squirrels.’

(119d) uisma-mbo capa ic-o-sh
tame-Aug squirrel be-Npast-3
‘The squirrels were tame.’

(119e) tanun-quo capa ic-o-sh
gray-Aug squirrel be-Npast-3
‘The squirrels were gray.’

To substitute manner adverbs, nad and ad must be cliticized with -ec or -en (120 & 121).

- (120) matses-n ad-en cues-shun abitedi chui-shun
 Matses-Erg like.that-Manr:Tr kill-after:S/A>A all tell-after:S/A>A
pe -quid
 eat-Hab
 ‘After Matses kill [the tapir] like that, they tell everyone and then they eat.’
 A-I 045 nëishamë 20
- (121) nad-ec inchësh-tsēc-nuc-bi
 like.this-Manr:Intr dark-Dim-while:Diff.Ref -Emph
shayaque-anec tsëquë tsëquë tsëquë...
 locomote:Pl-after:S/A>S bat.call bat.call bat.call
 ‘[Bats] fly around like this: [bat call and flapping imitations]’
 G-XV 063 cuesban 02

Section 5.3.4 provides more information about the verbal functions of nad and ad.

The postpositions pad ‘like’ and -bi ‘like’ are analogous, but take an object; and, rather than substituting for some word or description or an extralinguistic motion, etc, pad and -bi form a comparison, taking one of the compared entities or actions (the latter in the form of action nominalizations) as postpositional objects (§8.3.3).

One of the functions of ad is back-reference, as in (113) above (§12.4.4.6).

Another common adverbial use of ad is in the forms adembidi and adecbidi, which mean ‘likewise’ (the first agreeing with transitive verbs, the second with intransitive). They are synchronically segmentable, but due to their frequency of occurrence I have not been consistent about segmenting them:

- | | |
|---|-------------------------------------|
| (122a) <u>ad-en-bi-di</u> | (122b) <u>ad-ec-bi-di</u> |
| like.that-Manr:Tr-Emph-Same | like-that-Manr:Intr-Emph-Same |
| ‘likewise:Tr’ (lit. ‘in just the same way’) | ‘likewise:Intr’ (lit. same as 122a) |

The series of sentences in (123) exemplifies of their typical usage.

- (123a) shēcten chedo-n pe-aid itia ne-e-c
 collared.peccary etc/too-Erg eat-Pat.Nzr swamp.palm be-Npast-Indic
 ‘The swamp palm is one that is eaten by collared peccaries and similar animals,
 too.’

A-I 029 itia 05

- (123b) matses-n adembidi itia che-e-c
 Matses-Erg likewise:Tr swamp.palm eat.unchewed-Npast-Indic
 ‘Matses likewise eat swamp palm [fruits].’

A-I 029 itia 06

Thus, pro-adverbs have a demonstrative meaning in spatial, temporal, and discourse domains, but unlike the three-way distinction made by demonstrative adverbs, pro-adverbs make a two way distinction (‘this’ vs. ‘that’; Table 7.9). Note that the postposition pad ‘same as,’ which is similar to nad and ad in some ways (including form), has no deictic/demonstrative functions, and no spatial or discourse meanings.

Table 7.9. Demonstrative functions of pro-adverbs, compared with postposition pad.

adverb/postposition		Spatial	Temporal	Discourse
<u>nad(-ec/-en)</u>	‘like this’	near speaker	after speech act	about to be mentioned
<u>ad(-ec/-en)</u>	‘like that’	far from speaker	before speech act	previously mentioned
<u>pad(-ec/-en)</u>	‘like X’	—	at time X	—

7.3.10 Interrogative and indefinite adverbs

Interrogative words in Matses do not compose a separate lexical class, but rather they can easily be assigned to the noun and adverb classes. They share a few unique grammatical features, like a tendency to occur first in sentences and co-occurrence with interrogative-inflected verbs, but otherwise interrogative nouns and interrogative adverbs behave quite differently from each other. All the interrogative nouns and adverbs are summarized in Table 7.10. One thing we note in Table 7.10 is that indefinite forms are generally derived from interrogatives or from other adverbs; indefinite forms from other

sources do not exist (see §7.6.8 for formation of indefinite forms from adverbs with -bi).

All the forms in Table 7.10 could be considered pro-forms of one sort or another.

Table 7.10. Inventory of interrogative and indefinite pronouns and adverbs in Matses

Interrogatives		Indefinite pronouns/adverbs	
Nominal (all grammatically pronouns; all in absolutive case)			
human:	<u>tsuda</u> 'who'	<u>utsi-bi</u>	'whomever/anything'
	<u>tsutsi</u> 'who'		
non-human:	<u>atoda</u> 'what'	<u>atoda-bi</u>	'whatever/anything'
	<u>atotsi</u> 'what'	<u>atotsi-bi</u>	'whatever/anything'
definite:	<u>midacquid</u> 'which (one)'	*whichever, *either	
	<u>mitsicquid</u> 'which (one)'		
Adverbial (all grammatically adverbs)			
spatial:	<u>mida(-mbo)</u> 'where/where(?)'	<u>mida-mbo-bi</u>	'anywhere/wherever'
	<u>mitsi</u> 'where/where(?)'	*anytime	
directional:	<u>mida-uc</u> 'which side'	*either side	
	<u>mitsi-uc</u> 'which side'		
qualitative:	<u>mida pad</u> 'how'	*however	
	<u>mitsi pad</u> 'how'		
manner:	<u>mida pad-ec</u> 'in what way (intrans)'	<u>adequi (ad-ec-bi)</u>	'in any way (intr)'
	<u>mitsi pad-ec</u> 'in what way (intrans)'		
	<u>mida pad-en</u> 'in what way (trans)'	<u>adembi (ad-en-bi)</u>	'in any way (tr)'
	<u>mitsi pad-en</u> 'in what way (trans)'		
Measurement (all grammatically adverbs)			
quantitative:	<u>tedta</u> 'how many'	*any number	
	<u>tedtsi</u> 'how many'		
size:	<u>tenda</u> 'how big'	*any size	
	<u>tentsi</u> 'how big'		
length:	<u>tiontsi</u> 'how long/far'	*any length	
	<u>tionda</u> 'how long/far'		

While interrogatives differ from regular nouns and adverbs in some respects, such as inability to be reduplicated, these differences are generally shared with pronouns and pro-adverbs as well, so there is little motivation to describe the forms in Table 7.10 as a separate class. There is a section on interrogative sentences in chapter 11 (§11.9), so I

will not exemplify or go into the details here. Also, interrogative pronouns are the topic of section 4.4.3. Looking at Table 7.10, the reader will certainly have noted that these forms come in pairs, those ending (or at least containing) da and those ending in tsi. This topic is addressed in section 7.5.1 below, where the forms of adverb roots are considered.

7.4 Adverbial functions performed by non-adverbs

In reading the above section, the reader may have noticed that there are many adverbial functions in English that are not represented in the above inventory of Matses adverbs. For example, section 7.3.2 reveals a paucity of adjective-modifying adverbs. What we find in Matses is that adjective and adverb modification as well as much clause-level modification (e.g., locative, deictic, sequential, and other types of information) is accomplished morphologically, by affixation, encliticization, and reduplication. Table 7.11 lists a sample of adverb-like morphology.

Table 7.11. Example of morphology with adverbial meanings.

Form	Meaning	Process	Function
<u>bësh-</u>	De-intensifier	prefix	modifies adj. and verbs
<u>-mbo/-quio</u>	Augmentative	enclitic	modifies all word classes
<u>-tsëc</u>	Diminutive	suffix/enclitic	modifies adv. and nouns
<u>-en</u>	Contrast	noun/adv/PP enclitic	modal information
<u>-chit</u>	Uncertainty	verbal suffix	modal information
<u>-ua</u>	again	verbal suffix	clause elaboration
<u>-ba</u>	first	noun/adv/PP enclitic	clause elaboration
<u>-tsen</u>	next	noun/adv/PP enclitic	clause elaboration
<u>-tsen</u>	almost	verbal suffix	clause elaboration
<u>-uid</u>	only	noun/adv/PP enclitic	modifies nouns and adv
<u>-uid</u>	incompletely	verbal suffix	clause elaboration
<u>chedo</u>	et cetera	particle	clause elaboration
e.g., <u>ma-</u>	head	body-part prefixes	locative orientation
e.g., <u>-tan</u>	away from speaker	directional verbal suffixes	deictic information
(redup)	De-intensification	adjective reduplication	modifies adjectives

Additionally, adverbial information is relatable with postpositional phrases (Chapter 8).

For example, the postpositional phrase in (124) provides locative information and the one in (125) provides temporal information.

- (124) cuesban cuëte tédion ush-e-c 'Bats sleep under [fallen] trees.'
 bat dicot.tree below sleep-Npast-Indic

C-V 016 cuesban 06

- (125) cuesban inchësh-n natia-mbo-shë mamën-an-e-c
 bat dark-Loc much-Aug-Aug laugh-Incep-Npast-Indic
 'At night, bats begin laughing loudly.'

A-I 051 cuesban 03

Similarly, some types of information that are usually related in English by adverbs or postpositional phrases, are related in Matses using adverbial non-finite clauses:

- (126) badiad-ash
 dawn-after:S/A>S
 'tomorrow' lit. 'after dawning'
 or 'after getting up at dawn'

- (127) ushë bud-an
 sun descend-after:Diff.Ref
 'in the late afternoon' lit. 'after the sun
 has descended (to the horizon)'

Adverbial clauses, in fact, are a very prominent feature of the language and convey many adverbial notions, especially temporal and manner ones; see section 12.4.

7.5 Analyzability of adverb roots

A glance at Table 7.1 reveals, even to those unfamiliar with the language, that many of the adverbs appear to be analyzable into smaller components, with several recurring forms. All the adverbs in Table 7.1 are ones that I have identified as adverb roots (see §3.2.1 for a definition of *root*), in that they are not synchronically segmentable. But all these roots do not have the same level of "unanalyzability." We can describe the

adverbs based on the type of meaningful segments that we recognize in the roots (all defined in more detail in §3.2.5):

- 1) **unanalyzable roots**: contain no recognizable meaningful segments.
- 2) **roots containing formatives**: a formative is a form that does not occur productively in the language, but a meaning can be assigned to it based on its occurrence in multiple roots associated with a recurring meaning or function.
- 3) **roots containing cranberry morphemes**: contain a recognizable productive morpheme plus a segment that does not occur anywhere else in the language.
- 4) **lexicalized roots**: could be analyzed as being composed of productive morphemes, but the meaning of the word is not predictable from its parts; sometimes this semantic shift is accompanied by phonological irregularity, but this is not a defining characteristic.

7.5.1 *Formatives in adverbs*

Based on only a few of the adverbs (Table 7.12), it is possible to posit the form n as a formative associated with the meaning ‘proximal to the speaker.’

Table 7.12. Adverbs and verbs containing the formative n ‘proximal to speaker’ and corresponding distal adverbs/verbs.

Proximal to speaker	Distal to speaker
<u>nad</u> ‘like this’	<u>ad</u> ‘like that’
<u>nad</u> ‘do like this’ (intransitive)	<u>ad</u> ‘do like that’ (intransitive)
<u>nado</u> ‘do like this’ (transitive)	<u>ado</u> ‘do like that’ (transitive)
<u>në</u> ‘here (near speaker)’	<u>a</u> ‘there’ (by 2 nd person, away from speaker)
	<u>u</u> ‘there (away from speaker 2 nd person)’

The form pen is another formative. Table 7.13 shows all of the adverbs that contain this form.

Table 7.13. Adverbs in Matses that appear to contain the formative pen 'Negative.'

Adverb	Meaning	Possible analysis	Literal meaning
<u>ënapen</u>	'far, long'	<u>ëna</u> 'near' + <u>pen</u> 'Negative'	'not near'
<u>dadpen</u>	'many'	<u>daëd</u> 'two' + <u>pen</u> 'Negative'	'not two (not few)'
<u>cumapen</u>	'intensely'	<u>cuma</u> '?' + <u>pen</u> 'Negative'	'?not softly'

In the first example in Table 7.13, we note that there is a productive adverb ëna meaning 'near' (§7.3.3), while the form pen is not a productive morpheme in the language. We can nevertheless suggest that the meaning of pen is 'Negative' based on the meaning of ënapen 'far,' which is the antonym of ëna 'near.' The analysis of the next example, dadpen, is based at least in part on the conclusions drawn about pen from the analysis of ënapen. It is possible to suggest that dadpen is analyzable as containing the form daëd, despite the slight phonological and semantic discrepancy. Once pen has been found in several words, it is possible to call it a formative, and although there is no form in the language corresponding to cuma, it is possible to speculate that the form cumapen contains the formative pen, based on the position of the series of segments (i.e., at the end of the root), and the parallel meaning to the other forms (superlative meaning). To support this analysis, I draw attention to the enclitic -penquio 'Negative,' where the form pen also occurs associated with the negative meaning; however, here it would be the root of the word, rather than an affix/enclitic.

Another form that is clearly a formative is tsi 'Interrogative' which occurs on interrogative pronouns and adverbs (see Table 7.10). It cannot be used productively. It may be related to the adverb utsi 'other, another.' The enclitic -da is a productive marker of uncertainty (§9.4.1), occurring mostly in questions, but here it is a synchronically

unsegmentable component of interrogative pronouns and adverbs. One adverb, *-tëma* ‘few,’ seems to contain the negative formative *ma* described in section 5.3.3.

7.5.2 Adverbs with cranberry morphemes

The postposition *-uc* ‘on the side where X is’ is a semi-productive enclitic (§8.3.2.7). It occurs productively following action nominalizations and a few adverbs and nouns. It is also a recognizable element in several adverbs and postpositions with a more general ‘Locative’ meaning (Table 7.14). In some cases, the original root is identifiable as a synchronic morpheme, and I would call these “lexicalized roots.” In other cases, the identity of the original root is either completely obscure, or we can only speculate that the sub-morphemic element(s) are related to similar synchronic morphemes.

Table 7.14. Roots containing *-uc*: including lexicalized roots (LR) and roots containing cranberry morphemes (CM).

adverbs			
<i>nimëduc</i>	‘in primary forest’ (CM)	<i>anshantuc</i>	‘in a swamp’ (CM)
<i>abiuc</i>	‘right’ (CM)	<i>opiuc</i>	‘left’ (CM)
polysemous adverb-postpositions			
<i>tsimpiduc</i>	‘at the foot of a hill’ (CM)	<i>mananuc</i>	‘outside (of body of water)’ or ‘in upland forest’ (LR)
<i>abuc</i>	‘high/up/higher than’ (CM)		
postpositions			
<i>bëyuc</i>	‘before’ (CM)	<i>tsiuec</i>	‘after’ (CM) (?)
<i>cachoc</i>	‘behind’ (LR)	<i>anauc</i>	‘inside’ (LR)
<i>ëquëmatsiuc</i>	‘on the other bank of’ (CM)	<i>cuëmatsiuc</i>	‘on the other bank of’ (LR)
<i>ëquëduc</i>	‘inside’ (CM)	<i>umanuc</i>	‘outside, outdoors’ (CM)
<i>mëduc</i>	‘in, during’ (CM)		

Cranberry morphemes identified in the table above whose origin I cannot even speculate about at this point include: *anshant* (‘swamp?’), *opi* (‘left?’), *ab* (‘up?’), *uman* (‘outside?’) and *mëd* (‘middle?’). The form *nimëduc* ‘primary forest’ might have an analysis similar to that for *anshantuc*, but it is more likely that it contains the formative *ni*

‘forest/plant’⁹ and postposition mēduc ‘in the middle of,’ yet it would still contains the cranberry form mēd. The term for ‘right(side)’ appears to contain the form abi, the deictic adverbs meaning ‘there (by second person),’ but it is not evident what the semantic link might be between ‘there’ and ‘right.’ There is no synchronic form tsimpid, but this cranberry form seems to contain tsi- ‘butt,’ suggesting that the Matses once thought of the foot of a hill as the butt of a hill. Similarly, the form bēyuc ‘before, in front of’ seems to contain bē- ‘face,’ and tsiuec ‘after,’ seems to contain tsi- ‘butt’ (perhaps the ending uec is a related to uc). Another postposition, ēquēmatsiuc ‘on the other bank of,’ clearly contains the synchronically productive postposition ēquē ‘on the other side of,’ but it is not evident where the element matsi comes from. The rest of the forms in Table contain easily identified synchronic morphemes, but are considered here lexicalized roots primarily because the ‘side’ meaning of the semi-productive postposition -uc ‘on the side where X is’ is absent. Most of these also exhibit irregular phonological patterns. One of these is mananuc, which can mean ‘outside of a body of water of’ or ‘upland forest’ (which is hilly). It clearly contains the root mannan ‘hill(top)’ (note loss of geminate n in mananuc), but mananuc does not simply mean ‘on the hill’ or ‘on the side where the hill is.’ The postposition cuēmatsiuc ‘on the other bank of’ clearly contain the noun cuēma ‘riverbank,’ and probably the postposition/noun utsi ‘other/another,’ but I consider it a lexicalized root due to the phonological union of these otherwise independent roots. The postposition anauc ‘inside’ contains the root ana ‘mouth/tongue,’ yet exhibits considerable semantic shift (as does the related prefix an- ‘mouth, inside, underside’). And the postposition cachoc ‘behind’ can be straightforwardly analyzed as containing the root cacho ‘back’ and the postposition -uc ‘on the side where X is,’ despite the irregular vowel reduction.

⁹ The formative ni also occurs in the words nibēda ‘open forest’ (analyzable as ni ‘forest’ + bēda ‘good’) and nicsa ‘*Piper* sp. (secondary forest “weed”)’ (analyzable as ni ‘plant’ + icsa ‘bad’).

The adverb pictsēc ‘small, small amount’ appears to contain the diminutive enclitic/suffix -tsēc, but there is no form pic (or pi) in the language. So pic could be said to be a cranberry morpheme. The meanings of cranberry morphemes are difficult to elucidate because they only occur once in the language and never occur alone (e.g., what does *cran* mean in English?). Maybe pic meant something like ‘size/amount.’

7.5.3 Lexicalized adverb roots

The adverb daēdpatsēc (128b) represents a lexicalized root in that it contains two productive morphemes, but its meaning is not derivable from the combination of its composite parts. It contrasts with dadpen (128a) in that dadpen contains a non-productive formative (and irregular phonological alternation); and it contrasts with daēdpambo (128c) whose meaning is fully predictable from its composite morphemes.

w/ formative	lexicalized	not lexicalized
(128a) <u>dadpen</u> <u>daēd-pen</u> two-Neg ‘many’	(128b) <u>daēdpatsēc</u> <u>daēd-patsēc</u> two-Dim ‘few’	(128c) <u>daēdpambo</u> <u>daēd-pambo</u> two-Aug ‘two (big ones)’

The form mapictsēc ‘low’ is probably a combination of the prefix ma- ‘head’ and the adverb pictsēc ‘small, small amount’ or of mapi ‘head’ and -tsēc ‘Diminutive.’ But either of these combinations would be expected to mean something like ‘small-headed,’ but not ‘low’ or ‘short.’ Even meanings associated with heads, like ‘head-high’ or ‘low-headed,’ are not quite predictable from these two morphemes either, nor do they exactly mean ‘low,’ so we can only hypothesize that the meaning of mapictsēc was historically predictable from composite parts, but it is not now.

Table 7.15 shows several (quantitative) adverbs that could be analyzed as containing the form abi ‘Third Person.’

Table 7.15. Adverbs in Matses that appear to contain the formative abi 'Third Person.'

Adverb	Meaning	Possible analysis	Literal meaning
<u>abitedi</u>	'all/every'	<u>abi</u> '3' + <u>ted</u> 'as many as' + <u>-bi</u> 'Emph'	'all of them'
<u>abichobi</u>	'entire'	<u>abi</u> '3' + <u>?cho</u> 'have' + <u>-bi</u> 'Emph'	'?all it has/all of it'

As noted above, and described in detail below in section 7.8, there is a productive system of adverbialization, which produces adverbs of the manner type using -ec 'Adverbializer: Intransitive' or -en 'Adverbializer: Transitive.' As such, it is not surprising to find that some of these adverbializations have become completely or partially lexicalized.

Adverbialization of verbs frequently involves prior adjectivalization of the verbs with one of the adjective-modifying enclitics (-mbo/-quio, -quimbo, etc. §7.6.4). One fully lexicalized form is (i)sesembo 'repeatedly.' It appears to involve the adjectivalization of the reduplicated verb se 'pierce/hit' (reduplication of verbs often having an iterative meaning). However, this cannot be considered an adjective because it must always occur as an adverb accompanied by -ec or -en. The fact that it is pronounced as one word (reduplicated forms are usually two phonologically independent words; §2.8.1) and optionally occurs with the word-initial /i/ (source unknown) reinforces its lexicalized status. The adverb ac 'intensely/forcefully' (possibly from the verbal root ac 'kill') is less lexicalized in that it can occur either with -quimbo or -quio, but like (i)sesembo must always occur with either -ec or -en. Finally, the adverb otacquo is an enigma in that it does not occur with either -ec or -en, but must occur with -quio. The only occurrence of the bare form otac is as an imperative command meaning, 'Be quiet!', but it has no other verbal properties (or adjectival properties, for that matter).

The form ano 'there, that day' appears to be another lexicalized adverb root, composed of the deictic adverb a 'there' and the locative postposition -no

'Locative/Directional.' Its analyzability has already been discussed in section 7.3.3. It is possible as well that uanno 'apart' contains the postposition -no, in which case uan would be a cranberry morpheme, as it does not occur elsewhere in the language.

7.5.4 Classification of adverbs based on form

For the most part, the formatives and lexicalization patterns can be mapped onto the semantic categories posited in section 7.3 (Table 7.1), rather than their occurrence being randomly distributed among these categories. Table 7.16 shows all the recognized patterns.

Table 7.16. Distribution patterns of formatives and lexicalization patterns.

formative or lexicalization pattern	Set of roots encountered in
formative <u>uc</u>	deictic/locative/temporal adverbs, locative/temporal postpositions and interrogative adverbs
formative <u>n</u>	pro-adverbs and deictic adverbs
formative <u>pen</u>	noun-modifying adverbs (dimension and quantifiers)
formative <u>tsi</u>	interrogative adverbs and nouns
lexicalization with <u>abi</u>	quantitative adverbs
lexicalization with <u>-no</u>	deictic adverbs
lexicalized adverbializations	manner adverbs

7.6 Adverbial enclitics (and adverbial phrase particles)

The morphological possibilities of adverbs are restricted to enclitics and reduplication. All of the enclitics that can possibly occur on an adverb are listed in Table 7.17. The particle chedo 'et cetera/too' (and the enclitic -penquo 'Negative,' which is sometimes pronounced as a phonologically independent word) can occur modifying the adverb without phonological attachment to the adverb or preceding enclitics (these are the only instances of multi-word adverbial phrases). However, when chedo occurs in the

adverb phrase, they occur inserted among the adverbial enclitics. Enclitics that follow chedo are phonologically attached to it, but still have the adverb as its scope (as opposed to just chedo). For this reason, I include these particles in Table 7.17 and provide a very brief description here along with the adverb morphology; a full description of this particle is to be found in the particle morphology chapter (§9.3.1) and adverbial phrases are discussed in section 10.5. For those enclitics already described in the noun and adjective chapters, I will only provide a brief description of how they function with adverbs. More on these enclitics can be found in the postposition morphology chapter (§8.6).

Table 7.17. Relative positions of adverbial morphology.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	10	11	12	13
Adv	<u>-ec</u>	<u>chedo</u>	<u>-uid</u>	<u>-mbo/-quio</u>	<u>-shë</u>	<u>-tsen</u>	<u>-ba</u>	<u>-bi</u>	<u>-di</u>	<u>-en</u>	<u>-penquio</u>	<u>-da</u>	<u>-ni</u>
	<u>-en</u>			<u>-pambo</u>						<u>-c</u>			<u>-bi</u>
	<u>-uësh</u>			<u>-patsëc</u>									<u>-mbi</u>
	<u>-shun</u>			<u>-pabi</u>									
				<u>-quimbo</u>									
				<u>-tsëc</u>									
	1. Transitivity Agreement				6. next						11. Negative		
	2. et cetera/too				7. first						12. Uncertainty		
	3. only (followed by 4 or 8)				8. Emphasis						13. Pronouns		
	4. Augmentative/Diminutive				9. Same/Separate (follows 8)								
	5. 2 nd level Augmentative (follows 4)				10. Contrast								

In some cases, the relative order of the enclitics is somewhat flexible, but often particular orders are preferred. Table 7.17 reflects these preferred orders; numbers in parentheses indicate position classes that exhibit flexible relative order. Enclitics listed in the same column occur in paradigmatic contrast; -mbo/-quio, which may occur more than once in the adverb, is the exception to this. The order of some pairs of enclitics (e.g., -mbo/-quio and -shë) cannot be reversed; otherwise the general trend is that the further apart two enclitics are in Table 7.17, the less likely speakers are to approve a word with those two

enclitics' relative order reversed. Some enclitics only occur with a co-occurring enclitic(s) from another position class—this is specified below the table as, e.g., “(follows 4)” meaning that this enclitic must co-occur with enclitics in position class 4.

7.6.1 *Transitivity agreement*

In Matses, most adverbials take different morphology depending on the transitivity status of the matrix verb. In some cases, the absence of a transitivity agreement marker on the adverb carries a contrasting meaning. Clause-chaining subordinate clauses, which are essentially adverbial phrases (§12.4.2) also take different morphology depending on the transitivity of the matrix verb. Thus, sentences in Matses can contain multiple adverbials and subordinate clauses that agree in transitivity with the matrix verb. This typologically unusual feature is inconsistent with the distinguishing characteristic of adverbs that, except for degree distinctions in manner adverbs, they generally are not specified for any categories at all (Schachter 1985). The most common grammatical mistakes that I make while speaking Matses are errors in transitivity agreement, which are easy to get right when writing or speaking slowly, but in fast speech, I find it does not come automatically for me, yet. Transitivity agreement itself does not carry a meaning, so mixing up transitivity agreement on an adverb does not usually cause confusion, at least in simplex sentences; however, one function of transitivity agreement is to keep track of the adverb's matrix verb in multi-clause sentences, so in complex sentences there is a potential for confusion:

(129a) cumanpen-ec [mibi ëccuc]-te bun-e-bi
 intensely-**Manr:Intr** 2Abs kiss[Tr]-Infin want[Intr]-Npast-1S
 'I strongly desire to kiss you.'

(129b) [cumanpen-en mibi ëccuc]-te bun-e-bi
 intensely-**Manr:Tr** 2Abs kiss[Tr]-Infin want[Intr]-Npast-1S
 'I want to kiss you forcefully.'

All transitivity agreement enclitics are portmanteau morphemes. There are two pairs: i) the manner-marking enclitics, -ec ‘Manner: Intransitive’ and -en ‘Manner: Transitive,’ which mark that the adverb modifies the verb (and also function as adverbializers; §7.8); and ii) the event-initiation-marking enclitics, -uësh ‘Event Initiation: Intransitive’ and -shun ‘Event Initiation: Transitive,’ which specify that the adverb is to be associated with the initiation (rather than the end) of the event (or, with -shun, also arguably the A of a transitive matrix verb). These four enclitics are mutually exclusive (i.e., only one at a time allowed per word), and will be described in detail in the following two subsections. Most adverbs take only one of the two pairs of transitivity agreement enclitics and not the other. A few adverbs can take only one of the enclitics, and some can take one from each pair of enclitics. Table 7.18, based on the semantic classification of adverbs presented above, summarizes which enclitics can occur with which adverbs.

Table 7.18. Adverbs that can take manner transitivity agreement enclitics unreduplicated.

Adverb class	<u>-ec</u>	<u>-en</u>	<u>-uësh</u>	<u>-shun</u>
manner	some ^a	some ^a	none	none
adjective-modifying	none	none	none	none
deictic/location/temporal	none	none	all	all
noun-modifying				
dimension	most	none	none	none
quantifiers	none	none	none/ some ^b	all
noun-identifying	all	all	none	none
proadverbs	all	all	none	none
interrogative	none	none	some	some

^a Those manner adverbs that do take -ec/-en do so obligatorily.

^b Sociolinguistic variation: some older speakers use -uësh with a few quantifiers.

Generally, if one of these four enclitics occurs on an adverb, it occurs in the position closest to the root. However, the augmentative enclitic -mbo/-quio, which can occur almost anywhere in the adverb phrase (as well as more than once; §7.6.4.1) may occur preceding the transitivity agreement enclitics (130 & 131).¹⁰ In some cases, the relative positions of the augmentative enclitic and the transitivity agreement enclitic are fully interchangeable without any change in meaning (130). In other cases, especially with manner adverbs, the augmentative is preferred preceding the transitivity agreement enclitic and there can be a change in meaning (131).

- | | |
|---|---|
| <p>(130a) <u>ënapen-quio-uësh</u> cho-o-sh
 far-Aug-Ev.Init:Intr come-Past-3
 ‘He came from very far.’</p> | <p>(130b) <u>ënapen-uësh-quio</u> cho-o-sh
 far-Ev.Init:Intr-Aug come-Past-3
 ‘He came from very far.’</p> |
| <p>(131a) <u>cumapen-quio-en</u> cues-o-sh
 intensely-Aug-Manr:Tr hit-Past-3
 ‘He hit him very hard.’</p> | <p>(131b) ?<u>cumapen-en-quio</u> cues-o-sh
 intensely-Aug-Manr:Tr hit-Past-3
 ‘He really hit him hard.’</p> |

Note that several adverbs, including ac(-quimbo/-quio) ‘intensely,’ otacquio ‘quietly’ and (i)sesembo ‘often’ have the augmentative enclitics -mbo/-quio or -quimbo as part of the lexicalized root, in which case its position relative to the transitivity agreement enclitic is fixed. But because -mbo/-quio most often occurs after the transitivity agreement enclitics, where it occurs in contrastive distribution with other augmentatives and diminutives (§7.6.4.1), I list the transitivity agreement enclitics as occupying the first position class for adverbs. If we were to posit an inflectional category for adverbials, these suffixes would be it.

¹⁰ Were it not that transitivity agreement markers can be preceded by -mbo/-quio (which is clearly an enclitic), it would be tempting to call these “suffixes.” Nevertheless, it should be recognized that transitivity agreement markers are the most suffix-like of the adverbial enclitics: they always occur before chedo, so they never have an adverb phrase as their scope, they are specific to adverbs and postpositional phases, and are inflection-like in their sometimes obligatory status and that they are portmanteau morphemes.

7.6.1.1 Manner transitivity agreement: *-ec* & *-en*

Half of the manner adverbs *must* occur with one of the manner transitivity agreement enclitics. These are: cumapen ‘intensely,’ ac(-quimbo/-quio) ‘intensely,’ (i)sesembo ‘often,’ padpide ‘again,’ and iu ‘for a long time.’¹¹ The other half of the manner adverbs, baded ‘quickly,’ natia ‘intensely,’ buëd ‘intermediately,’ bëdia ‘softly,’ and otacquio ‘quietly’ *cannot* take the manner transitivity agreement enclitics at all (unless they are first reduplicated; §7.7). Thus, for the manner adverbs, there is no opportunity for contrast between a bare root and the same root cliticized with *-ec* and *-en*.

With non-manner adverbs, the addition of *-ec* or *-en* marks a change in meaning as well as a change in function. Although all the adverbs can take either *-ec* or *-en* when reduplicated, only a subset of the adverbs can take these enclitics unreduplicated (see Table 7.18 above). What seems to govern which (non-manner) adverbs take *-ec* or *-en* is whether the adverbs can be construed as modifying the manner in which an action is performed. In light of this, it seems to make sense that deictic/locative/temporal adverbs cannot take *-ec* or *-en*, since these adverbs specify spatial or temporal grounding or deixis, which has little to do with the manner in which an action is performed. By contrast, noun-modifying adverbs, in a sense modify the way in which an entity *exists*. In fact, we find that the copular verb that is used with adjectives and adverbs is ic, which can mean ‘be’ as well as ‘exist’ (132a). Thus, it is not much of a stretch to use these same adverbs to describe the way that entities change over time. For example, in (132b) and (132c), the meaning is essentially the same, except that in (132b) the focus is on how the entity *is* at the end of the growing event, while in (132c) the focus is on how the entity

¹¹ The enclitics -mbo/-quio and related enclitics may optionally intervene between some roots and *-ec* or *-en* (e.g., padpide-mbo-en). With other roots, the form -mbo/-quio is a lexicalized part of the root (e.g., sesembo), or the root cannot occur without -mbo/-quio or a related enclitic (e.g., ac).

grows. The essential meanings of (132d) and (132e) are significantly different: in (132d) the adverb modifies a path or destination, but not really how the subject walks, while in (132e) the adverbial phrase clearly describes how the entity moves.

- | | |
|---|---|
| (132a) <u>ënapen ic-e-c</u>
long be-Npast-Indic
'It is long/tall.' | (132b) <u>ënapen cani-e-c</u>
long be-Npast-Indic
'It grows long/tall.' |
| (132c) <u>ënapen-ec</u> <u>cani-e-c</u>
long- Manr:Intr grow-Npast-Indic
'It grows becoming long.' (e.g., anaconda) | (132d) <u>ënapen capu-e-c</u>
long walk-Npast-Indic
'He walks far.' |
| (132e) <u>ënapen-ec</u> <u>capu-e-c</u>
long- Manr:Intr walk-Npast-Indic
'It moves by becoming long.' (e.g., inchworm) | (132f) * <u>ënapen-en</u> <u>is-o-sh</u>
long- Manr:Trsee -Past-3
'(He looked by stretching out.)' |

But to describe the way that transitive verbs are performed, is perhaps semantically too odd a function for noun-modifying adverbs (132f). Let me spell out why I think this explains why some dimension adverbs occur with -ec, but none with -en: change-over-time and spatial displacement verbs are intransitive and to agree with their transitivity, adverbs modifying them would take -ec. Since change-over-time notions are associated with states, and spatial displacement notions can be associated with posture, noun-modifying adverbs could, with some extension, be used to modify these verbs. Meanwhile, adverbs taking -en would have to be modifying transitive verbs, which tend to be more complex and dynamic, and modifying such verbs may be a function that is beyond noun-modifying adverbs. It should be noted, however, that the use of -ec on dimension adverbs, even with intransitive matrix verbs, is not common at all.¹²

¹² Another possibility is that the adverb is first zero-verbalized, and then adverbialized with -ec. This would account for the inchoative semantics, which always accompanies zero-verbalization, but it would still not explain why it cannot be adverbialized with -en. This competing analysis is hard to disprove, but is less attractive because it is more complicated.

The one noun-modifying adverb that does occur with both -ec and -en is the only noun-identifying adverb, utsi ‘other.’ When suffixed with -ec or -en, it means ‘differently’ (133) or ‘different’ (134).

- (133) utsi-en pe-e-c ‘It eats in a different manner.’
other-**Manr:Tr** eat-Npast-Indic
- (134) tsau-es-bi-mbo-ec ic-quid-bi utsi-ec
long.nosed.armadillo-like-Aug-Advzr:Intr be-Hab-Emph other-**Manr:Intr**
ic-quid sedudi
be-Hab nine.banded.armadillo
‘The nine-banded armadillo is like the long-nosed armadillo, but it is different.’
A-I 048 sedudi 13

The two “proadverbs,” nad ‘like this’ and ad ‘like that,’ can also take both -ec and -en. When the adverb that nad or ad stands for is a manner adverb, nad and ad must be followed by one of the transitivity agreement enclitics (135-137).¹³

- (135) tsitsan matses-n daëdca-quid nad-en
basket Matses-Erg plait-Hab **like.this-Manr:Tr**
‘Matses weave baskets like this.’ [a description of basket weaving follows]
A-XIII 027 tsitsan 02
- (136) matses-n ad-en cues-shun abitedi chui-shun
Matses-Erg **like.that-Manr:Tr** kill-after:S/A>A all tell-after:S/A>A
pe-quid
eat-Hab
‘After Matses kill it like that, they tell everyone and then they eat it.’ [preceding sentence described how Matses kill tapirs]
A-I 045 nëishamë 20
- (137) ad-ec capu-quid mencudu ne-e-c
like.that-Manr:Intr locomote-Agt.Nzr naked.tailed.armadillo be-Npast-Indic
‘That is how the naked-tailed armadillo gets around.’ [following a description of how the naked-tailed armadillo travels underground digging tunnels]
A-I 050 mencudu 11

¹³ If it were not for the fact that nad and ad can stand for noun-modifying adverbs, the simplest analysis might be that nad-en, nad-ec, etc., are adverbialized pro-verbs.

The pair in (138) illustrates the difference in function between nad and nad-ec. In (138a), the adverb is providing information about the manner in which squirrels sit; in (138b), tsad is used as a (plural) copular verb, and is referring to squirrels' appearance, rather than how they perform an action.

- | | | | | | | | |
|--------|-------------|--|-----------------|--------|-------------|--------------------------------|-----------------|
| (138a) | <u>capa</u> | <u>nad-ec</u> | <u>tsad-e-c</u> | (138b) | <u>capa</u> | <u>nad</u> | <u>tsad-e-c</u> |
| | squirrel | like.this- <u>Tr</u> | sit-Npast-Indic | | squirrel | like.this | sit-Npast-Indic |
| | | 'Squirrels sit like this.' | | | | 'Squirrels look like this.' | |
| | | (imitating or followed by description) | | | | (pointing at picture in book)' | |

The adverbializing functions of -ec and -en are described below in sections 7.8 and 12.4.1, and more on these enclitics can be found in the section on adverb reduplication (§7.7).

7.6.1.2 Event initiation transitivity agreement: -uësh & -shun

The enclitics -uësh 'Event Initiation: Intransitive' or -shun 'Event Initiation: Transitive' can follow some adverbs (and some postpositional phrases), including location adverbs and quantifiers, but not manner adverbs, adjective-modifying adverbs, or dimension adverbs (as shown above in Table 7.18). These enclitics exhibit transitivity agreement with the main verb of the clause that they occur in: -uësh is used with intransitive verbs (139b), and -shun with transitive verbs (139a).

- | | | | | | |
|--------|--|------------------|----------------------------|-------------|-----------------|
| (139a) | <u>ad-en</u> | <u>bed-shun</u> | <u>në-shun-quo</u> | <u>mibi</u> | <u>matses-n</u> |
| | like.that-Advzr:Tr | grab-after:S/A>A | here-Ev.Init:Tr-Aug | 2Abs | Matses-Erg |
| | <u>bed-ac</u> | <u>cho-shun</u> | <u>tish-onda-mbi</u> | | |
| | grab-when:O>S/A | come-after:S/A>A | give.birth.to-Dist.Past-1A | | |
| | <u>que-onda-sh</u> | <u>cun</u> | <u>tita</u> | | |
| | say-Dist.Past-3 | 1Gen | mother | | |
| | 'My mother told me: "After Matses captured me like that, I gave birth to you right here, after they captured me and I came here".' | | | | |

- (139b) ashic nē-uësh-quio-bi mibi cani-e-c
 then here-Ev.**Init:Intr**-Aug-Emph 2Abs grow-Npast-Indic
 ‘Then you grew up right here.’ [mother still being quoted]

K-XXI 007 dēmushbo 06

The functions of these enclitics with locative adverbs and with quantifier adverbs are somewhat different, so here I will first describe how these work with locative adverbs, and then below how they work with quantifiers.

With locative adverbs (and locative postpositional phrases), the presence of -uësh or -shun generally indicates that the location being specified by the locative postposition or adverb phrase refers to the location where the event initiates. This is particularly clear with events that involve movement across space (140-142).

- (140) padnuen nēishamē-n ēnapen-uësh-quio cho cho-quin
 by.contrast tapir-Erg far-Ev.**Init:Intr**-Aug (redup=Distr)come-while:S/A>A
 ‘By contrast, the tapir, repeatedly coming from far away...’

C-III 001 shēcten 09

- (141) a-uësh inchësh-n nique-ac nique-ac
 there-Ev.**Init:Intr** dark-Loc run.off-Narr.Past run.off-Narr.Past
 ‘They [a Dēmushbo man and his wife] ran off **from there** at night. They ran off!’

+ K-XXII 007 chema 065

- (142) nē-uësh-quio-bi cun papa nid-pac ca-denne-c
 here-Ev.**Init:Intr**-Aug-Emph 1Gen father go-Narr.Past say-Rem.Past-Indic
 ‘They tell that my father left **from right here**. [in reference to some Matses that left Peru for Brazil a long time ago and never came back].’

K-XXI 008 dēmushbo 12

When event initiation enclitics are absent from the locative phrase in an event involving real or metaphorical motion, the locative phrase refers to the location where the event ends (143 & 144).

- (143) ënapen nid-ec ush-tuid-quin matses-n
 far go-while:S/A>S sleep-upon.arrival-while:S/A>A Matses-Erg
isan podo shubu-ua-e-c
 palm.species frond house-Vzr:make-Npast-Indic
 ‘When Matses go far, when they stop to sleep, they make a shelter from isan palm
 fronds.’

E-XI 001 isan 20

- (144) nëid-n bënë is-o-Ø në-mbo cho-ac-sho
 this.one-Gen husband see-Past-Interr:1/2 here-Aug come-Infer-when:S/A/O>O
 ‘Have you seen this one’s [pointing to an old woman sitting in a room]
 husband?...when he came here?’

+ K-XXII 003 chema 030-1

Two locative phrases can (but seldom) occur in the same sentence, with one referring to where the event started and one where the event ended (145).

- (145) u-shun në-mbo bë-o-sh ‘He brought it from there to here.’
 there-Ev.Init:Tr here-Aug bring-Past-3

Note that the event initiation enclitics do not necessarily imply movement toward or away from the speech act; i.e., their main function does not seem to be to provide deictic orientation. Rather, deictic information is supplied by deictic adverbs like në ‘here,’ a ‘there (near second person) and u ‘there (not near first or second person),’ and by verbs like nid ‘go, leave,’ cho ‘come,’ and bë ‘bring.’ For example, in (146a), the path of the subject is toward the location of the speech act (as specified by the verb bë ‘bring’), and the bringer does not reach the location of the speech act, but only reaches a midway location. In (146b), the direction of movement is similarly toward the speech act, but we do not know if the subject reached the location of the speech act (although this would be assumed by default), but the location where the bringer started out is specified by the locative adverb. Thus, -shun here does not affect direction of movement or relative

orientation of the locative adverb, but only specifies whether the locative adverb is referring to where the event started or to where the event ended.

- | | |
|---|--|
| (146a) <u>u bē-o-sh</u>
there bring-Past-3
'He brought it up to there.' | (146b) <u>u-shun bē-o-sh</u>
there-Ev.Init:Tr bring-Past-3
'He brought it from there.' |
|---|--|

With transitive punctual events that involve A and O participants at separate locations (e.g. seeing someone far away), a locative phrase with -shun will be associated with the A argument (147a); and if -shun is absent from the locative phrase, the specified location will be associated with the location of the O argument (147b).

- | | |
|---|--|
| (147a) <u>nē-mbo-shun</u> mibi is-o-mbi
here-Aug-Ev.Init:Tr 2Abs see-Past-1A
'I saw you (from) here.' | (147b) <u>nē-mbo</u> mibi is-o-mbi
here-Aug 2Abs see-Past-1A
'I saw you here.' |
|---|--|

To understand more fully the difference between (147a) and (147b), imagine that interlocutors are sitting in a restaurant, and that the speaker describes one of three different scenarios that occurred the previous day: i) the speaker was sitting in the restaurant from where he saw the hearer walking down the street by the restaurant; ii) as the speaker walked by the restaurant, he saw the hearer sitting inside the restaurant; or iii) the speaker saw the hearer while both were sitting inside the restaurant. Situation (i) could be related using sentence (147a), but not (147b); situation (ii) could be related using (147b), but not (147a); and situation (iii) could be related with either (147a) or (147b). The minor difference in (147a) and (147b) for relating situation (iii) is that (147a) describes a more precise location: (147b) would simply express that both people were in the restaurant, while (147a) might be chosen if the speaker was sitting at the same table where the speech act is taking place.

With transitive punctual events, it is difficult to show that -shun does not code an association with the A rather than coding the initiation of the event, considering that A's are generally associated with event initiation. But with some transitive verbs, where, unlike with seeing, there is no spatial separation between the A and the O, the analysis that event initiation transitivity agreement enclitics are linked to the A argument of transitive verbs is even more compelling. For example, in (148), the enclitic -shun occurs because the topic is about porcupines and the goal is to describe where porcupines eat (thus, the function is to focus on the text topic). By contrast, (149b), where there is no event initiation transitivity agreement enclitic, would have as its aim to describe where the squirrel's food (e.g., palm nuts that have not yet fallen to the ground) is located at the time when the squirrel acquires it.

- (148) abuc-shun tambis-n pe-ac-bi-mbo-en isa-n
 high-Ev.Init:Tr paca-Erg eat-Act.Nzr-like-Aug-Advzr:Tr porcupine-Erg
sos sos ca-pambo-en pe-quid isa ne-e-c
 gnawing.sound say-Aug-Advzr:Tr eat-Agt.Nzr porcupine be-Npast-Indic
 'The porcupine is one that eats up high making a loud gnawing sound saying "sos sos," like a paca makes.'

A-IV 041 isa 21

- (149a) capa-n abuc-shun pe-e-c 'Squirrels eat (their food) high up.'
 squirrel-Erg high-Ev.Init:Tr eat-Npast-Indic focus on A
- (149b) capa-n abuc pe-e-c 'Squirrels eat (the palm nuts) high up.'
 squirrel-Erg high eat-Npast-Indic focus on O

Similarly, in (150), the adverbial phrase simply specifies the location of the action (i.e., the giving birth), while the same sentence without -shun would carry the additional implication that the young (i.e., the O) stay high up in the trees (e.g., in a nest) after being born (i.e., it focuses on the O).

- (150) abuc-shun-bi tsise-n aton bacuë tish-e-c
 high-Ev.Init:Tr-Emph coati-Erg 3Gen offspring give.birth.to-Npast-Indic
 'High in the trees, coatis give birth to their young.'

1-p65-B tsise 06

Thus, in (150) the adverb cliticized with -shun focuses simultaneously on the A and on the initiation of the event, and if not cliticized, the adverb would focus on the O and/or what occurs after the event is initiated. However, this association with the A and O arguments does not always hold, as can be seen with non-punctual transitive events that involve movement across a physical distance, as in (146) above, where it can be shown that -shun is not necessarily associated with the A. The pair of examples in (151) similarly allows us to tease event initiation and core arguments apart. The semantic difference between these two sentences is that (151a) indicates that someone is going to be waiting at some locality for no particular person or thing (e.g., a hunter waiting at a mineral lick for any game). In (151b), the waiter knows that a particular person will show up at that locality.

- (151a) a-mbo cain-e-c
 there-Aug wait-Npast-Indic
 'He will wait there.'
- (151b) a-shun-quio cain-e-c
 there-Ev.Init:Tr-Aug wait-Npast-Indic
 'He will wait for him there.'

If the basic function of event initiation transitivity agreement enclitics were to associate locative phrases with a particular core argument, then in (151b) the function of -shun would be reversed, as it seems to be focusing on the (identifiable) O, as opposed to the A. I'm embarrassed to say, however, that I cannot explain the difference in meaning in (151) based on event initiation, but at least it does not seem to be a counterexample to my hypotheses. So this discourages the analysis that the basic function of -shun is to associate the locative phrase with the A, but it must be admitted that this is sometimes at least an epiphenomenal function of -shun in transitive sentences, and that there is

something else going on besides just marking event initiation. The fact the -uësh can associate the adverb to the initiation of the event, but cannot be used to associate the locative phrase with a core argument (because there is only one) further discourages the analysis that these enclitics function basically to associate the adverb with an argument. However, the function of -shun with quantitative adverbs, as described at the end of this section, does provide strong counterevidence for my analysis.

I still have not figured out the exact function of -uësh and -shun in examples (152) and (153). For some hypotheses, see the postposition chapter (§8.6.1.2), where I take up the discussion of deictic and discourse functions of the event initiation enclitics. In conclusion, I suggest that the basic function of these enclitics (at least with locative adverbs) is to specify that the adverb is associated with the initiation of the event; association with A seems to be an epiphenomenon, and such functions as focusing on the topic, deictic orientation, etc., are extended functions available when a distinction between event initiation and end is not applicable.

- (152) badiad-nuc a-uësh-quoio-bi cuëdën-e-c
 dawn-while:Diff.Ref there-Ev.Init:Intr-Aug-Emph sing-Npast-Indic
achu
 howler.monkey
 ‘While it is dawning, howler monkeys sing from right there [the vine tangle where they slept].’

1-p55-B achu 02

- (153) cho-e-c que-shun cain-quid a-shun-quoio-bi
 come-Npast-Indic say-after:S/A>A wait-Hab there-Ev.Init:Tr-Aug-Emph
 ‘They say, “It’s (the armadillo) coming!” and then they wait right there (beside the armadillo burrow).’

A-I 047 tsaues 28

These enclitics cannot be used with temporal adverbs (154) or to refer to the temporal domain at all (155).

- (154a) enden cain-o-mbi
yesterday-Ev.Init:Tr wait-Past-1A
'I waited yesterday.'
- (154b) *enden-shun cain-o-mbi
yesterday-Ev.Init:Tr wait-Past-1A
'(I waited since yesterday)'
- (155a) në-bi cain-e-mbi
here-Emph wait-Npat-1A
'I will wait nearby.'
'I'm waiting now.'
'I will wait today.'
- (155b) në-bi-shun cain-e-mbi
here-Emph-Ev.Init:Tr wait-Npat-1A
'I will wait nearby.'
'*I am/will wait (starting) now.'
'*I will wait today.'

With quantifiers, which are noun-modifying adverbs, the basic function of -shun is shifted. When -shun is attached to a quantitative adverb or postposition, it indicates that the quantifying phrase is to be linked with the ergative participant (156); the absence of -shun indicates that the quantifying phrase is to be linked to the absolutive participant (157 & 158).

- (156) matses-n abitedi-shun-bi shëbun-quid nëishamë-Ø
Matses-Erg all-Ev.Init:Tr-Emph share-Hab tapir-Abs
'All the people in the village share the tapir [meat].'

A-I 045 nëishamë 10

- (157) nad-quid daëd chido-Ø bed-ac nëid ted
like.this-Agt.Nzr two woman-Abs grab-Infer this.one as.many.as
'Thus, we captured two women, this many [speaker holds up two fingers].'
+ K-XXII 015 chema 148

- (158) tayun dadpen-quo bacuë-Ø cani-quid
at.the.base many-Aug seedling-Abs grow-Hab
'Many seedlings grow at its base.'

A-I 007 acte pinchuc 12

The adverb can be associated thus with the core participants whether the core participant occurs overtly (as in the above three examples), or covertly as a third-person zero pronoun, as in (159) - (161).

- (159) dadpen-shun macueste dë-din-nan-budcuen-shun
 many-Ev.Init:Tr corn.grinding.tub end-lift-Recip-in.two-after:S/A>A
bë-quid macueste
 bring-Hab corn.grinding.tub
 ‘Many [people] carry the corn grinding tub together.’
 A-XIII 030 macueste 12
- (160) dadpen tësh-tanquin matses-n codoca-quid
 many pull.off-after:S/A>A Matses-Erg boil-Hab
 ‘After going to collect many [bee hives], Matses cook them.’
 A-XIII 001 buid 22
- (161) nuntan dadpen-quo cho-quid ‘Many [bats] come inside the house.’
 inside many-Aug come-Hab
 D-X 057 cuesban 02

In light of the above three sentences, one might wish to argue that quantifiers occur polysemously as nouns/pronouns and that there are two ergative markers in the language, -n for non-quantifier nouns, and -shun for quantifiers (and -Ø would mark absolutive case for any noun). This analysis is compelling when we compare sentences like (162) and (163).

- (162) senta abitedi-shun-quo pe-aid ne-e-c
 red.uakari.monkey all-Ev.Init:Tr-Aug eat-Pat.Nzr be-Npast-Indic
 ‘Red uakari monkeys are ones that are eaten by everyone.’
 A-I 057 senta 15
- (163) bëdi-n pe-aid-quo shaë ne-e-c
 jaguar-Erg eat-Pat.Nzr-Aug giant.anteater be-Npast-Indic
 ‘Giant anteaters are truly ones that are eaten by jaguars.’
 A-IV 027 shaë 31

Thus, because ergative arguments generally represent the participant that initiates an action, and because quantifiers always refer to some participant, with quantifiers, -shun may appear to be an ergative marker. Nevertheless, several arguments can be presented that discourage calling -shun an ergative case marker for quantifiers. First, the function of -shun with locative adverbs (as described above) is clearly not that of a case marker, so

we would have to posit two disparate functions for -shun. Second, if -shun were an ergative marker, we would have to analyze sentences like (164) as having two ergative-marked participants; while double case-marking is optional for some noun-noun noun phrases, like relative clauses (§12.2.1) and conjoined noun phrases (§10.9.1), here it would not be optional, and would change the meaning if -shun was left out. Third, a -shun-marked quantifier adverb can modify a genitive (164) or instrumental (165) participant *instead* of the Ergative argument.

(164) abitedi-shun dayunua-aid ampe-ac-o-sh
 all-Ev.Init:Tr possess-Pat.Nzr steal-Infer-Past-3
 ‘Everyone’s possession’s were stolen.’ / ‘Everyone stole the possessions.’

(165) debi-n chështe-n daëd-shun tsesca-o-sh
 Davy-Erg machete-Inst two-Ev.Init:Tr clear.undergrowth-Past-3
 ‘Davy cleared the undergrowth using two machetes.’ / ‘Two Davys...’

And fourth, we note that some older speakers use the intransitive agreement marker -uësh on some quantifiers when modifying an intransitive subject (167), thereby breaking up the absolutive category (i.e., A taking -shun, O taking -Ø, and S taking -uësh).

(166) abitedi-shun matses-n pe-aid poshto ne-e-c
 all-Ev.Init:Tr Matses-Erg eat-Pat.Nzr woolly.monkey be-Npast-Indic
 ‘Woolly monkeys are ones that are eaten by all Matses.’

A-I 052 poshto 33

(167) abitedi-uësh nid-o-sh ‘Everyone went.’
 every-Ev.Init:Intr go-Past-3

Since only some younger speakers seem to be aware that some older speakers use sentences like (167), it is possible that they have reanalyzed -shun as a ergative marker when used with quantifiers.

7.6.2 chedo 'et cetera/too'

The particle chedo is discussed in sections 9.3.1 and 10.9.1, so here I will only point out that it occurs following transitivity agreement suffixes and sometimes after -quio/-mbo (§7.6.4.1), but generally before all the other enclitics in the adverbial phrases. It can mean 'et cetera,' 'too,' or both at the same time (168).

- (168) tsimpiduc chedo cani-quid budəd ushu ne-e-c
 valley:Loc **etc/too** grow-Agt.Nzr palm.species white be-Npast-Indic
 'Budəd ushu palms are ones that **also** grow in valleys **and other such habitats.**'
 1-p03-B budəd ushu 03

7.6.3 -uid 'only'

The basic meaning of the enclitic -uid is 'only' (169 & 170).

- (169) abuc-uid-bi ic-quid '[Woolly monkeys] stay high up (in the trees).'
 high-**only**-Emph be-Hab [lit. 'They are **only** high up']
 A-I 052 poshto 23
- (170) abentsēc-uid-bi cuəd-e-c nēbi-ni diad-e-c que-ec
 one-**only**-Emph call-Npast-Indic here-1S hang-Npast-Indic say-while:S/A>S
 '**Only** one answers back saying, "I'm hanging here".'
 + K-XXII 007 chema 067

In other more idiomatic usages, the 'only' meaning is less straightforward; 'always' could be considered a common secondary, related meaning of -uid (171).

- (171) chimu-bud-ne-tsēc-quio-en mani che-ash
 defacate-Dur-Distr-Dim-Aug-Advzr.Tr plantain eat.unchewed-after:S/A>S
ano-uid-bi cho cho-quid cuesban ne-e-c dadpen
 there-**only**-Emph (redup=Distr) come-Agt.Nzr bat be-Npast-Indic many
 'Bats are ones that keep on coming **always** to the same place [lit. 'only right there'], leaving feces right where they eat plantains ...many!'
 D-X 057 cuesban 07

The enclitic -uid never occurs without another enclitic following it. This enclitic is usually -bi or -mbo/-quio, but it can also be one of the other position 4 enclitics. The meanings of -bi and -mbo/-quio following -uid are usually bleached and non-contrasting (172), but with a few adverbs there is a slight difference in meaning (173).

(172a) otac-quio-uid-bi cho-e-c
 quietly-Aug-only-**Emph** come-Npast-Indic
 ‘They are all coming quietly.’/ ‘Quietly is the only manner they come.’

(172b) otac-quio-uid-quio cho-e-c
 quietly-Aug-only-Aug come-Npast-Indic
 ‘They are all coming quietly.’/ ‘Quietly is the only manner in which they are coming.’

(173a) abentsēc-uid-bi cuēd-e-c
 one-only-**Emph** call-Npast-Indic
 ‘Only one calls out.’

(173b) abentsēc-uid-quio cuēd-e-c
 one-only-Aug call-Npast-Indic
 ‘Always, only one calls out.’

7.6.4 *Augmentatives, Diminutives, De-intensifiers*

All of the enclitics in this position class, except -tsēc ‘Diminutive,’ also occur with adjectives, and they were described in some detail in the adjective chapter (§6.6.2). However, their meaning and function are sometimes different with adverbs, so here I will only describe these enclitics in detail where their meaning/function differs.

7.6.4.1 *-mbo/-quio Augmentative*

This enclitic exhibits an irregular phonologically-conditioned allophony pattern, with the allophone -mbo following vowels and -quio consonants (see §2.6.8 for a discussion of this phonological phenomenon). In most cases, this enclitic serves to simply augment the semantics of the adverb, meaning something like ‘very’ (174).

- (174) baded-quoio dectato-quad ne-e-c
 quickly-Aug climb.up-Agt.Nzr be-Npast-Indic
 'It [the porcupine] is one that climbs up very quickly.'

A-IV 041 isa 20

With adjectives, cliticization with -mbo/-quoio is obligatory in most construction types, including copular constructions (175; §6.4) and adverbial adjective constructions (§6.4), where -mbo/-quoio simply fulfills the grammatical requirement and carries no augmentative meanings.¹⁴ An important difference between adverbs and adjectives is that -mbo/-quoio is not required with adverbs, and (with most adverbs) carries an augmentative meaning in any construction (176).

- (175a) aid piu-mbo ic-o-sh
 that.one red-Aug be-Past-3
 'That one was red.'

- (175b) *aid piu ic-o-sh

- (176a) aid nua-mbo ic-o-sh
 that.one large-Aug be-Past-3
 'That one was very big.'

- (176b) aid nua ic-o-sh
 that.one large be-Past-3
 'That one was big.'

Partial lexicalization with -mbo/-quoio can be illustrated with the demonstrative deictic adverb roots. The roots nē and u readily occur without any additional morphological material (177 & 178).

- (177) nē canti utsi ic-e-c que-quin mene-quad canti
 here bow other be-Npast-Indic say-while:S/A>A give-Hab bow
 'He gives the bow saying, 'Here! is an extra bow''.

A-XIII 035 canti 14

- (178) u nēid dēbiate-mi niste ushu dadpen ic-onda-sh
 there this.one headwaters-Loc palm.species white many be-Dist.Past-3
 'There [pointing], around the headwaters of this one [the Galvez River], there were many niste ushu palms.'

A-I 035 niste ushu 05

¹⁴ One analysis is that in these cases, -mbo/-quoio functions to make adjectives more adverb-like in the sense that they require -mbo/-quoio to occur in the adverbial adjective constructions (§11.8).

By contrast, the root a does not usually occur as a bare root in the speech of most Matses speakers, but some old speakers use the bare root a as a deictic adverb (179a). What seems to be happening is that a new grammatical requirement is being adopted in the speech of younger speakers where deictic adverbs must occur with the augmentative enclitic -mbo/-quio (similar to the requirement of -mbo/-quio with adjectives in copular constructions, §6.4). What we find is that a is used as a bare root, as in (180a), mostly by very old speakers. The form në is used as a bare root by all speakers in its lexical-particle-like function, as in (177), but only by older speakers in sentences like (180a). The root u, by contrast, is used regularly as a bare root by all speakers in both deictic and dimension polysemous senses, but younger speakers are more likely to encliticize the deictic adverb with -mbo/-quio than are older speakers. In examples (179) - (181), we can see that the augmentative meaning of -mbo/-quio is bleached when suffixed to deictic pronouns (but not when used with dimension adverbs; 181b second translation), suggesting that the use of -mbo/-quio with deictic pronouns is becoming obligatory and semantically empty, as it already has with adjectives in copular clauses (§§6.4, 11.7.2).

(179a) ?a ic-e-c
 there be-Npast-Indic
 'There it is (by you).'

(179b) a-mbo ic-e-c
 there-Aug be-Npast-Indic
 'There it is (by you).'

(180a) në ic-e-c
 here be-Npast-Indic
 'Here it is.'

(180b) në-mbo ic-e-c
 here-Aug be-Npast-Indic
 'Here it is.'

(181a) u ic-e-c
 there be-Npast-Indic
 'There it is.' / 'It's far.'

(181b) u-mbo ic-e-c
 there-Aug be-Npast-Indic
 'There it is.' / 'It's very far.'

So the demonstrative deictic adverbs are nascent exceptions to the general rule that no adverbs require -mbo/-quio and that -mbo/-quio always carries an augmentative meaning with adverbs in all constructions. However, this seems to be a new pattern that is not fully incorporated into the language.

Sometimes the enclitic -mbo/-quio can precede the manner transitivity agreement suffixes, in which case -quio exhibits phonological reduction at the morpheme boundary (/o/ + /e/ → /e/):

- | | | | | | |
|--------|------------------------|------------------|--------|-------------------------------|----------------|
| (182a) | <u>cumapenquien</u> | <u>cuesosh</u> | (182b) | <u>abuc abucquiec</u> | <u>icosh</u> |
| | <u>cumapen-quio-en</u> | <u>cues-o-sh</u> | | <u>redup abuc-quio-ec</u> | <u>ic-o-sh</u> |
| | intensely-Aug-Manr:Tr | hit-Past-3 | | Distr high-Aug-Manr:Intr | be-Past-3 |
| | 'He hit him very hard' | | | 'They were all very high up.' | |

7.6.4.2 -pambo and -patsëc 'De-intensifiers'

Unlike with adjectives, -patsëc and -pambo do not carry size semantics with when cliticized to adverbs. They both mean 'more or less' with -patsëc de-intensifying the adverb a bit more than -pambo (see Table 7.19 in the next section). With some adverbs (especially dimension adverbs) it is used to express a comparative meaning (183 & 184).

- | | | | | |
|-------|---|------------------|----------------|----------------|
| (183) | <u>abuc-pambo</u> | <u>cani-quad</u> | <u>toncate</u> | <u>ne-e-c</u> |
| | high-Aug | grow-Agt.Nzr | palm.species | be-Npast-Indic |
| | 'It [the <u>toncate</u> palm] is one that grows somewhat tall.' | | | |

1-p30-B toncate 05

- | | | | | | |
|--------|------------------------|-------------|--------|---------------------|-------------|
| (184a) | <u>ënapen-patsëc</u> | <u>te-Ø</u> | (184b) | <u>ënapen-pambo</u> | <u>te-Ø</u> |
| | long-Dim | cut-Imper | | long-Aug | cut-Imper |
| | 'Cut it a bit longer!' | | | 'Cut it longer!' | |

7.6.4.3 -pabi 'De-intensifier'

The enclitic -pabi is similar to -patsëc and -pambo in one of its meanings. As a de-intensifier, it fits into a paradigm with -pambo and -patsëc, standing in the middle of

these two forms. Table 7.19 compares these enclitics using the dimension adverb ënapen ‘long.’

Table 7.19. Comparison of adverb de-intensification morphology.

Term	Meaning	Relative length
<u>ënapen</u>	‘long’	
<u>ënapen-pambo</u>	‘somewhat long’	< <u>ënapen</u> ; > <u>ënapen-pabi</u>
<u>ënapen-pabi</u>	‘a bit long’	< <u>ënapen-pambo</u> ; > <u>ënapen-patsëc</u>
<u>ënapen-patsëc</u>	‘a tiny bit long’	< <u>ënapen-pabi</u>

The enclitic -pabi does not have a comparative meaning (e.g., ‘longer’) like -pambo and -patsëc, but it does also have two meanings associated with it:

- (185) nua-pabi ‘a bit big’/ ‘big enough’
 large-Deintens

7.6.4.4 -quimbo ‘Augmentative’

This enclitic simply augments the meaning of the enclitic, meaning ‘very’ or ‘extremely’ (186). It may be a combination of -quio and -mbo (§§6.6.2, 7.6.4.1), and specifies a further level of augmentation than either one of these two forms alone.

- (186) nua-quimbo ‘extremely large’
 large-Aug

7.6.4.5 -tsëc ‘Diminutive’

The enclitic -tsëc (and its phonologically-conditioned allomorphs -tsë and -ts) also occurs on verbs (§5.5.8) and postpositions (§8.6.4.6), but unlike the other enclitics in this position class, it cannot occur with adjectives. Unlike with verbs, -tsëc ‘Diminutive’

cannot occur freely on any adverb: it only occurs on the few adverbs that designate a property that is already diminutive in nature, as in (187) - (190).

- (187) tacchish bushcu-tsēc ic-quid 'The stilt roots [of the niste palm] are short.'
 stilt.root **short-Dim** be-Hab
 A-I 031 niste 07
- (188) nua-mbo cuesban ic-nuc-bi utsi-bo ania-tsēc
 large-Aug bat be-while:Diff.Ref-Emph other-Pl **small-Dim**
tsad-quid cuesban ne-e-c
 be:Pl-Agt.Nzr bat be-Npast-Indic
 'Bats are ones that while some bats are large, others are small.'
 A-I 051 cuesban 19
- (189) ad-nuc-bi tēma-tsēc ic-quid tēdentabente
 do.thus-while:Diff.Ref-Emph **few-Dim** be-Agt.Nzr thirty twenty
ted-tsēc-bi shēctenamē ne-e-c
 as.many.as-Dim-Emph white.lipped.peccary be-Npast-Indic
 'Meanwhile, [other] white-lipped peccary [herds] are ones that are few, having only twenty or thirty.'
 A-I 044 shēctenamē 09
- (190) nēishamē cues-quid-n-quo matses-n bēdia-tsēc-quo nid-shun
 tapir kill-Agt.Nzr-Erg-Aug Matses-Erg **softly-Dim-Aug** go-after:S/A>A
ue-sho istuid-tanquin matses-n cues-quid
 lie.down-when:S/A/O>O find-after:S/A>A Matses-Erg kill-Hab
 'The good tapir killers walk very softly and find it while it is lying down, and then kill it.'
 H-XVII 039 cuesban 14

When these diminutive adverbs are cliticized with -tsēc, the semantics of -tsēc and -mbo/-quo 'Augmentative' does not contrast, apparently because adding -tsēc to a Diminutive adverb equals 'smaller smallness' and adding ' -mbo/-quo to a diminutive adverb also amounts to 'more smallness' (191-192). There seems to be a grammatical restriction against using -tsēc when the adverb occurs as part of a noun phrase (193b).

- (191a) bushcu-mbo ic-o-sh
short-Aug be-Past-3
'It was very short.'
- (191b) bushcu-tsēc ic-o-sh
short-Dim be-Past-3
'It was very short.'
- (192a) ania-mbo ic-o-sh
small/thin-Aug be-Past-3
'It was small/thin.'
- (192b) ania-tsēc ic-o-sh
small/short-Dim be-Past-3
'It was small/thin.'
- (193a) dada bushcu cho-o-sh
man short come-Past-3
'Shorty/the short man came.'
- (193b) *dada bushcu-tsēc cho-o-sh

Some adverbs like ania 'small' never occur as bare roots (and thus cannot modify noun phrases), but can occur with -mbo (194) instead of -tsēc. Some synchronically unsegmentable diminutive adverbs that end in tsēc cannot be further cliticized with -tsēc (195 & 196; §7.5.2).

- (194) sedudi-n mapi ania-mbo ic-tsēc-quid
nine.banded.armadillo-Gen head small-Aug be-Dim-Hab
'...but the nine-banded armadillo's head is small.'
- A-I 048 sedudi 03
- (195a) dada pictsēc ic-tsēc-e-c
trunk small be-Dim-Npast-Indic
'The trunk [of the toncate palm] is small.'
- A-I 018 toncate 05
- (195b) *pictsēc-tsēc
- (196a) tacchish mapictsēc ic-tsēc-quid
stilt.root short be-Dim-Hab
'The roots [of the pēdimpi palm] are short.'
- A-I 033 pēdimpi 04
- (196b) *mapictsēc-tsēc

Adverbs cliticized with -tsēc can be intensified by adding the enclitic -quio 'Augmentative' (197 & 198).¹⁵

¹⁵ The enclitic series -tsēc-quio 'Diminutive-Augmentative' should not be confused with the (lexicalized) enclitic -tsēcquio 'Derogatory,' which occurs on adjectives (§6.6.2.6).

- (197) bētantete bushcu-tsēc-quo ic-quid madu-n sipi-mpi ne-e-c
 face short-Dim-Aug be-Agt.Nzr demon-Gen tamarin-small be-Npast-Indic
 ‘The little pygmy marmoset is one that has a very short little rostrum.’
 A-IV 006 madun sipi 04
- (198) tsitsu ania-tsēc-quo ic-e-c ‘[The howler monkey’s] hindquarters are
 butt small-Dim-Aug be-Npast-Indic very small [compared to its upper body]
 A-I 054 achu 05

The enclitic -tsēc is the only enclitic that is reduplicated together with the adverb root (199). Adverbs that end in tsēc are exceptional in that they can reduplicated without being cliticized (200).

- (199) aidi quēñēuaquid bushcutsēc bushcutsēc
aid-bi quēñē-ua-quid redup bushcu-tsēc
 that.one-Emph enclosure-Vzr:make-Hab Distr short-Dim
nacte-shun
 cut-after:S/A>A
 ‘They make walls from that one after cutting many short pieces.’
 A-I 032 pēdi 07
- (200) shupud pictsēc pictsēc icquid dedombi
shupud redup pictsēc ic-quid dedo-o-mbi
 bag Distr small be-Agt.Nzr carry.on.back-Past-1A
 ‘I carried many small bags.’

7.6.5 -shē ‘Augmentative’

The enclitic -shē functions to intensify an adverb (or adjective or postposition) further. It must follow another augmentative enclitic, i.e., -mbo/-quo, -quimbo, or -pambo (201), but not necessarily directly, as becomes evident when a manner transitivity agreement enclitics intervene (202 & 203).

- (201) cuesban inchēsh-n natia-mbo-shē mamēn-an-e-c
 bat dark-Loc many-Aug-Aug laugh-Incep-Npast-Indic
 ‘At night, many bats begin laughing.’
 A-I 051 cuesban 03

- (202) cumapen-quo-en-shë 'very intensely'
intensely-Aug-Manr:Tr-Aug
- (203) ac-quimbo-ec-shë ichad-quid ad-quid-bi
intensely-Aug-Manr:Intr-Aug sweat-Agt.Nzr like.that-Agt.Nzr-Emph
shëcten ne-e-c
collared.peccary be-Npast-Indic
'It sweats producing a strong smell, that is how the collared peccary is.'
A-I 043 shëcten 10

The enclitic -shë cannot follow -tsëc or -patsëc without -quo in between (204b).

- (204a) tacchish bushcu-tsëc-quo-shë ic-quid 'The roots are very, very short.'
stilt.root short-Dim-Aug-Aug be-Hab
A-I 031 niste 07
- (204b) *bushcu-tsëc-shë

7.6.6 -ba 'first'

The enclitic -ba modifies a word providing sequential information. This enclitic, introduced in the chapter on nouns (§4.6.7) can be attached to most elements in a sentence, including noun phrases (205a & 205b), postpositional phrases (205c), interrogative nouns (205d) and adverbs (205e-205f), the main exceptions are finite verbs.

- (205a) poshto-ba is-o-sh (205b) poshto-n-ba is-o-sh
woolly.monkey-first see-Past-3 woolly.monkey-Erg-first see-Past-3
'First, he saw the woolly monkey.' 'The woolly monkey saw him/it first.'
- (205c) shubu ëquëduc-ba is-o-sh (205d) atoda-ba is-o-sh
house inside-first see-Past-3 what-first see-Past-3
'He saw it first inside the house.' 'What did he see first?'
- (205e) u-ba is-o-sh (205f) dadpen-ba is-o-sh
there-first see-Past-3 many-first see-Past-3
'He saw it there first.' 'He saw many first.'

The enclitic -ba can follow almost all of the adverbs, including adverbs from all of the different semantic subclasses (205e, 205f & 206). With the few adverbs that cannot be cliticized with -ba, there seems to always be an obvious semantic motivation for the restriction (207).

(206a) ania-tsēc-ba pe-Ø
 little-Dim-first eat-Imper
 ‘First, eat a little bit!’

(206b) nad-en-ba na-Ø
 like.this-Tr-first do-Imper
 ‘Do it like this first!’

(206c) bēdia-tsēc-ba cho-o-sh
 softly-Dim-first come-Past-3
 ‘First, it came slowly.’

(206d) utsi-ba pe-me-Ø
 other-first eat-Cause-Imper
 ‘Feed someone else first.’

(207) *padpide-ec-ba
 again-Manr.Tr-first

The enclitic -ba can occur with adjectives (208a), but to a very limited extent since few situations would call for it, and adjectives occur in a limited number of syntactic positions. For example (208a) was corrected with (208b), using a nominalization. Since -ba readily occurs with most adverbs, so this is another general difference between adjectives and adverbs, even if it cannot be applied as a diagnostic tool.

(208a) piu-mbo-ba ic-o-sh ‘It was red first (and then turned some other color).’
 red-Aug-first be-Past-3

(208b) *piu-mbo-ba dabiun-nu (‘I’m going to paint it red first.’)
 red-Aug-first paint-Intent:1

(208c) piu-mbo ic-quid-n-ba dabiun-nu
 red-Aug be-Agt.Nzr-Inst-first paint-Intent:1
 ‘I’m going to paint it with the red one first.’

The ‘first’ meaning can be associated either with the adverb itself or with the clause. So, example (209b) has the same ambiguity as its English translation. If it refers to just the

locative adverb, it would mean: ‘First I sat here... and then I sat there’; if it refers to the clause it could mean: ‘First I sat here... and then I saw the pretty girl’ (sequentially ordering the very different clauses). But it seems that the subject of the clause cannot change, so (209a) would *not* mean: ‘First I sat here... then she came and sat by me.’ To get this last reading, -ba would have to follow the subject of the clause, as in (209b).¹⁶

- | | |
|--|---|
| (209a) <u>në-mbo-ba</u> <u>tsad-o-bi</u>
here-Aug- first sit-Past-1S
‘First, I sat here.’ | (209b) <u>ubi-ba</u> <u>në-mbo</u> <u>tsad-o-bi</u>
1Abs- first here-Aug sit-Past-1s
‘I sat here first.’ |
|--|---|

7.6.7 -tsen ‘next’

The syntactic and morphological properties of -tsen and -ba are almost identical and their meanings are related in that both convey sequential information. The enclitic -tsen conveys that the action or part of the action in the clause occurs subsequently to another action or part of the same action (210-212).

- | | |
|---|--|
| (210) <u>u-mbo-tsen</u> <u>nid-Ø</u>
there-Aug- next go-Imper
‘Go there next!’ | (211) <u>cumapen-en-tsen</u> <u>titique</u>
intensely-Manr:Tr- next run
‘Then run quickly.’ (after running slowly, or after doing something else) |
| (212) <u>ado-tanquin</u> <u>utsi-tsen</u> <u>daëdca-shun-quin</u>
thus-after:S/A>A other- next weave-Appl-while:S/A>A
‘After doing that, weaving another set...’ | |

A-XIII 043 uitsun 16

Despite their morpho-syntactic and semantic similarity, -tsen and -ba do not occur in paradigmatic contrast (i.e., in the same position class). Both can (but seldom do) occur together on a word, with -tsen always preceding -ba (213).

¹⁶ The grammatically-conditioned allomorph of -ba, -a, follows pronouns; §4.4.5.2.

- (213a) në-mbo-tsen-ba cho-o-sh
 here-Aug-next-first come-Past-3
 ‘The next time, he came here first.’
- (213b) *në-mbo-ba-tsen cho-o-sh

In adverbial phrases where -ba and -tsen occur together, as in (213a), the scope of -tsen is the whole clause (in this case, the whole series of visits), while the scope of -ba is only the adverb (in this case the location). It is worth pointing out that despite adverbs and postpositions being almost identical in their morphological possibilities, when -ba and -tsen occur together on postpositions, their allowed order is reversed, but the scopes of -tsen and -ba do not differ, despite their different positions (§8.6.7). It should also be pointed out, however, that I have not found these two enclitics occurring together in texts nor have I ever heard them used together in overheard speech—their co-occurrence may be an artifact of elicitation, and so I do not consider this a significant morphological difference between adverbs and postpositions. These two sequential enclitics do seem to be mutually exclusive with nouns.

7.6.8 -bi ‘*Emphatic*’

The enclitic -bi (and its phonologically-conditioned allomorph, -i) is one of the most commonly encountered and semantically and functionally complex morphemes in the language; this is no less true with respect to adverbs. It can be attached to nouns, adjectives, non-finite verbs, adverbs and postpositions. When attached to adverbs, the enclitic -bi marks emphasis for the purpose of confirming or correcting one’s own statement, another person’s statement, or an attitude or presupposition that the speaker supposes or anticipates of the hearer. This meaning can often be translated into English as ‘actually,’ ‘really,’ ‘right,’ or ‘only.’ The other (related) meaning of -bi might be termed “identity” in the sense that the location or other information related by the adverbial phrase is the *same* as one that was previously mentioned or otherwise “on

stage.” This meaning might be translated into English as ‘right (where...)’ or ‘same.’ With many adverbs (and pronouns; §4.4.1) *-bi* has either become obligatory and semantically empty, or it is associated with idiosyncratic meanings. First, I will describe the regular meanings of *-bi*, and after that the irregular, idiosyncratic meanings it has with certain adverbs.

Example (214) illustrates a case where the speaker corrects (or, more precisely, modifies in a contrastive manner) a previous statement. The narrator first says that swamp palm fruits are eaten by Matses/humans in (214a), and then in (214b) emphasizes ‘all,’ making sure that the hearer knows that it is not just Matses/humans that eat swamp palm fruits.

(214a) itia matses-n che-tequid itia ne-e-c
 swamp.palm Matses-Erg eat.unchewed-Inst.Nzr swamp.palm be-Npast-Indic
 ‘Swamp palm [fruits] are ones that are eaten by Matses.’

A-I 029 itia 02

(214b) abitedi-shun-bi che-tequid itia ne-e-c
 all-Ev.Init.Tr-**Emph** eat.unchewed-Inst.Nzr swamp.palm be-Npast-Indic
 ‘(Actually), the itia palm [fruits] is one that is eaten by *all* [animals (and people)].’

A-I 029 itia 03

In (215), the speaker knows that the hearer (me) has seen that *bumpac* palms (*Itaya amicornum*) are all short (up to 4 or 5 meters tall), and here he is confirming this fact and perhaps assuring me that they do not grow tall somewhere I had not been.

(215) mapictsēc-bi cani-tsēc-quid bumpac ne-e-c
 short-**Emph** grow-Dim-Agt.Nzr palm.species be-Npast-Indic
 ‘The *bumpac* palm is a little one that **really does** grow short.’

A-I 026 bumpac 10

The topic of the text from which (215) was extracted is about the Western woolly opossum (*Caluromy lanatus*), which is probably the most arboreal species of opossum in

the area, and is most appropriately named abuc checa (literally ‘high/up opossum’). The -bi in (216) serves to confirm that this behavior is just as one would expect from the animal’s name.

- (216) bundo-ash adecbidi checa capu-e-c abuc-bi
 get.hungry-after:S/A>S likewise:Intr opossum locomote-Npast-Indic high-**Emph**
 ‘After it gets hungry, the opossum climbs around, up (in the trees, **as expected**).’
 A-IV 044 abuc checa 05

In (217b), the speaker uses -bi to emphasize that the place where the young rice rats grow up is the same place where the rice rats were born, as mentioned in the preceding sentence (217a). In the absence of -bi in (217b), the location would be somewhat ambiguous, potentially simply meaning ‘from that sort of place. But -bi emphasizes focused continuity in the locative setting of the scene.

- (217a) shubu maca-n-bi ushte-ua-shun bacuë
 house roof.apex-Loc-Emph nest-Vzr:make-after:S/A>A offspring
tish-e-c shubu pe-quid-n
 give.birth.to-Npast -Indic house eat-Agt.Nzr-Erg
 ‘The bicolored arboreal rice rat [lit. “house eater”] makes a nest right in the top part of the roof of a [Matses] house and there gives birth to its young.’
 A-IV 018 shubu pequid 09

- (217b) a-uësh-quoio-bi bacuë cani-bud-ne-ash bacuë-bo
 there-Intr-Aug-**Emph** offspring grow-Dur-Distr-after:S/A>S offspring-Pl
daëd-ash dadpen-quoio shubu pe-quid ic-quid
 proliferate-after:S/A>S many-Aug house eat-Agt.Nzr be-Hab
 ‘**Right** at that **same** place [at the roof apex], the bicolored arboreal rice rat’s offspring keep on growing and then after the offspring multiply, then many bicolored arboreal rice rats live there.’

A-IV 018 shubu pequid 10

In (218), -bi occurs on the locative adverbs to emphasize that the place where the speaker is speaking is the same as the place where the swiddens were a long time ago. Here, -bi may have a rhetorical effect, but it contributes no new information on account of the

requirement that the speaker be at the same locality to use nē ‘here.’ But with a different deictic locative adverb like a, additional information is necessarily added by -bi: in (219b), it is clear that events occurred at the same locality twice, while this is not included in the meaning of (219a). The first -mbo in the deictic adverbs in (218) and (219) are essentially semantically empty, with the exception that nē-mbo and a-mbo are partially lexicalized to have location and discourse readings (§7.3.3). The second -mbo in the last word in (218), however, is worth noting here in that it conveys a different sort of emphasis. The speaker uses it to emphasize that he is certain that the location information is exact and true (= ‘really’).

(218) nē-mbo-bi ēnden tied ic-pa-onda-sh nē-mbo-mbo-bi
 here-Aug-Emph before swidden be-Comment-Dist.Past-3 here-Aug-Aug-Emph
 ‘A long time ago our swiddens were right here, really right here [in Peru].’
 + K-XXII 001 chema 001

(219a) a-mbo
 there-Aug
 ‘there, in that place’

(219b) a-mbo-bi
 there-Aug-Emph
 ‘there, in that **same** place’

With some adverbs (specifically utsi and ad), -bi functions to create indefinite adverbs (see Table 7.10 in §7.3.10). For example, adequi (ad-ec-bi) means something like ‘in any way,’ ‘without any special effort, conditions or effects’ or ‘without significant or desired results.’ For example, in (220), without the -bi, ad-ec would follow a description of the manner in which this palm grows, but here, there is no such description preceding this sentence in the text, and the use of ad-ec-bi seems to mark that such a description would be insignificant.

(220) shēcmaucudanmēs ad-ec-bi cani-quid ne-e-c
 palm.species like.that-Intr-Emph grow-Agt.Nzr be-Npast-Indic
 ‘The shēcmaucudanmēs palm is one that just grows any old way.’

A-I 036 shēcmaucudanmēs 02

Sentence (221) is preceded by a description of how the speaker's then newly-kidnapped (older) wife refused to have sex with him during the long voyage home, despite the speaker's persistent requests.

- (221) ad-ec-bi nuntan-bi cho-onda-bi
do.like.that-Advzr:Intr-**Emph** inside-Emph come-Dist.Past-Emph
'In that deplorable state of affairs we came home.'

+ K-XXII 015 chema 152

While utsi generally only means 'other' or 'another,' utsi-bi can have an indefinite meaning ('anybody'; probably based on its nominal polysemous meaning) or it can mean 'another *kind*' (probably based on its adverbial meaning), which, in reference to plants and animals, refers to different species (or, more accurately, "folk species"), as in (222).

- (222) aid mechodo-n ic-quid utsi-bi buintad shëcuë-n
that.one termite.nest-Loc be-Agt.Nzr other-**Emph** hardwood.tree hole-Loc
'That one [the big bat] lives in termite nest , and **another species** in tree hollows.'

H-XVII 039 cuesban 05

With other adverbs, -bi is required following certain enclitics. For example, the composite meaning of daëd-quoio-bi would be something like 'actually really both,' but instead it is a lexicalized phrase meaning 'in twos' or 'paired' and the meaning of -bi appears to be absent (223).

- (223a) taë daëd-quoio-bi ic-tsëc-quid shëcten ne-e-c
foot two-Aug-Emph have-Dim-Agt.Nzr collared.peccary be-Npast-Indic
'The collared peccary is one that has small paired hooves.'

A-I 043 shëcten 06

- (223b) *daëd-quoio

7.6.9 Second level emphasis:

The enclitics -di 'Same' and -c 'Separate' can only occur following -bi (described in the preceding section). They intensify the emphatic meaning of -bi to a second level, but focus on different aspects of its meaning, which include emphasis, sameness/identity, contrast, and separateness.

7.6.9.1 -di 'Same'

When -bi codes 'Identity (sameness),' -di specifies a further level of sameness. So, for example, (224a) is ambiguous (both in Matses and in the English translation) as to whether the speaker felled trees in the same place (to make a swidden), or whether he felled trees in the same place where something else occurred (e.g., where he or the speaker had a hunting camp). But in (224b) and (225), it is clear that the *same* action (felling of trees to make a swidden or eating of fish) happened at the *same* location (though possibly performed by different agents).

(224a) a-mbo-bi cun tied död-o-mbi
 there-Aug-**Emph** 1Gen swidden chop-Past-1A
 'I made my swidden in that **same** place.'

(224b) a-mbo-bi-di cun tied död-o-mbi
 there-Aug-**Emph-Same** 1Gen swidden chop-Past-1A
 'I made my swidden in that **same place again.**'
 'I made my swidden in that **same place, too.**'

(225) ad-ec-bi-di padpide-ec cho cho-shun
 like.that-Intr-**Emph-Same** again-Intr (redup=Distr) come-after:S/A>A
ano-shun-bi-di pe-quad onina ne-e-c
 there-Ev.Init.Tr-**Emph-Same** eat-Agt.Nzr giant.otter be-Npast-Indic
 'Just like that again, after the giant otters all come again, they eat right there in the **same place again.**'

This high level of sameness consequently often amounts to coding ‘Repetition’ when the reference is to an event, but not in all cases. In (226) (but note that pad is actually a postposition that creates an adverbial phrase; §8.3.3), the message is that women know how to plait many woven artifacts, including woven palm mats, woven palm thatch, and woven makeshift baskets, and that to make woven palm fire fans, they use the same plaiting technique (one over-one under). If pad-en was used instead of pad-en-bi-di in (226), the sentence would simply be a comparison of the two artifacts. And if pad-en-bi were used, it would mean that women know how to make many things (e.g., bracelets and clay pots) and they likewise know well how to make fans. So what -di specifies is that the technique for all these plaited artifacts is very much the same (i.e., it emphasizes more sameness in manner).

- (226) ambi pisid daëdca-ac pad-en-bi-di shuccate
 4Erg woven.mat plait-Act.Nzr like-Tr-Emph-Emph fan
chido-n daëdca-e-c
 woman-Erg plait-Npast-Indic
 ‘In the same way that they plait woven mats (and other plaited artefacts), women plait fans.’

A-XIII 018 shuccate 20

7.6.9.2 -c ‘Separate’

This enclitic further emphasizes the separateness meaning of -bi. It is used in situations where one wishes to emphasize that the entities being talked about are quite different (227), or that there is a sense of contrast between separate entities. (The contrast marker -en, can express contrast with respect to a single entity.)

- (227) utsi-bi-c piu piu-mbo utsi-bi-c
 other-Emph-Separ (redup=Deintens) red-Aug other-Emph-Separ
tanun tanun-quo que-tsēc-quid checa ne-e-c
 (redup=Deintens) gray-Aug do-Dim-Agt.Nzr opossum be-Npast-Indic
 ‘Four-eyed opossums are such that one (species) is yellowish and another
 (species) is grayish.’

A-IV 043 checa dëuisac 08

Well, actually, the ‘separateness of *entities*’ meaning pretty much precludes the use of -c with adverbs (225 probably represents utsi as a noun). More on this enclitic can be found in the noun morphology chapter (§4.6.9).

7.6.10 -en ‘Contrast’

The basic meaning of the enclitic -en is ‘Contrast.’ This enclitic serves mostly discourse functions, but it is also associated with modal meanings (‘uncertainty,’ ‘must,’ etc.) All of these different meanings can be linked by the fact that they all at least in part express some type of contrast. The enclitic -en marks the same sorts of contrast on adverbs as it does on nouns and postpositions, and I refer the reader to section 4.6.10.1 for a detailed discussion of these types of contrast, and to section 8.6.10 to see how -en interacts with other morphology on postpositions, which is analogous to how -en interacts with other enclitics with adverbs. Here, I will present only one example: the -en in (228b) marks the contrast between the old days, when monkeys were hunted only in the traditional way (228a), and the current time, when Matses have started hunting monkeys with shotguns. The contrast that is highlighted here is not between the hunting methods, but between the time periods.

- (228a) matses-n pia-n se-shun pe-quid poshto
 Matses-Erg arrow-Inst pierce-after:S/A>A eat-Hab woolly.monkey
 ‘Matses kill them with arrows and then eat the woolly monkeys.’

A-I 052 poshto 26

- (228b) në-bi-en chompian-n cues-shun pe pe-e-c
 now-Emph-Contr firearm-Inst kill-after:S/A>A (redup=Distr) eat-Npast-Indic
poshto
 woolly monkey
 ‘But *nowadays*, they kill them with shotguns and eat up the woolly monkeys.’
 A-I 052 poshto 27

7.6.11 -penquio ‘Negative’

The negative morpheme -penquio can be used to negate adverbs:

- (229) nua-mbo-shë-penquio mencudu ic-e-c
 large-Aug-Aug-Neg naked.tailed.armadillo be-Npast-Indic
 ‘Naked-tailed armadillos are not real big.’
 1-p50-B mencudu 01
- (230) abuc-quio-penquio mapictsëc-bi cani-quid chonco ne-e-c
 high-Aug-Neg short-Emph grow-Agt.Nzr palm.genus be-Npast-Indic
 ‘Not very high; rather, chonco palms are ones that grow somewhat low.’
 A-I 037 chonco 10

This form is usually pronounced as a bound form, but sometimes it is pronounced as an unbound, independent word. When phonologically independent, -penquio/penquio occurs in the same position among the other enclitics: it occurs after all the other postpositional phrase enclitics/particles, but precedes the enclitic -da (next section), which follows -penquio/penquio (phonologically attached) in phrases that mark uncertainty associated with the adverb (231), and the pronominal enclitics.

- (231) në-mbo penquio-da ic-o-sh ‘Wasn’t it here?’
 here-Aug Neg-Uncert be-Past-3

A full description of -penquio can be found in the particle chapter (§9.3.3).

7.6.12 -da 'Uncertainty'

The uncertainty marker -da is a second-position enclitic: it follows the first adverbial, postpositional, noun, or adjective phrase or non-finite verb in a sentence. It is used mostly in yes-and-no questions, where it is accompanied by rising intonation at the end of the sentence and, for the first and second person, also interrogative verbal inflection (232).

- (232) ano-bi-da diad-e-Ø papa ca-onda-sh
 there-Emph-Uncert hang-Npast-Interr:1/2 father say-Dist.Past-3
 'He asked him, "Are you hanging over there (in your hammock), father?''
 + K-XXII 007 chema 066

It is also used to express uncertainty about a constituent in the sentence with the verb suffixed with -pa 'Comment,' as in (233).

- (233) në-mbo-da cho-pa-e-c
 here-Aug-Uncert come-Comment-Npast-Indic
 'I doubt that/perhaps he will come *here*.'

The enclitic -da is actually an allomorph of the first-position particle ada; both forms are described in the particle chapter (§9.4.1), and questions are described in section 11.9.2.

7.6.13 *Pronominal enclitics*

Pronominal enclitics usually follow only verbs and particles (§§5.6.5, 11.2.6), but two pronominal enclitics, -bi '1S' and -mbi '1A,' can also follow the uncertainty enclitic -da (234) or interrogative adverbs (235).

- (234) aid-bi chud-nu ca-ac bacuë-bo-n
 that.one-Emph copulate.with-Intent:1 tell-when:O>S/A child-Pl-Erg
chud-tiapi-mbo ic-e-bi min bacuë utsi-da-bi
 copulate.with-Neg.Abil-Adjzr be-Npast-1S 2Gen child other-Uncert-1S
ne-e-Ø que-onda-sh
 be-Npast-Interr:1/2 say-Dist.Past-3
 ‘When I told that very one, “I going to have sex with you,” she responded “I
 won’t have sex with children, do you think I’m your age-mate or something?” she
 said.’

+ K-XXII 015 chema 150

- (235) atoda-mbi na-e-Ø ‘What should I do?’
 what-1A do-Npast-Interr:1/2

Since -bi and -mbi occur on the particle ada, and -da is an allomorph of ada, it is hard to argue that these pronominal enclitics are general adverbial enclitics. One possible exception is the pronominal enclitic, -ni ‘1S’ that appears to be a grammatically-conditioned allomorph of -bi, which can be used (only?) with non-interrogative adverbs lacking -da (235). Only very old speakers seem to use it.

- (235) abentsëc-uid-bi cuëd-e-c në-bi-ni diad-e-c
 one-only-Emph call-Npast-Indic here-Emph-1S hang-Npast-Indic
que-ec
 say-while:S/A>S
 ‘Only one answers back saying, “I’m hanging here”.’

+ K-XXII 007 chema 067

7.7 Adverb reduplication

Reduplication of adverbs always carries a distributive meaning, which can express plurality (235 & 237), spatial distribution (238 & 239) or repetition/iterativity (= temporal distribution, 240).

- (236) ënapen ënapenquiec chosh
redup ënapen-quo-ec cho-o-sh
 Distr far-Aug-Manr:Intr come-Past-3
 ‘They came from various long distances.’

- (237) cuesban utsi utsiec iquec
cuesban redup utsi-ec ic-e-c
 bat **Dist** otherAdvzr:Manr:Intr be-Npast-Indic
 'There are different kinds of bats.'

A-I 051 cuesban 16

- (238) uanno uannuec capuquid bëui nec
redup uanno-ec capu-quid bëui ne-e-c
Distr apart-Manr:Iter locomote-Agt.Nzr tamandua be-Npast-Indic
 'Tamanduas are ones that walk/climb around here and there and everywhere.'

A-IV 026 bëui 28

- (239) adquidën nidaid baded badedquien uëdëshcaic
ad-quid-n nidaid redup baded-quio-en uëdëshca-e-c
 do.thus-Agt.Nzr-Ergground **Distr** quickly-Aug-Advzr:Tr dig-Npast-Indic
 'That one [the naked-tailed armadillo] digs the ground very quickly, starting in one place, and then in another'

A-I 050 mencudu 04

- (240) ashumbic chidon pictsëc pictsen
ad-shun-bi chido-n redup pictsëc-en
 do.that-after:S/A>A-Emph woman-Erg **Distr** small-Manr:Tr
cuësh cuëshshun
redup cuësh-shun
Distr break.up-after:S/A>A
 'After that, Matses women break it up into many small pieces, and then...'

A-XIII 004 tabote 10

Actually, more than one or all of these facets of the meaning apply at once, as in many of these examples. As can be seen in the above examples and in (241) and (242), reduplication of adverbs is accompanied by a manner transitivity agreement enclitic (-en or -ec), frequently also by an augmentative enclitic (usually -mbo/-quio.)

- (241a) bëdiatsëc cho-o-sh (241b) bëdiatsëc bëdiatsëcquiec chosh
 slowly come-Past-3 redup bëdiatsëc-quio-ec cho-o-sh
 'He/They came slowly.' **Distr** slowly-Aug-Manr:Intr come-Past-3
 'Many came slowly.'

- (241c) *bëdiatsëc bëdiatsëc chosh (241d) *bëdiatsëc bëdiatsëcquio chosh

(242a)	<u>abentse</u>	<u>abentsec</u>	<u>pu_{dued}</u>	(242b)	* <u>abentsēc</u>	<u>abentsēc</u>	<u>pu_{dued}</u>
	<u>redup</u>	<u>abentsēc-ec</u>	<u>pu_{dued}-Ø</u>				
	Distr	one-Manr:Intr	enter-Imper				
		'Come in one-by-one!'					

Note the similarity to adverbialized reduplicated adjectives (next section). Only the proadverbs and the interrogative adverbs cannot be reduplicated.

7.8 Adverbialization

Adjective and verb roots can be adverbialized. Nouns cliticized with postpositions could be considered to have been class-changed into adverbs; this is discussed in the next chapter.¹⁷ Verb roots are usually class-changed into adverb words by first being adjectivalized, but adverbial clauses are usually formed by adverbializing the verb directly (adverbialization of clauses is treated separately in §12.4.1). All adverbialized words behave syntactically as manner adverbs (i.e., they modify verbs); there is no process for creating adjective-modifying adverbs, deictic/location/temporal adverbs (other than by using postpositional enclitics), noun-modifying adverbs or interrogative adverbs. Adverbialization is accomplished using either -ec 'Adverbializer: Intransitive Agreement' or -en 'Adverbializer: Transitive Agreement' (note their identity with the manner transitivity agreement enclitics, §7.6.1.1), so all derived adverbs exhibit transitivity agreement. The closest translation into English of -ec/-en is *-ly*.

7.8.1 Adjective adverbialization

Adjectives can serve as a type of verb adjunct without any modification in what I call "adverbial adjective constructions" (243a; §11.8), but to occur as manner adverbs, adjectives must be suffixed with an adverbializing suffix (243b). Adjectives in adverbial

¹⁷ Since noun roots can be adjectivalized (through reduplication, §6.8.1), adjectivalized nouns could theoretically be adverbialized by adding -ec or -en. I have no text examples and I have not tried to elicit such forms yet.

adjective constructions are a bit adverb-like in that they occur outside of a noun phrase and are not part of a copular construction, but semantically they still modify the noun. With adjectives suffixed with -ec or -en, the class-changed word behaves as a true manner adverb, modifying the verb (243b, 244 & 245).

- (243a) bēda-mbo isad-e-c (243b) bēda-mbo-ec isad-e-c
 good-Aug appear-Npast-Indic good-Aug-Advzr:Intr appear-Npast-Indic
 ‘It looks good/pretty.’ ‘It can be seen well [e.g., using glasses].’
- (244) bēda-mbo-en chēsh-quid shē-pada-ua-quin
 good-Aug-Advzr:Tr carve-Hab spearhead-flat-Vzr:make-while:S/A>A
 ‘They carve it [the spear] well, making the head flat [lit. making it flat-headed].’
A-XIII 033 tēdi 03
- (245) bēda-mbo-ec tsad-Ø ‘Sit nicely! [spoken to a child]’
 good-Aug-Advzr:Intr sit-Imper

Because derived adverbs always modify the verb, the adverbializing suffix that is used is contingent upon the transitivity of the verb they modify: -ec is used as the adverbializer with intransitive matrix verbs (243b & 245), and -en with transitive matrix verbs (244). Adverbialization of adjectives accompanied by reduplication carries a distributive meaning, just as reduplication of adverb roots does (§7.7):

- (246) chuca chucamboec iccosh ‘There were many new ones.’
redup chuca-mbo-ec ic-o-sh
 Distr new-Aug-Advzr:Intr be-Past-3

Recall that adjective reduplication carries de-intensification semantics (247a; §6.7.1), but this de-intensification does not occur with reduplicated adverbialized adjectives (246 & 247b). So one must analyze forms like those in (246) and (247b) as first having been adverbialized (by -ec or -en) and then reduplicated afterwards (thereby obtaining the distributive/plural/iterative semantics usually associated with adverb reduplication).

(247a) bēda bēdambo isadec ‘It looks alright.’
 redup bēda-mbo isad-e-c
 Deintens good-Aug appear-Npast-Indic

(247b) bēda bēdambuec isadec
 redup bēda-mbo-ec isad-e-c
 Deintens good-Aug-Advzr:Intr appear-Npast-Indic
 ‘Many good-looking ones are appearing.’

Once adverbialized, these forms can take the usual adverbial morphology (246).

(238) bēda-mbo-ec-shē isad-e-c
 good-Aug-Advzr:Intr-Aug appear-Npast-Indic
 ‘It can be seen very well [e.g., a television].’

7.8.2 Verb adverbialization

To create an adverb word from a verb root, the usual process is to first adjectivalize the verb with one of the “adjective-modifying enclitics” (-mbo/-quio, -pambo, etc; §6.6.2), which in this context function as adverbializers, and then to adverbialize it with -ec or -en, as any adjective would be adverbialized (247).

(249) tanca-mbo-en shēcten-n pe-quid
 make.crushing.noise-Adjzr-Advzr:Tr collared.peccary-Erg eat-Hab
 ‘Collared peccaries eat loudly (lit., eat making a loud crushing noise).’

A-I 043 shēcten 19

There is an option to adverbialize the verb directly with -en or -ec (250), but the use of the adverbializing suffix is preferred. This same process can also be used to create subordinate adverbial clauses, especially with -en or -ec (251). But with the plethora of other adverbial/clause-chaining morphology, direct adverbialization is the norm. The discussion of adverbialization and adverbial clauses is taken up in section 12.4.1.

(250a) [podqued-ua]-pambo-ec shēctenamē capu-quid
 path-Vzr:make-Adjzr:Aug-Advzr:Intr white.lipped.peccary locomote-Hab
 ‘White-lipped peccaries travel making wide paths.’

A-I 044 shēctenamē 26

(250b) [podqued-ua]-ec shēctenamē capu-quid
 path-Vzr:make-Advzr:Intr white.lipped.peccary locomote-Hab
 ‘White-lipped peccaries travel making paths.’

(251) [acte dada-Ø podte podte]-tsēcquio-ec nid-e-c
 stream trunk-Abs (redup=Distr) cross-Adjzr:Dim-Advzr:Intr go-Npast-Indic
 ‘They (collared peccaries) go crossing streams.’

C-III 001 shēcten 16

7.9 Summary of syntactic properties of adverbs

A full description of the syntactic properties of adverbs and adverbial phrases can be found in the syntax chapters, but here I will briefly mention those syntactic aspects of adverbs that are relevant for distinguishing subcategories of adverbs grammatically. As it turns out, the syntactic properties of all the adverbs are fairly uniform, so we do not have much to work with. Perhaps the most useful for sorting out adverbs is copular constructions. Manner adverbs and the adjective-modifying adverb, for the most part cannot occur in copular constructions at all, unless as part of a nominalization (252).

(252a) ?nēid baded-quio ic-quid ne-e-c
 this.one quickly-Aug be-Agt.Nzr be-Npast-Indic
 (‘He is fast.’) [speakers’s reaction: “But doing what?”; corrected with 252b].’

(252b) nēid baded-quio na-quid ne-e-c
 this.one quickly-Aug do-Agt.Nzr be-Npast-Indic
 ‘He is one that does things quickly.’

Copular constructions involving the rest of adverbs are discussed in section 11.7.3, where two types of predicate adverbial clauses are identified: predicate locatives (involving deictic, locative and temporal adverbs, as well as locative postpositions), and attributive

adverbial clauses (involving the noun-modifying adverbs). This distinction was based on the ability to use nibəd ‘not be’ as a copular verb and some word-order restrictions.

The ability of adverbs to occur in and the way in which they occur in noun phrases also help distinguish adverbs (§10.3.4). Manner, deictic, and temporal adverbs cannot directly modify nouns or form parts of noun phrases; dimension adverbs occur after the head noun in the noun phrase; (non-deictic) locative adverbs occur before the head noun; the noun-identifying adverb utsi ‘other/another’ can occur before or after the head noun, with slightly different semantic effects; and quantitative adverbs seem to occur in apposition to the noun they modify, occurring before, after, or separate from the noun.

Word order really only distinguishes the interrogative adverbs and the proadverbs, both of which have a strong tendency to occur at the beginning of their clauses (proadverbs especially so in their back-reference function).

Postpositions can occur in sequence (§10.4.4) and sometimes following adverbs:

(253a) <u>a-mi</u>	(253b) <u>nē-no</u>	(253c) <u>ad-no</u>
there-Loc	here-Loc	like.that-Loc
‘around there (by you)’	‘around here’	‘at a place like that.’

The meaning of these forms is predictable from their composite parts, but some forms like ano ‘there (invisible),’ represent lexicalized forms (§7.3.3). This phenomenon seems to be completely restricted to deictic adverbs and proadverbs.

7.10 Morpho-syntactic categorization of adverbs

This is where I consider all the morphological possibilities and syntactic patterns, and see if a morphosyntactically-based classification of adverbs maps onto the semantic

classification introduced in the beginning of the chapter. Table 7.20 summarizes the grammatical properties useful for distinguishing adverbs:

Table 7.20. Grammatical properties that distinguish sub-categories of adverb roots.

Semantic categories		Grammatical properties										
		1	2	3	4	5	6	7	8	9	10	11
Manner		%	-	+	-	-	-	-	-	-	-	-
Adjective-modifying		-	-	+	-	-	-	-	-	-	-	-
Locative and temporal	deictic	-	+	+	+	+	-	-	%	%	-	-
	non-deictic locative	-	+	+	+	+	-	-	-	+	-	+
	non-deictic temporal	-	+	+	+	+	-	-	-	-	-	-
Noun-modifying	dimension	%	-	+	+	-	+	-	-	+	+	-
	quantifiers	-	+	+	+	-	+	-	-	?	-	-
	noun-identifying	+	-	+	+	-	+	-	-	+	+	+
Proadverbs		+	-	-	-	-	-	+	-	-	-	-
Interrogative		-	%	-	+	%	%	+	-	-	-	-

+ = all in category; - = none in category; % = only some in category

Key to grammatical properties in Table 7.20:

1. manner transitivity agreement (§7.6.1.1; Table 7.18)
2. event initiation transitivity agreement (§7.6.1.2; Table 7.18)
3. can be reduplicated (§7.7)
4. can occur in copular clauses (§7.9)
5. can occur in predicate locative clauses (§7.9)
6. can occur in attributive predicate adverbial clauses (§7.9)
7. tendency to occur first in sentence (§7.9)
8. can be object of postposition (§7.9)
9. can form part of noun phrases (§7.9)
10. follows noun in noun phrase (§7.9)
11. precedes noun in noun phrase (§7.9)

Looking at Table 7.20, I can conclude that the semantic classification of adverbs pretty much holds up to the morpho-syntactic distinctions (as indicated by the low percentage of percent signs and the distribution of the plus and minus signs; a large number of percent signs would indicate that the semantic categories should be divided up in a different way, and pairs or groups of categories with identical distributions of plus and minus signs would indicate the categories should be joined up). One change that should be made,

based on Table 7.20, is to unite manner and adjective-modifying adverbs into a single category. It is also notable that there is not much motivation to separate deictic and non-deictic temporal adverbs. Recall that the distribution patterns of formatives, etc. in adverb roots were similarly describable using the semantic categories (§7.5.4; Table 7.16). This indicates that semantic classification of adverbs is correlated with form and grammar. The key to this correlation, if we are allowed to theorize, is function: semantics is related to function, and function is related to grammar. And form is often a product of historical grammar.

CHAPTER 8

POSTPOSITIONS

8.1 Introduction

The postposition lexical class consists of only 32 known roots (Table 8.1). Due to the finite number of roots and the lack of a productive class-changing process that creates postpositions, this class is readily identified as a closed lexical class. However, as will be discussed at length in the next section, this lexical class is morpho-syntactically very similar to the adverbs, and this is the class for which it is the hardest to argue for its status as a separate main lexical class.

These postposition roots occur in a paradigmatic relationship with the postposition enclitics and case markers that were presented in section 4.6.4 (all listed in Table 8.1). In other words, postposition roots replace postposition enclitics at the same relative position in the postpositional phrase, with the difference being that the postposition roots are not phonologically attached to the preceding noun:

- | | |
|--|---|
| <p>(1a) <u>tsadte-n-bi</u> <u>ic-o-sh</u>
 seat-Loc-Emph be-Past-3
 ‘It was right on the bench.’</p> | <p>(1b) tsadte <u>tēdion-bi</u> <u>ic-o-sh</u>
 seat under-Emph be-Past-3
 ‘It was right under the bench.’</p> |
|--|---|

As discussed elsewhere (§§4.6.4, 11.2.3), case-marking enclitics specify a noun’s syntactic relation to a predicate or construction type, which not only requires the noun, but imposes the type of case-marking that occurs on the noun (either -n or -Ø). The rest of the enclitics that occur in paradigmatic contrast with the case markers change the noun into a word that patterns grammatically like Matses adverbs. In other words, case markers categorize the noun syntactically, while postpositions essentially change the noun into an adverb.

Table 8.1. Semantic classification of postpositions and case markers (32 postposition roots and 8 postposition enclitics).

Case-markers:

<u>-n</u>	‘Ergative/Instrumental/Genitive’	<u>-Ø</u>	‘Absolutive’
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Comitative postpositions:

<u>-bēd</u>	‘Comitative: S’	<u>-bēta</u>	‘Comitative: O’
<u>-bētan</u>	‘Comitative: A/Instrumental’		

Locative/Temporal postpositions:

<u>-n</u>	‘Locative/Temporal (in, on, at, during)’		
<u>-no</u>	‘Locative/Directional (precise location/direction)’		
<u>-mi</u>	‘Locative/Directional (general location/direction)’		
<u>-uc</u>	‘on the side where’		
<u>nēnantan</u>	‘in the middle of’	<u>ēquēduc</u>	‘inside’
<u>anauc</u>	‘inside’	<u>nuntan</u>	‘inside (indoors)’
<u>nantan</u>	‘within, amidst, in, on,’	<u>mēduc</u>	‘during, in’
<u>mananuc</u>	‘out of body of water’	<u>tsimpiduc</u>	‘at the foot of a hill of’
<u>umanuc</u>	‘outside, outdoors’	<u>dayun</u>	‘beside’
<u>cachoc</u>	‘behind’	<u>tayun</u>	‘at the foot of’
<u>ēquē/uquē</u>	‘on the other side of’	<u>ēquēbi</u>	‘on this side of’
<u>cuēmatsiuc</u>	‘on the other bank of’	<u>ēquēmatsiuc</u>	‘on the other bank of’
<u>udi</u>	‘further than’	<u>udibi</u>	‘closer than’
<u>tēdion</u>	‘below, underneath’	<u>tsidion</u>	‘below, lower than’
<u>abuc</u>	‘higher than’	<u>taēmi</u>	‘downstream from’
<u>dēbiatemi</u>	‘upstream from’	<u>bēyuc</u>	‘before’
<u>tsiuec</u>	‘after’		

Comparative postpositions:

<u>ten</u>	‘as big as’	<u>tion</u>	‘as long as’
<u>ted</u>	‘as many as’	<u>pad/pado</u>	‘same as’
<u>-bi</u>	‘like’		

Quantitative postpositions:

<u>tedi</u>	‘all of’	<u>daēdi</u>	‘both of’
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The postposition roots function essentially identically to the postpositional enclitics, with the exception that the roots are not phonologically attached to the noun (the postpositional object): thus, a postpositional phrase has essentially the same grammatical properties as an adverb, and nouns with postpositional enclitics could be considered one-word postpositional phrases. Adverbs and postpositional phrases will be referred to

collectively as **adverbials**, along with adverbialized clauses (described in section 12.4). On account of the grammatical and functional similarity, and the fact that locative and comparative semantic subclasses of postpositions include both roots and enclitics (Table 8.1), I will describe all the postposition enclitics in this chapter along with the roots; case markers are described in sections 4.6.4 and 11.2.3. Note that the term “postposition” will be used here to refer to both the roots and the enclitics (never to case-markers), and when a statement is applicable to only one or the other, I will make this explicit.

Although there is no productive morphological process for creating postpositions, postposition roots can be made to function as verbs by adding the verbalizing suffix -ua ‘Verbalizer: make’ or through the process of zero-verbalization (§5.10). As with noun and adjective roots, postposition roots can be used as *intransitive* (inchoative) verbs by simply attaching inflectional verbal morphology to the postposition (2a), or they can be turned into transitive verbs carrying construction semantics by attaching the suffix -ua (2b).

(304a) ?nuntan-ac
indoors-Infer
‘Now there is an indoors
[e.g., after making the walls of a house].’

(304b) ?nuntan-ua-ac
indoors-Vzr:make-Infer
‘He made the indoors.’

However, due to the generally awkward semantics of the verbalized postpositions generated by this process, it is marginally acceptable with postpositions, and not at all as common as it is for adjectives and nouns. There is, to my knowledge, only one postposition that occurs polysemously as a verb (3), and we can recognize it as a polysemous/homophonous root as opposed to a product of zero-verbalization because the verb is transitive and has disparate semantics.

(3) nuntan ‘inside (a man-made shelter)’/‘submerge’

In the first part of this chapter (§8.2), I will discuss how to distinguish postpositions from the other word classes, and address some problematic cases. The rest of this chapter, like the preceding chapter, is organized around the hypothesis that a semantic classification of Matses postpositions (as in Table 8.1) will correlate with a morpho-syntactic classification of postpositions. Unlike with adverbs, however, with postpositions there will be the further feature of seeing how the phonetically bound forms pattern. Section 8.3 will be devoted to describing the semantics of all the different postpositions. Section 8.4 will describe some functions often performed by adpositions in other languages which are coded by other means in Matses (e.g., locative/body-part orientational prefixes, adverbial clauses, etc.). Section 8.5 analyzes the form of postposition roots with respect to any recognizable meaningful units they may contain. Sections 8.6 and 8.7 illustrate the morphological possibilities available to postpositions, which are restricted to enclitics and reduplication. In section 8.8, I provide a very brief overview of postpositional syntactic processes that are relevant for the morpho-syntactic classification of the postpositions, the topic of section 8.9. Postpositional syntax is discussed in more detail in the syntax chapters (especially §§10.4 & 11.2.3).

8.2 Distinguishing postpositions from the other word classes

The roots in the postposition lexical class can be described notionally as concepts expressing either relative location/time, comparison (with respect to general or specific qualities, size, length, or number), or quantification (all of, both of); but here, as with the other lexical classes, morpho-syntactic properties rather than semantic characterizations are primary for identification of word class membership. Postposition roots share almost all of their morphological properties and many of their syntactic properties with adverbs, and therefore, to avoid repetition, I refer the reader to section 7.2, where adverbs are

distinguished from the other lexical classes, and to section 3.3 where I give some general reasons for recognizing postpositions as a main lexical class. The essential difference between postposition roots and adverbs is that the former take postpositional objects, while the latter do not. Most of the rest of the distinctions are simply restatements of this property (e.g., ability to head a postpositional phrase) or a consequence of it (e.g., the scope of a postpositional phrase enclitic may be only the postpositional object, rather than postposition root or the postpositional phrase). Whether one considers this distinction to be important enough to merit a separate position class for postpositions has to do with how one looks at it. One could simply list all the morphological and syntactic properties of postposition roots and compare them to those of adverbs and say that there are not enough differences to separate a group of roots into two separate classes (arguing that otherwise, transitive and intransitive verbs, or locative and manner adverbs, would have to be separate lexical classes instead of just subclasses). The other way to look at it is to consider the function of postpositions, and to see that postpositions do not really have the properties of adverbs, but they have the function of creating an adverb-like phrase, similarly to how a nominalizer can convert a verb into a noun (would we say that English *-er* was a noun if it was not phonetically bound to the word and never functioned alone as a noun?). In fact, postposition enclitics perform this class-changing process without the complications of creating a two-word adverbial. Because postpositions occur after the head noun, then any phrasal enclitics must be attached to the postposition—hence the essentially identical morphological possibilities as adverbs (just as adjectives can take all noun-phrase morphology when they are the last element in a noun phrase, §§6.6.9, 10.3.3). Similarly, the link between a postposition root and its postpositional object is as strong as any in the language (fixed word order, inseparability, etc.; §10.4), so syntactic properties of adverbials treat the postpositional phrase as a unit, rather than selecting just

the postposition. This second way of looking at the situation is the one I adopt: postposition roots are unbound class-changing operators that create a phrase that has essentially all the grammatical properties of adverbs. This is emphasized by the fact that the pro-adverbs introduced in the preceding chapter (§7.3.9) can stand for an adverb (4b) or a postpositional phrase (5b), but not for just a postposition (5c).¹

- | | | | |
|------|--|------|---|
| (4a) | <u>ënapen-da ic-o-sh</u>
long-Uncert be-Past-3
'Was it long?' | (4b) | <u>ai ad ic-o-sh</u>
yes like.that be-Past-3
'Yes, it was like that.' |
| (5a) | <u>nisi tion-da ic-o-sh</u>
snake as.long as-Uncert be-Past-3
'Was it as long as a snake?' | (5b) | <u>ai ad ic-o-sh</u> |
| | | (5c) | * <u>ai nisi ad ic-o-sh</u> |

Further complicating matters, however, is that many postposition roots can have covert third-person postpositional objects (the only way to have a third-person pronoun as a postpositional object), and a few actually occur polysemously as adverbs. In section 10.4.1, I provide what I believe is conclusive semantic and syntactic evidence supporting that there really are covert third-person postpositional objects in sentences like (6).

- (6) Ø tayun dadpen-quio bacuë cani-quid
 3 at.the.base.of many-Aug seedling grow-Hab
 'Many seedlings grow at its [the acte pinchuc palm's] base.'

A-I 007 acte pinchuc 12

The essential point is that in sentences like (6), where the reference object (the Ground) has high salience and identifiability, the postposition not only can, but is expected to occur with a covert third-person pronoun. A general pattern encountered in the data is that the more restricted a postposition root's specification of its Ground's (generally realized

¹ Actually, if nisi ad is not interpreted as phrase in (5c), it would mean 'Yes, the snake was like that' (but not 'Yes, it was like that with respect to the snake.')

grammatically as the postpositional object; see §8.3 for definitions of Figure and Ground), the more likely it is to occur without an overtly-mentioned object. This is because it is easier to identify the Ground and therefore also to pronominalize it without causing ambiguity. So, for example, nantan ‘within’ specifies any diffusely bounded Ground, including a swidden, a village, a rainforest habitat, the area above a river, etc., so, unless the context makes it clear what the Ground is, nantan will be used with an overt postpositional object. And it almost always is, as in (7).

- (7) mactac nantan cani-quid antin ne-e-c ënapen
 mud within grow-Agt.Nzr palm.species be-Npast-Indic long
 ‘The antin palm is one that grows in the middle of the muddy areas, tall.’
 A-I 014 antin 09

By contrast, nuntan ‘inside’ (it would be translatable as ‘indoors’ if it did not take an object) is only used for man-made human habitations (houses, temporary shelters, buildings in cities, etc.), and is less likely to be ambiguous and thus it is used more frequently without an overtly-mentioned object (8 & 9).²

- (8) shubu shëni an-diad-quid cuesban shubu nuntan
 house old under-hang-Hab bat house inside
 ‘Bats hang in old houses, inside the houses.’
 H-XVII 039 cuesban 12
- (9) mani sin-aid is-ash dadpen cuesban cho-quid nuntan
 plantain ripen-Pat.Nzr see-after:S/A>S many bat come-Hab inside
 ‘After seeing ripe plantains, many bats come inside (houses).’
 D-X 057 cuesban 03

² A pattern can be identified, where the most general postpositions are bound enclitics, which not only would be expected to occur with overt Grounds due to their general semantics, but are grammatically required to. The hypothesis that this pattern seems to bear out is that repeated co-occurrence with overt postpositional objects leads to phonological union over time, and that is why currently we find the more general postpositions as bound forms.

The other possibilities for the absence of an overt Ground is that it is backgrounded (e.g., English *upward* where the Earth is the ground) or because there is a default deictic center (e.g., English *here* where the speech act is the default deictic center). Most postpositions cannot occur with this type of backgrounded or default entity as their primary Ground, but rather this is a property of adverbs, and the few postpositions that are considered to occur polysemously as adverbs (this polysemy is the topic of first subsection of the present section). We note that locative adverbs (like nē ‘near’) not only usually occur with this type of backgrounded or default ground (10a), but they *cannot* occur with them stated overtly in the same phrase (10d & 10c), unlike postpositions like udi ‘further than’ (10d).

(10a) itia nē-bi ic-o-sh ‘The palm swamp is near (here).’
palm.swamp near-Emph be-Past-3

(10b) *itia mactac nē-bi ic-o-sh [corrected with (10c)]

(10c) mactac ic-ac-no-uësh itia nē-bi ic-o-sh
mineral.lick be-Act.Nzr-Loc-Ev.Init:Intr palm.swamp near-Emph be-Past-3
‘The palm swamp is near to where the mineral lick is.’

(10d) itia mactac udi ic-o-sh
palm.swamp mineral.lick further.than be-Past-3
‘The palm swamp is further away than the mineral lick.’

Thus, postpositions are characterized by their *ability* to take overt nouns or noun phrases as objects, and their *requirement* to take either an overt or covert postpositional object; and adverbs by their inability to take any noun as an object.

Having said this, it should be noted that only some postposition roots in Matses have the property of being able to appear with a covert object. What we have in Matses might be best described as a continuum, with comparative and quantifying postpositions, such as tion ‘as long as,’ which must take an overt postpositional object at one extreme,

and postpositions like nuntan 'inside (a man-made structure),' which most frequently occur without an overt object at the opposite end (Table 8.2).

Table 8.2. Continuum of postposition roots.

<u>Comparative & Quantifying</u>	<u>Locative</u>	
e.g., <u>tion</u> 'as long as'	e.g., <u>nantan</u> 'within'	e.g., <u>nuntan</u> 'inside'
cannot occur without obj.	seldom occur without obj.	usually occur without obj.

The postposition roots can in turn be placed in the middle of a continuum with postposition enclitics at one end and adverbs at the other extreme (Table 8.3).

Table 8.3. Continuum between postpositions and adverbs.

<u>Postposition enclitics</u>	<u>Postposition roots</u>	<u>Adverbs</u>
always occur with obj.	some may occur without obj.	never occur with obj.

In conclusion, there are arguments for and against separating postposition roots as a separate lexical class, and, considering the continuum, it could be argued that the cut-off point is arbitrary. In situations like, this I take into consideration the factor of ease of description, and find in this case that describing postposition roots as adverbs, and considering postposition enclitics separately considerably more complicated.

8.2.1 Polysemous postposition-adverbs and postposition-like adverbs

As mentioned above, locative adverbs have backgrounded or default Grounds/deictic centers that cannot be stated overtly as a simple noun in the same phrase with the adverbs, while postpositions always have an obvious (primary) Ground that is coded as an overt postpositional object, or else by a covert third-person pronoun referring

to a Ground made explicit by the context. There are four roots in Matses that can fit both these descriptions, and these roots will be considered here to exhibit inter-class polysemy.

The root abuc ‘high/up/higher than’ functions most often as an adverb (11), without a postpositional object (overt or covert), but it is included here because it can sometimes function as a postposition, taking a noun as its object (12).

- (11) abuc ic-quiv achu ne-e-c
 high be-Agt.Nzr howler.monkey be-Npast-Indic
 ‘Howler monkeys are ones that are high up.’

A-I 054 achu 13

- (12) poshto mechodo abuc tsad-e-c
 woolly.monkey termite.nest higher.than sit-Npast-Indic
 ‘The woolly monkey is sitting higher up than the termite nest’

If abuc in (11) were a postpositional phrase with a covert third-person pronoun, we could translate it as ‘above it,’ and be able to readily identify the referent of ‘it’ and substitute it in as a full noun/noun phrase. However, the Ground here seems to be an ill-defined, boundary between the substory and the canopy with an implicit up-down orientation based on a very backgrounded reference to the Earth, but most importantly, the Earth, the implicit boundary, or other entity cannot be stated overtly, nor is there any indication that these notions are active when the speaker uses the term in this context. Thus, here I classify abuc as both an adverb and as a postposition. For contrast, I consider here the adverb mapictsëc ‘low/short,’ which in many ways is the semantic antonym of abuc (13). Unlike abuc, however, mapictsëc can never take a noun as its object (14; cf. 12; see also 10), and therefore unlike abuc never functions as a postposition.

- (13) mapictsëc-bi cani-quiv manëcte ne-e-c
 low-Emph grow-Agt.Nzr palm.species be-Npast-Indic
 ‘The manëcte palm is actually one that grows short.’

A-I 038 manëcte 03

(14) *poshto mechodo mapictsëc tsad-e-

Another postposition that occurs polysemously as an adverb is ëquë (sometimes pronounce uquë) ‘on the other side of/at another place.’ Note that in sentences like (15), there is an understood postpositional object (the Yaquerana River), while in (16) where ëquë occurs polysemously as an adverb, the Ground is not obvious or mentionable, and its meaning is related, but decidedly different (16).

- (15) adashic ëquë padpide-ec capu-cuen-onda-sh
 then **other.side** again-Manr:Intr locomote-Incho-Dist.Past-3
nibën-quin matses utsi nibën-quin
 search-while:S/A>A Indian other look.for-while:S/A>A
 ‘Then, they began walking around on the other side (of the Yaquerana River)
 searching, searching for other Indians.’

+ K-XXII 001 chema 007

- (16) uanno ic-ash ëquë ic-ash ëquë-tsëc
 apart be-after:S/A>S **elsewhere** be-after:S/A>S **elsewhere-Dim**
ic-ash que-quid-quo abuc checa ne-e-c
 be-after:S/A>S do-Agt.Nzr-Aug high opossum be-Npast-Indic
 ‘The woolly opossum is one that lives far, then at somewhere else, then at another
 place close by.’

A-IV 044 abuc checa 18

The third and four polysemous roots occur as nouns, adverbs, or postpositions. They are tsimpiduc ‘valley/in a valley/at the foot of a hill of’ and mananuc ‘upland forest/in upland forest/beyond (a body of water)’; see sections 8.3.2.2 and 7.3.4.

In light of the continuum described above, it should not be surprising to find polysemous adverb-postpositions and borderline cases, the purpose of the above argumentation is simply to make explicit where and how I draw the line between adverbs and postpositions, rather than to make a theoretical claim about their disparity.

8.2.2 Postpositions vs. nouns

Postpositional phrases (17a) and postposition roots (17b) can sometimes appear like they are in noun syntactic positions, as objects of transitive verbs. But these in fact are locative phrases, as can be seen in (18).

- (17a) shubu nuntan dabiun-o-mbi (17b) nuntan dabiun-o-mbi
 house inside paint-Past-1A inside paint-Past-1A
 'I painted (*the) inside of the house.' 'I painted (*the) inside (of the house).'
- (18) nuntan quënë dabiun-o-mbi 'I painted the enclosure inside (of the house).'
- inside enclosure paint-Past-1A

On the other hand, nouns in O (or S) syntactic positions do not resemble adverbials, since they are always marked with a postposition if they are to appear as an adverbial (19).³

- (19a) mannan is-o-mbi (19b) mannan-n is-o-mbi
 hill see-Past-1A hill-Loc see-Past-1A
 'I saw the hill.' 'I saw him on the hill.'
 *'I saw him on the hill.' *'I saw the hill.'

The distinction is harder to make, however, when a head noun is modified by an locative-marked modifying noun. If the modifying noun is one that regularly occurs with the locative postposition enclitic -n, it may look like one of the lexicalized postposition roots ending with in n, as will be seen subsequently.

The words cuëman and dayun function in similar ways, providing location information in relation to some entity (20a & 21a). However, it is important to distinguish the two formally: cuëman is segmentable, being composed of a noun root and a postposition enclitic, in (20a) occurring as the second element in a part-whole noun

³ Of course, the fact that genitive, instrumental, and genitive case-marked nouns are marked with -n, is a potential source of confusion, but usually the semantics do not allow ambiguity (e.g., Agents are not likely to be interpreted as locatives).

phrase. This is evident from the fact that cuëma occurs elsewhere independently as a noun root (20b). The postposition dayun, by contrast, is not synchronically segmentable, since the form dayu never occurs independently of -n (21b & 21c).

- (20a) acte cuëma-n cani-e-c 'It grows on riverbanks.'
 river **edge-Loc** grow-Npast-Indic
- (20b) acte cuëma ic-ac-no cani-e-c 'It grows where riverbanks are.'
 river **edge be-Act.Nzr-Loc** grow-Npast-Indic
- (21a) shubu dayun nidtsin-o-sh (21b) *shubu dayu ic-ac-no nidtsin-o-sh
 house **beside** plant-Past-3
 'He planted it beside the house.' (21c) *dayu

It is not hard to imagine, of course, that dayu may have been historically a noun meaning 'side,' but it is unquestionably not synchronically segmentable. Similarly, the usage of cuëma as a bare noun is very rare, and it would not be surprising if in the future the bare root drops out of the productive lexicon, as I speculate happened with dayun. A few more examples like cuëma-n can be found in section 8.4.

The difference between cuëma-n and dayun is fairly clear, but the situation with some other postpositions is considerably more complicated. For example, the postpositions dëbiatemi 'upstream from' and taëmi 'downstream from' can be analyzed as containing the roots dëbiate 'nose, tip' and taë 'foot' plus the locative/directional postposition enclitic -mi. And in fact, sometimes the words dëbiatemi and taëmi can be correctly synchronically analyzed thus, as in (22), where the postpositional phrase indicates that the armadillo escaped into the elongated part of its burrow (the retreat burrow), arguably metaphorically called the 'snout' of the burrow, or as in (23) where taë is interpreted literally.

- (22) nid-e-c aton shëcuë **dëbiate-mi** nid-e-c
 go-Npast-Indic 3Gen hole tip-Loc go-Npast-Indic
 ‘It leaves...it goes into the end of its retreat burrow.’

A-I 047 tsaues 07

- (23) cun **taë-mi** tsad-Ø
 1Gen **foot-Loc** sit-Imper
 ‘Sit [with me in my hammock] by my feet.’

If we were to include ‘headwaters’ as part of the definition of dëbiate, and ‘mouth (of river/stream)’ as part of the definition of taë, we could analyze dëbiatemi and taëmi as meaning ‘toward the headwaters’ = ‘upstream’ and ‘toward the mouth’ = ‘downstream,’ as I have done in sentences like (24) and (25).

- (24) u nëid **dëbiate-mi** niste ushu dadpen ic-onda-sh
 there.far this.one **headwaters-Loc** palm.species white many be-Dist.Past-3
 ‘Far away, around the headwaters of this one [the Galvez River], there were many niste ushu palms.’

A-I 035 niste ushu 05

- (25) **taë-mi** daëd-shun is-quid **dëbiate-mi** utsi-n is-quid
mouth-Loctwo-Ev.Init:Tr see-Agt.Nzr **headwaters-Loc** other-Erg see-Agt.Nzr
ic-e-c achu camun tabad-quid ne-e-c
 be-Npast-Indic howler.monkey jaguar stand:Pl-Agt.Nzr be-Npast-Indic
 ‘The bush dogs (lit. “howler monkey jaguars”) stand with two that watch downstream (of the paca that is submerged in the stream) and another that watches upstream.’

A-IV 035 achu camun 09

However, the problem with this otherwise elegant solution is that while headwaters *are* referred to with dëbiate (26), mouths of rivers and streams are not referred to with the term taë (27) (although they most likely were in the past).

- (26) choba **dëbiate** podte-o-mbi
 Chobayacu.Creek **headwaters** cross-Past-1A
 ‘I crossed the headwaters of Chobayacu Creek

(27a) *choba-n _____ taë
 Chobayacu.Creek-Gen foot

(27b) *choba taë

Thus, concentrating on morphology and semantics, the word dëbiatemi can be analyzed as a synchronically segmentable word (noun + postpositional enclitic) when referring to fluvial orientation ('upstream') in addition to when it refers to noses, snouts, and tips of things. By contrast, taëmi can only be analyzed as synchronically segmentable when it refers literally to feet; and when referring to fluvial orientation ('downstream'), it must be treated as a lexicalized postposition. However, the syntactic possibilities of taëmi and dëbiatemi further complicate the analysis. Specifically, these forms have the ability (at least apparently) to take either points on the river/stream (28a) or the river/stream itself (28b) as a postpositional object (= Ground). Thus, in (28a), we could analyze -mi as the head of the postpositional phrase, with its object being a part-whole noun phrase. But a problem presents itself when we try this same analysis with (28b) because the postpositional phrase does not mean 'toward/at the headwaters of San Juan' since a village does not have headwaters. So the only way this seems to make sense is to treat dëbiatemi in (28b) as a simple, lexicalized postposition meaning 'upstream from.'

(28a) cadbes _____ dëbiate-mi _____ aton tied _____ dëd-ac
 Gálvez.River headwaters-Loc 3Gen swidden fell-Infer
 'He felled (trees to make) his swidden in the headwaters of the Gálvez.'

(28b) sanuan _____ dëbiatemi _____ aton tied _____ dëd-ac
 San.Juan upstream 3Gen swidden fell-Infer
 'He felled (trees to make) his swidden upstream from San Juan.'

As a final note, I make the observation that my decision to not segment taëmi when it refers to fluvial orientation works nicely with reference localities as its postpositional objects (29a), but when a river or stream is its object, this analysis is a bit awkward. It

seems that postpositional phrases like that in (29b) are fossilized remnants from a time when river mouths were referred to as feet.

(29a) sanuan taëmi aton tied dëd-ac
 San.Juan **downstream** 3Gen swidden fell-Infer
 ‘He felled (trees to make) his swidden downstream from San Juan.’

(29b) cadbes taëmi aton tied dëd-ac
 Gálvez.River **downstream** 3Gen swidden fell-Infer
 ‘He felled (trees to make) his swidden downstream on the Gálvez.’

In summary, taëmi and dëbiatemi are treated as postpositions only in some cases, with dëbiatemi being treated as a postposition less frequently than taëmi. These complications in analysis are to be expected when we catch these forms in the middle of the dynamic process of lexicalization.

8.3 Semantic description of postpositions

Some of the morphological processes described in this chapter apply only to a subset of the postpositions, and other processes result in different meanings with different postpositions. These differences are sometimes a result of idiosyncratic semantics or conventionalized usages particular to some postpositions, but other morpho-syntactic patterns can be described more efficiently by referring to subcategories of postpositions. Thus, in order to be able to refer to categories of postpositions, I have tentatively classified the postpositions into readily-observed semantically-based subcategories. Later, in section 8.9, after having described all the postposition morphological possibilities, I will evaluate whether these semantic categories are correlated with morpho-syntactic properties. Table 8.1 (at the beginning of the chapter) lists all the known postpositions, both root and enclitics, in their respective semantic categories.

In the subsections of the present section, I introduce all the postpositions before discussing their morphological possibilities starting in sections 8.6 and 8.7. Section 8.4 lists other functions that one might expect postpositions to perform, but are performed by other morphological or syntactic means in Matses. I will concentrate on semantics and usage here, and in section 8.5, I will address the analyzability of postpositions.

8.3.1 *Comitative postpositions*

The first thing to note here is that there are three different forms for marking comitative relations: -bēd ‘Comitative: S’ (30); -bēta ‘Comitative: O’ (31); and -bētan ‘Comitative: A’/‘Comitative: Instrumental’ (32 & 33).

- (30) itia-bēd-bi cani-quid antin-Ø ne-e-c
 swamp.palm-**Com:S-Emph** grow-Agt.Nzr palm.species-**Abs** be-Npast-Indic
 ‘The antin palm is one that grows together with swamp palms.’
 A-I 014 antin 04
- (31) shupud-bēta matses-n buid-Ø codoca-quid
 rubber-**Com:O** Matses-Erg pitch-**Abs** boil-Hab
 ‘Matses boil pitch together with rubber sap.’
 A-XIII 001 buid 08
- (32) tēsh tēsh-tsēc-shun aton bēnē chedo-bētan
 (redup=Distr) pull.off-Dim-after:S/A>A 3Gen husband etc-**Com:A**
chompish pucu pe-e-c
 small.two.toed.sloth intestines eat-Npast-Indic
 ‘After they [the women] divide it into small pieces, they eat the small two-toed sloth guts with their husband and others.’
 A-IV 024 chompish 22
- (33) ad-en nacnen-quin nain-shun pupu ēshē-n
 like.that-Manr:Tr make-while:S/A>A finish-after:S/A>A owl.species eye-**Inst**
acte chiun-bētan danoshca-quid bēda-mbo-en
 river clam-**Com:Inst** smoothen-Hab good-Aug-Advzr:Tr
 ‘After finishing making it like that, they smoothen it well with pupu ēshē seeds and with river clam shells.’
 A-IX 013 tēchu 06

These forms are not really synchronically analyzable, primarily because of the lack of a productive form *-ta* (§8.5.1). When *-bëtan* is used with pronouns, it does not occur with ergative pronominal forms (34a), but rather with the absolutive form, which in this case would be better analyzed as a case-neutral form.

- | | |
|---|--|
| (34a) <u>mibi-bëtan</u> pe-onda-mbi
2Abs-Com:A eat-Dist.Past-1A
'I ate with you (a long time ago).' | (34b) <u>mi-bëtan</u> pe-onda-mbi
2-Com:A eat-Dist.Past-1A
'I ate with you (a long time ago).' |
| (34c) <u>mi-bëtan-bi</u> pe-onda-mbi
2-Com:A-Emph eat-Dist.Past-1A | 'I ate with you at the exact same time.' |

The meaning of these comitative postpositions is either actual concurrent accompaniment, as in (30) - (32), or substitution/disjunction, as in (33), which does not imply that the seed and the shell are necessarily used together at the same time, but that either can be used to smoothen pots. To specify concurrent action, the enclitic *-bi* may be attached to the comitative postposition as in (34c; cf. 34b). These comitative postpositions have more restricted semantics than the English *with* or Spanish *con*: they carry no instrumental semantics, as in *He hit him with a stick*, instrument/material semantics, as in *he He coated it with pitch*, or simultaneity semantics for distinct actions, as in *He said it with a grin*. Instruments or materials would be coded in Matses with the instrumental case marker *-n* (§§4.6.4, 11.2.3) and simultaneity of distinct actions with an adverbial/clause-chaining clause (§12.4.2.1).

8.3.2 Locative and temporal postpositions

Locative postpositions are by far the most numerous subclass of postpositions in Matses. They are related semantically in that they all provide spatial location, orientation, or path information in relation to their postpositional object. A subset of these postpositions also convey temporal information, a typical semantic extension of

spatial terms (Givon 1973, Talmy 2000). In this chapter, I have adopted the terminological and descriptive conventions of Talmy (2000:chapter I.3), which is a revised and expanded version of Talmy (1983). The most important terms are **Figure** and **Ground** (which will appear capitalized in their technical usage), which Talmy (2000:184) defines as follows:

The Figure is a moving or conceptually movable entity whose site, path, or orientation is conceived as a variable the particular value of which is the relevant issue. The Ground is a reference entity, one that has a stationary setting relative to a reference frame, with respect to which the Figure's site, path, or orientation is characterized.

In more complex geometries, some postpositions require reference to more than one entity to convey the spatial information they code (e.g., a river and a perspective point one side of the river). Rather than continuing to use the term Ground (which he uses interchangeably with "Reference Object," anyways), Talmy (2000:203) describes the more complex geometries using the terms "primary Reference Object" and "secondary Reference Object," characterized as follows:

Most frequently, this involves the distinction between a **primary Reference Object**, one that has the same syntactic position and largely the same role as the single Ground objects studied up until now, and a **secondary Reference Object**, which in many cases is not explicitly named but merely implied by a particular spatial term.

In what follows, I will restrict the use of the term Ground to geometries involving a single Reference Object. The locative postpositions described in the subsections of the present section differ semantically from each other in terms of the geometric configuration of the Figure to the Ground (e.g., 'in,' 'below') and/or the nature of the Ground/Reference Objects, including their shape (e.g., container-like), whether they have

a secondary Reference Object, and, if so, the type of secondary Reference Object (e.g., the speaker's perspective, the Earth). All the Matses postpositions treat the Figure simply as a point, but see section 8.4 for other grammar that specifies the shape of the Figure, and for other space-structuring grammar. With Matses postpositions, the Ground or primary Reference Object is always the postpositional object, and the Figure is generally a core argument in the clause, usually the subject.⁴

8.3.2.1 Comparison of postpositions translatable as 'in'

Nine Matses postpositions can be used to translate the English preposition *in*, but each carries a different range of meanings. These all also have in common that they have a single Ground (i.e., they have a "Ground-based" or "intrinsic" orientation; Talmy 2000). The postposition enclitic -n 'Locative/Temporal' is the most general with respect to the shape of Ground and its relations to the Figure. It simply specifies that the location of the Figure is coextensive with the Ground, and depending on the shape of the ground, -n can mean 'in' (35a), 'at' (35b), or 'on' (35c).

(35a) cun shubu-n ic-o-sh
1Gen house-Loc be-Past-3
'He was **in** my house.'

(35b) cun tied-n ic-o-sh
1Gen swidden-Loc be-Past-3
'He was **at** my swidden.'

(35c) cun tsadte-n ic-o-sh 'He was **on** my bench.'
1Gen seat-Loc be-Past-3

The Spanish preposition *en* 'in/on/at' or Portuguese *em* 'in/on/at' actually capture the meaning of -n more closely. The most similar postposition to -n is -no

'Locative/Directional.' The postposition -no also provides general locative orientation,

⁴ Locative *adverbs* have no direct way of overtly coding a Ground in a separate noun phrase. Rather, any Ground associated with a locative adverb is generally coded by the adverb root itself; e.g., 'swamp' is the Ground in anshantuc 'in a swamp' and the speech act or other deictic center can be considered the Ground in demonstrative deictic adverbs like nē 'here.' This is one reason why postpositional phrases can be seen as "two-part adverbs."

but differs from -n in that while -n by default specifies ‘in/inside’ when the Ground is container-like, -no is always ambiguous (between ‘in’ and ‘at’) with respect to the specific orientation of the Figure to the Ground regardless of the shape of the Ground (36; cf. 35a & 35b)⁵.

(36a) cun shubu-no ic-o-sh
1Gen house-Loc be-Past-3
‘He was in/at my house.’

(36b) cun tied-no ic-o-sh
1Gen swidden-Loc be-Past-3
‘He was at my swidden.’

Furthermore, -no can only mean ‘on’ if the Figure is permanently attached to the top surface of the Ground, while -n does not have this limitation. Both -n and -no can function to mark a goal- (37a & 38a) or source-type (37b & 38b) Ground of a moving Figure (37 & 38), but only -no can specify a direction without implying arrival (or intention to arrive) at the Ground location, or origin right at the Ground location (37 & 38, second interpretations).

(37a) cun shubu-no nid-o-sh
1Gen house-Loc go-Past-3
‘He went to my house.’
‘He went toward my house’

(37b) cun tied-no-uësh cho-o-sh
1Gen swidden-Loc-Ev.Init:Intr come-Past-3
‘He came from my swidden.’
‘He came from the direction of my swidden.’

(38a) cun shubu-n nid-o-sh
1Gen house-Loc go-Past-3
‘He went to my house.’
*‘He went toward my house’

(38b) cun tied-n-uësh cho-o-sh
1Gen swidden-Loc-Ev.Init:Intr come-Past-3
‘He came from my swidden.’
*‘He came from the direction of my swidden.’

Yet another difference between -n and -no is that the use of -n has been extended to the temporal domain, while -no is restricted to the spatial domain (39).

⁵ In other words, -n exhibits “context-dependent polysemy” (§7.3.1), while -no may code the specific meanings ‘in’ or ‘at’ in any context.

- (39a) seta-n tish-aid ne-e-c (39b) *seta-no tish-aid ne-e-c
 dry.season-Loc give.birth.to-Pat.Nzr be-Npast-Indic
 ‘He is one that was born in the dry season.’

The enclitic -mi is the “diffuse location” counterpart of -no. It can be used in the same range of grammatical positions and semantic situations as -no, but denotes less exact overlap of the Figure with the Ground (40).

- (40a) cun shubu-mi ic-o-sh (40b) cun tied-mi-uësh cho-o-sh
 1Gen house-Loc be-Past-3 1Gen swidden-Loc-Ev.Init:Intr come-Past-3
 ‘He was in/at or near my house.’ ‘He came from the vicinity of my swidden.’

The postposition -mi does not assert that the Figure is not exactly at or in the Ground, but rather means that the speaker is not sure of the exact location of the Figure. The suffix -mi is also more appropriate for diffuse Grounds, like river headwaters. More on the allative vs. ablative uses of -no and -mi can be found in section 8.6.1.2.

The postposition nēnantan ‘in the middle of’ provides more exact information, not with respect to the shape of the Ground, but with respect to the part of the Ground where the Figure is located (41).

- (41a) cun shubu nēnantan ic-o-sh (41b) cun tied nēnantan ic-o-sh
 1Gen house middle.of be-Past-3 1Gen swidden middle.of be-Past-3
 ‘He was in the center of my house.’ ‘He was in the center of my swidden.’

Like all of the other postposition roots, nēnantan does not have a directional meaning, but can have a goal- or source-type meaning.

The postpositions ēquēduc ‘inside,’ nuntan ‘inside,’ and anauc ‘inside’ have more restricted meanings than the above postpositions with respect to the nature of the Ground: ēquēduc requires that the Ground be (or be construed as) a bounded container that completely encloses or envelops the Figure, especially from the top. The Ground, which

could be a hole (42), a body of water (43; bounded by the water surface and the river/lake basin), and is even extended to include the Earth (44; bounded at least by the ground-level surface).

- (42) aton shēcūē ēquēduc cuēte podo shēni bed-shun nua-mbo-shē
 3Gen hole inside dicot.tree leaf old grab-after:S/A>A large-Aug-Aug
ushte-ua-ash tsaues ush-e-c
 nest-Vzr.make-after:S/A>S long.nosed.armadillo sleep-Npast-Indic
 ‘After getting a lot of old dicot tree leaves and after making a very large bed, the
 long-nosed armadillo sleeps inside its hole.’

1-p47-B tsaues 03

- (43) acte ēquēduc capu-quiv ‘It swims underwater.’
 river inside locomote-Hab

A-IV 031 onina 15

- (44) is-ad-en-quio nidaid ēquēduc-uid-bi capu-quiv
 see-Rflx-Neg-Aug ground inside-only-Emph locomote-Agt.Nzr
mencudu ne-e-c
 naked.tailed.armadillo be-Npast-Indic
 ‘The naked-tailed armadillo is one that is not seen because it travels inside the
 ground.’

A-I 050 mencudu 06

A swidden, which could be construed as being bounded by the surrounding unfelled forest, cannot serve as the Ground for ēquēduc, evidently because the boundaries are not sharp and do not completely enclose the area. The postposition root, nuntan is even more restricted in that it can only be used when the Ground is a man-made habitation, including houses, temporary shelters, and buildings in cities (see 8 & 9 above). The postposition ēquēduc could technically be substituted in all situations where nuntan occurs, since all man-made habitations are bounded and have clearly identifiable interiors, but for man-made shelters, nuntan is preferred. Because of its restricted range of possible Grounds, the object of nuntan is less likely to be ambiguous when not mentioned overtly, and thus nuntan occurs more frequently without an overt

postpositional object than does ëquëduc. In other words, sentences like (45a) do not require much context at all to convey that it is houses bats come inside, while (45b) would only put across the same message clearly if the context makes it explicit that the bounded Ground is a house.

(45a) nuntan dadpen-quio cho-quid 'Many [bats] come indoors.'
inside many-Aug come-Hab

D-X 057 cuesban 02

(45b) ëquëduc dadpen-quio cho-quid 'Many [bats] come inside.'
inside many-Aug come-Hab

The postposition anauc 'inside' is rare and I have little information about it. It appears most similar to ëquëduc.

The postposition nantan 'within/amidst/in/on' is similar to the postpositions described above in this section in that it can be translated as 'in.' However, unlike the above-described postpositions, it cannot be used to translate the sentence, 'He was inside my house' (46).⁶

(46) cun shubu _____ nantan ic-o-sh *'He was in my house.'
 1Gen house/village **within** be-Past-3 'He was in my village.'

The requirement for nantan seems to be that the Ground must be some entity that has either non-concrete or unclearly-marked boundaries. Thus, the postpositional object cannot be a house, which has clear, concrete boundaries, but it can be a village, whose exact boundaries are difficult to define precisely and are not necessarily visible.

Similarly, swiddens (which, as discussed above, couldn't be objects of ëquëduc) are

⁶ The reference here is to modern Matses villages, which are composed of multiple nuclear-family homes. Traditionally, the Matses lived in large communal longhouses that were usually distant from other longhouses, so in a sense a house *was* a village, hence the polysemy of shubu.

bounded by uncut trees, which form a diffuse boundary and do not enclose the area from the top (47).

- (47) aid tied nantan cani-quid
 that.one swidden **within** grow-Hab
 ‘That one [the peach palm] grows in swiddens.’

A-I 008 titado 08

Similarly, rainforest habitats like tanac palm stands, which are defined by high densities of tanac treelet palms (*Lepidocaryum temue*), are hard to draw a line around (48).

- (48) mannan dada-n-quo budēd ushu cani-e-c tanac nantan
 hill top-Loc-Aug palm.species white grow-Npast-Indic palm.species **within**
 ‘Budēd ushu palms grow on hill tops, (and) amidst tanac palms (= in tanac palm stands).’

A-I 017 budēd ushu 04

Situations like (48) could be described as the Ground being a diffusely bounded area (with nantan translatable as ‘within’), or else a partite/aggregate Ground (with nantan translatable as ‘amidst/among’). Another example is the area above a river or stream, which increases in width during the rainy season, and is neither sharply definable nor concrete (49 & 50).

- (49) acte nantan mish-quin dēco pe-quid shēcten
 stream **within** touch-while:S/A>A aquatic.snail eat-Agt.Nzr collared.peccary
ne-e-c
 be-Npast-Indic
 ‘The collared peccary is one that eats aquatic snails while feeling around in streams [their bodies are above the water, though their feet may be in the water].’

A-I 043 shēcten 14

- (50) utsi cuēte-n didique-tsēc-e-c acte-dapa nantan
 other dicot.tree-Loc hand-Dim-Npast-Indic river-large **within**
 ‘Another (small one) hangs on trees over the big river.’

E-XI 049 cuesban 19

A final exemplification of nantan is its use with rainforest paths, which could be construed as trampled ribbons or vegetation-free tubes running through the jungle, and which have non-concrete boundaries that are only really visible from a distance (51).

- (51) ad-nuc-bi-en cain-onda-sh podqued nantan
do.like.that-while:Diff.Ref-Emph-Advzr:Tr wait-Dist.Past-3 path **within**
'Then, they waited on the path.'

+ K-XXII 001 chema 020

The postposition mëduc 'during' can be used to refer to physical location or to temporal location, but its basic meaning seems to be temporal. Its use is restricted in that its Ground is always weather or the seasons. When it refers to physical location, it means 'in the sun' (52), 'in the rain' (53), etc. When it functions as a temporal orientation postposition, it usually refers to a season (54 & 55). Note that ue mëduc is a lexicalized phrase meaning 'in the rainy season' (54), but it can also mean 'in the rain' (53).

- (52) ad-shun-bi ushë mëduc nan-quid cuda mëdante
do.thus-after:S/A>A-Emph sun **during** put-Hab bamboo mortar
ushu-ua-quin
white-Vzr:make-while:S/A>A
'Then they make it white by putting it in the sun.'

A-XIII 021 cuda mëdante 05

- (53) ue mëduc capu-quid senad ne-e-c
rain **during** locomote-Agt.Nzr deer be-Npast-Indic
'The deer is one that walks around in the rain.'

A-I 046 senad 25

- (54) ue mëduc ue se-bud-ec badiad-sho
rain **during** rain fall-downward-while:S/A>S dawn-when:S/A/O>O
is-ash acate-n se-ad-nu que-quid
see-after:S/A>S tree.toad.poison-Inst pierce-Pass-Intent:1 say-Hab
'During the rainy season, when they see that it is raining in the morning, they say,
'I'm going to have myself pierced with tree toad poison''.

A-XIII 019 acate 11

- (55) titado mēduc tish-aid ne-e-bi
 peach.palm during give.birth.to be-Npast-1S
 ‘I was born during peach palm season (i.e., February).’

Unlike the other locative postposition roots, mēduc cannot occur with a covert Ground.

So, we find that locative postposition *roots* are specific with respect to the Figure-Ground orientation (‘in the middle of,’ ‘inside’), with respect to the nature of the Ground (container-like, man-made shelter, diffusely bounded, weather), and with respect to location/goal vs. direction. Thus, the reader has probably already noted the general trend that phonetically-bound postpositions convey more general information than do free postposition roots. The historical implications of this pattern are discussed in section 8.5.5.

8.3.2.2 *Terrain orientation postpositions*

There are two postpositions that are used exclusively to talk about rainforest terrain. Like the postpositions in the preceding section, these have a single Ground, but differ in that rather than specifying an abstractly-defined ground (such as “container-like” or “diffusely-bounded area”) these have concrete, specific Grounds that are relevant to the hydrology and topography of the local terrain. One, mananuc, means ‘out of (a body of water)’ or ‘beyond the floodplain of (a body of water).’ Thus, the Ground is always a body of water (a river, stream, or lake) that can be mentioned overtly as a postpositional object (but often is not). For example, in (56), the message is that the speaker cleared a stretch of forestland in upland forest, near Chobayacu Creek, but beyond its seasonally-flooded floodplain.

- (56) chēshē-mpi mananuc tsesca-o-mbi
 black-small out.of.water clear.undergrowth-Past-1A
 ‘I cleared undergrowth in forest upland from Chobayacu Creek [lit ‘little black’].’

The other terrain-specific postposition, tsimpiduc, means ‘low-lying area at the foot of (an elevated area)’ and its Ground is always a hill, ridge, levee island, or other elevated area, or something like a village or a swidden, which are always located on hills (57).

- (57) cun tied tsimpiduc tsauesamë capu-e-c
 1Gen swidden **at.foot.of.hill** giant.armadillo walk-Npast-Indic
 ‘A giant armadillo walks around in the valley adjacent to my swidden.’

These postpositions occur polysemously as adverbs, without any identifiable Ground (other than the Ground being incorporated in the adverbs). The meanings are clearly related, but somewhat different (58 & 59).

- (58) tsimpiduc chedo cani-quid budëd ushu ne-e-c
valley:Loc etc grow-Agt.Nzr palm.species white be-Npast-Indic
 ‘Budëd ushu palms are ones that grow in valleys and other such habitats.’
 1-p03-B budëd ushu 03

- (59) adecbidi mananuc nadeque-quid bëchun
 likewise:Intr **upland.forest:Loc** bound.through.tree-Agt.Nzr capuchin.monkey
chëshë ne-e-c
 black be-Npast-Indic
 ‘Similarly, brown capuchin monkeys are ones that bound through trees in upland forest.’

1-p60-B bëchun chëshë 02

8.3.2.3 Other single-Ground postpositions

There are several other postpositions that convey different spatial orientation with reference to a single Ground. One, umanuc ‘outside,’ is the semantic opposite of ëquëduc ‘inside’ (60).

- (60) ëquëduc usud-sho _____ mëcueste bed-quid umanuc-shun
inside be.in.a.hole-when:S/A/O>O agouti grab-Hab **outside**-Ev.Init.Tr
abitedi-shun pe-nun
 all-Ev.Init.Tr eat-Purp:S/A>S/A
 ‘They capture the agouti as it sits inside it (its burrow), in order to all eat it outside (the burrow).’

A-IV 035 achu camun 13

As with ëquëduc, umanuc entails a container-like Ground that can completely enclose the Figure. Its most common usage is to mean ‘outdoors.’

The postpositions dayun ‘beside’ and tayun ‘at the base of’ provide orientational information with respect to an asymmetrical Ground; i.e., one that has structurally distinct parts. The postposition dayun, generally occurs with objects that have a distinguishable back, front and sides, like houses or people (61), and tayun makes reference to an entity that has a base as distinguished from its middle and distal end, as would a tree (62). Like most Locative postposition roots in Matses, it can occur without an overtly stated object (63).

- (61) ad-shun _____ matses-n besca-quid aton shubu dayun
 do.thus-after:S/A>A Matses-Erg sweep-Hab 3Gen house **beside**
 ‘After doing that, Matses sweep the area next to their houses.’

A-XIII 031 bescate 04

- (62) aid itia _____ tayun _____ dayumenquid tsad-quid
 that.one swamp.palm **at.the.base.of** anaconda sit-Hab
 ‘Anacondas lie at the base of those swamp palms.’

A-I 029 itia 14

- (63) tayun _____ dadpen-quio bacuë cani-quid
at.the.base.of many-Aug seedling grow-Hab
 ‘Many seedlings grow at its base [of the acte pinchuc palm].’

A-I 007 acte pinchuc 12

The base of an object is identified not with respect to vertical alignment, but in reference to attachment, so that the base of tree is where it is attached to the ground, and the base of

penis is where it is attached to the body. Similarly, dayun does not refer to the side of something with respect to the speaker or some other external reference point, but with an intrinsic orientation based on the location of the main (front) door.

The postposition cachoc ‘behind’ provides locative orientational information with respect to an object with a clear front or back, such as a person or a house.

8.3.2.4 Postpositions with the speaker as default secondary Reference Object

The postposition ëquë (sometimes pronounced uquë) means ‘on the other side of.’ The primary Reference Object can be a house or a river, and can occur as an overtly-stated postpositional object (64) or a covert third-person pronoun (65).

- (64) cusasac ëquë yaquidana cuëmatiuc
 Curuça.River **other.side** Yaquerana.River other.bank
 ‘[Chema had crossed to] the other side of the Curuça River, on the other bank of the Yaquerana River [in Brazil].’

+ K-XXII 008 chema 073

- (65) adashic ëquë padpide-ec capu-cuen-onda-sh
 then **other.side** again-Manr:Intr locomote-Incho-Dist.Past-3
nibën-quin matses utsi nibën-quin
 look.for-while:S/A>A Matses other search-while:S/A>A
 ‘Then, they began walking around on the other side searching, searching for other Indians.’

+ K-XXII 001 chema 007

This postposition can only be understood from the (implicit) perspective of a secondary Reference Object that is by default the speaker (which is never mentioned overtly), or it can be the location of the current scene in a narrative (e.g., 64 and 65) or other similarly established perspective points. In sentences like (65), there is an understood postpositional object (the Yaquerana River), but ëquë also occurs polysemously as an adverb, with no overtly-mentionable Ground/Reference Object and a somewhat different meaning (see 15 & 16 in §8.2.1).

The postposition ëquëbi ‘on this side of’ is essentially the semantic opposite of the postposition ëquë (66). Note that in both examples in (66), the primary Reference Object is the postpositional object, and the secondary Reference Object is (by default) the speaker.

(66a) cun shubu ëquëbi nënë nidtsin-o-mbi
 1Gen house **this.side** tobacco plant-Past-1A
 ‘I planted a tobacco on this side of my house.’

(66b) cun shubu ëquë nënë nidtsin-o-mbi
 1Gen house **other.side** tobacco plant-Past-1A
 ‘I planted a tobacco on the other side of my house.’

The postpositions cuëmatsiuc ‘on the other bank of’ and ëquëmatsiuc ‘on the other bank of’ are more specific both in terms of the nature of the primary Reference Object (must be a river or stream) and the distance of the Figure to the primary Reference Object (must be close):

(67) cusdac ëquë yaquidana cuëmatsiuc
 Curuça.River other.side Yaquerana.River **other.bank**
 ‘[Chema had crossed to] the other side of the Curuça River, on the other bank of the Yaquerana River [in Brazil].’

+ K-XXII 008 chema 073

(68) ëquëmatsiuc capu-ec nid-o-sh
other.bank hunt-Purp:S/A>S go-Past-3
 ‘He went hunting on the other side (of the river).’

The meaning of these two postpositions is essentially the same when used to refer to a river or stream: they mean ‘on the other bank,’ or ‘on the other side but not very far on the other side’ (ëquë would be appropriate for very far on the other side). Neither ëquëmatsiuc or cuëmatsiuc can be used alone in reference to paths (69a & 69b), but cuëmatsiuc in combination with the postposition ëque can take a path as the

postpositional object (69c; see §10.4.4 for doubling-up of postpositions). The difference between (69c) and (69d) is that (69d) simply means anywhere on the other side, while (69c) refers to a more restricted area nearer to the path.

- | | |
|---|--|
| (69a) * <u>podqued</u> <u>ëquë</u> <u>matsiuc</u> | (69b) * <u>podqued</u> <u>cuë</u> <u>matsiuc</u> |
| (69c) <u>podqued</u> <u>ëquë</u> <u>cuë</u> <u>matsiuc</u>
path other.side other.side
'on the other side of the path' | (69d) <u>podqued</u> <u>ëquë</u>
path other.side
'on the other side of the path' |

The two postpositions, udi 'further than' and udibi 'closer than' are semantic opposites (70). These postpositions do not refer to abstract distances, but to relative orientation along a single line, i.e., in addition to the primary Reference Object (the palm swamp in 70), there is a secondary Reference Object, which is by default the speaker, but as with ëquë, could similarly be some other established perspective point.

- | |
|---|
| (70a) <u>mactac</u> <u>itia</u> <u>udi</u> <u>ic-o-sh</u>
mineral.lick palm.swamp further.than be-Past-3
'The mineral lick was further than the palm swamp.' |
| (70b) <u>mactac</u> <u>itia</u> <u>udibi</u> <u>ic-o-sh</u>
mineral.lick palm.swamp closer.than be-Past-3
'The mineral lick was closer than the palm swamp.' |

8.3.2.5 Postpositions with the Earth as default secondary Reference Object

The two postpositions tëdion and tsidion have similar meanings, but are interchangeable in very few contexts. They both require reference to the Earth as a secondary Reference Object in order to understand the implicit up-down vertical axis, but this is very backgrounded and the Earth is never mentioned overtly. The postposition tëdion indicates that the Figure is completely overshadowed by the primary Reference

Object, as in (71), while tsidion is used to indicate the relative position of two entities, with the Figure being lower than the primary Reference Object, as in (72a).

(71a) cuesban cuëte tëdion ush-e-c
 bat dicot.tree **below** sleep-Npast-Indic
 ‘Bats sleep underneath [fallen] trees.’

C-V 016 cuesban 06

(71b) cuesban cuëte tsidion ush-e-c
 bat dicot.tree **below** sleep-Npast-Indic
 ?‘Bats sleep closer to the ground than [fallen] trees are to the ground.’
 ‘There are some bats sleeping between the ground and that fallen tree.’

(72a) senta poshto tsidion tsad-quid
 uakari.monkey woolly.monkey **below** sit-Hab
 ‘Uakari monkeys sit below woolly monkeys.’ (i.e., when uakari monkeys and woolly monkeys eat in the same tree, the uakaries sit lower than the woollies.)

(72b) ?senta poshto tëdion tsad-quid

(72c) senta poshto-n tëdion tsad-quid
 uakari.monkey woolly.monkey-Gen **below** sit-Hab
 ‘Uakari monkeys sit below woolly monkeys.’ (same situation as 72a)

To substitute tsidion for tëdion in (71a) would be very awkward (71b, first reading) because with a habitual reading it would be saying that bats’ sleeping place is closer to the ground than fallen trees, an unlikely situation considering that many fallen trees lay right on the ground. Instead, it would have to be interpreted in the present progressive tense-aspect (71b, second reading), with the speaker trying to guide the listener as to where to look to see some bats, which may or may not be in contact or directly underneath a fallen tree. Similarly, tsidion cannot be simply replaced with tëdion in (72a), otherwise it would be indicating that the woolly monkey was somehow a giant animal that could completely overshadow the uakari monkey (72b). To use tëdion in such a situation, the primary Reference Point (woolly monkey) would have to take the

genitive marker -n, a common strategy for expressing some relational concepts with respect to animate postpositional objects (§10.4.3).

Another difference between tëdion and tsidion is that tsidion can never be used for an object that is in contact with the ground. For example, if a pen falls under a house (modern Matses houses are built with elevated floors), (73a) could be used but not (73b).

(73a) shubu tëdion paëd-o-sh
house **below** fall-Past-3
'It fell underneath the house.'

(73b) *shubu tsidion paëd-o-sh

A more accurate gloss of tsidion might be 'lower than X, but not on the ground.' And tëdion might be more accurately be glossed as having two meanings: i) 'underneath' with simple postpositional objects; and ii) 'lower than' with genitive objects.

The postposition abuc 'higher than' was already introduced in section 8.2.1, so I will not repeat the description here, except to note that it also takes the Earth as a secondary Reference Object. It is the semantic opposite of tsidion (and in some cases, also of tëdion).

8.3.2.6 *Postpositions with unidirectional secondary Reference Objects*

In section 8.2.1, I have already discussed the status of taëmi 'downstream from' and dëbiatemi 'upstream from' as postpositional roots vs. cliticized nouns. As postpositions, their meaning is restricted to fluvial orientation. These postpositions can take points on rivers and streams as primary Reference Objects (as postpositional phrases), with the river or stream as the secondary Ground. The river or stream is much more salient with these postpositions, and the direction of water flow is relevant for specifying the spatial orientation information. In (74), for example, the (covert) primary Reference Object is the *paca* (a dog-sized rodent) that submerges itself in streams to

escape predators (this point was made clear in the preceding sentences of the natural history text) and the secondary Reference Object is the stream it submerges itself in.

- (74) taëmi daëd-shun is-quid dëbiatemi utsi-n is-quid
 downstream two-Ev.Init.Tr see-Agt.Nzr upstream other-Erg see-Agt.Nzr
ic-e-c achu camun tabad-quid ne-e-c
 be-Npast-Indic howler.monkey dog/cat stand:Pl-Agt.Nzr be-Npast-Indic
 ‘The bush dogs stand with two that watch downstream (of the paca that is submerged in the stream) and another that watches upstream.’

A-IV 035 achu camun 09

There are two postpositions that convey sequential orientation, bëyuc ‘before’ and tsiuec ‘after.’ These can refer either to chronological sequence of events, as in (75), or to spatial orientation involving unidirectional movement (76).

- (75a) seta bëyuc suc cho-e-c
 dry.season before cold.spell come-Npast-Indic
 ‘Before the dry season comes the cold spell.’

- (75b) suc tsiuec seta cho-e-c
 cold.spell after dry.season come-Npast-Indic
 ‘After the cold spell comes the dry season.’

- (76) deibi bëyuc nid-o-bi ‘I went in front of Davy.’
 Davy before go-Past-1S ‘I went before Davy did.’

In the spatial meaning, the primary Reference Object is a person or animal moving in a line, and in the temporal meaning it can be an event or a season. The secondary Reference Object is either the moving line of people or animals (or cars) or time.

The postposition cachoc ‘behind,’ introduced above (§8.3.2.3) primarily provides locative orientational information with respect to an object with a clear front or back, such as a person or a house, but it can mean ‘after’ as does tsiuec in reference to a moving line of people, etc. But with cachoc it is implied that the Figure is much closer to

the primary Reference Object, and if for person in front is walking backwards, cachoc would no longer makes sense, while tsiuec would.

8.3.2.7 -uc 'on the side where'

I consider -uc to be a semi-productive morpheme. It occurs productively following action nominalizations, and can follow some adverbs, but does not productively follow nouns, as one would expect a postposition to do. It is also identifiable as sub-morphemic element in several postpositions and adverbs (see §7.5.2 for an analysis of these postpositions and adverbs). In most cases, both productive and lexicalized, -uc exhibits phonological irregularities. Examples (77-80) illustrate the use of -uc with action nominalizations (note the loss of the c at the morpheme boundary).

- (77) umbi tied dēdbouc min shubuua
umbi tied dēd-boc-uc min shubu-ua
 1Erg swidden fell.**Rec.Past.Act.Nzr-side** 2Gen house-Vzr:make-Imper
 'Make your house on the side (e.g., of a village) where I made my swidden'
- (78a) cun shubu yauc (79a) tied dēdondauc
cun shubu ic-ac-uc tied dēd-ondac-uc
 1Gen house be-Act.Nzr-side swidden fell-Dist.Past.Act.Nzr-side
 'on the side where my house is.' 'on the side where they felled trees long ago.'
- (78b) *cun shubu-uc (79b) *tied-uc
- (80) mio tabadauc (80b) mio tabadacno
mio tabad-ac-uc mio tabad-ac-no
 palm.species stand:Pl-Act.Nzr-side palm.species stand:Pl-Act.Nzr-side
 'on the side where there are mio palms.' 'where mio palms are'

Examples (81) and (82) illustrate the five adverbs with which the postposition -uc many occur. Note that with the adverbs in (81), the word class of the adverb is not changed, while with utsi (82), the adverb becomes a postposition.

- (81a) mida-uc (81b) mitsi-uc (81c) nē-uc (81d) a-uc
 where-side where-side here-side there-side
 ‘Which side?’ ‘Which side?’ ‘on this side’ ‘on that side (by you)’
- (82) utsi-uc ‘on the other side of/the other half of’
 other-side

The postposition utsi-uc provides spatial orientation information (83) and in another use identifies the other member of a pair of entities (84).

- (83) cun tied potse-no neshca-o-mbi utsi-uc padambo
 1Gen swidden half-Loc weed-Past-1A **other-side** no:Perf
 ‘I weeded half of my swidden, the other half, not yet.’
- (84) utsi-n nidte bed-nuc utsi-n nidte utsi-uc utsi-n mapi
 other-Erg leg grab-while:Diff.Ref other-Erg leg **other-side** other-Erg head
utsi-n podo utsi-n podo utsi-uc que-quin nēishamē
 other-Erg arm other-Erg arm **other-side** do-while:S/A>A tapir
shēbun-quid matses-n
 share-Hab Matses-Erg
 ‘While one takes the back leg, another takes **the other back leg**, another the head, another the front leg, and another **the other front leg**; doing that the Matses share the tapir.’

A-I 045 nēishamē 11

8.3.3 Comparative postpositions

All the forms described in this subsection compare one entity or action to another entity or action. These five postpositions can be divided into three subtypes: i) size-comparing postpositions, tion ‘as long as’ and ten ‘as big as’; ii) the quantity-comparing postposition, ted ‘as many as’; and iii) overall- or action-comparing postpositions, pad ‘same as’ and -bi ‘like.’ Just as locative/temporal postposition are most similar to adverbs in the deictic/locative/temporal subclass, the size comparing postpositions are most similar to dimension adverbs, the quantity-comparing postposition is most similar to the quantifier adverbs, and overall- or action-comparing postpositions are most similar to

manner adverbs (or perhaps to the pro-adverbs). Comparative postpositions take the object of comparison as a postpositional object, forming a phrase that, like other postpositional phrases, behaves grammatically like a Matses adverb in most ways. The postpositions tion and ten are the best example of this, since the postpositional phrases these head can occur in both active clauses (85 & 86) and copular clauses (87).

- (85) abuc-quio tabad-onda-sh isan tion-quio-bi
 high-Aug stand:Pl-Dist.Past-3 palm.species **as.tall.as**-Aug-Emph
 ‘They [the shubu tanun palms] stood very tall, as tall as the isan palm.’
 A-I 022 shubu tanun 09
- (86) cun shubu ten min shubu-ua-ta
 1Gen house **as.big.as** 2Gen house-Vzr:make-Imper
 ‘Make your house as big as my house.’
- (87) ania-tsēc dada cobisan dada ten-tsēc-bi itia
 small-Dim trunk palm.species trunk **as.big.as**-Dim-Emph swamp.palm
pinchuc ic-e-c
 thorn be-Npast-Indic
 ‘The itia pinchuc palm has a thin trunk, as big as that of a cobisan palm trunk.’
 A-I 039 itia pinchuc 06

The postposition ted ‘as many as’ by contrast, may appear superficially to not be a postposition because in some sentences it looks like phrases with ted participate as core arguments (88a & 89a). However, in these sentence there is an understood zero third-person pronoun core argument (as argued for quantitative adverbs in the preceding chapter, §7.3.7). And in sentences like (88b) and (89b) where the true core argument is stated overtly, we can see that these phrases behave just like quantitative adverbs. Note in (89) and (90) that similarly to locative postpositional phrases, postpositional phrases with ted take event initiation transitivity agreement enclitics (see §7.6.1.2 for discussion of transitivity marking on quantitative adverbs).

- (88a) mēdanted ted cho-o-sh 'Ten came.'
hand as.many.as come-Past-3
- (88b) matses mēdante ted cho-o-sh 'Ten Matses came.'
Matses hand as.many.as come-Past-3
- (89a) mēdante ted-shun pi-o-sh 'Ten ate.'
hand as.many.as-Ev.Init:Tr eat-Past-3
- (89b) bacuē-mpi-n mēdante ted-shun pi-o-sh 'Ten little kids ate.'
child-small-Erg hand as.many.as-Ev.Init:Tr eat-Past-3
- (90) daēd-pa-shun-quo che-shun-bi tedes
two-Aug-Ev.Init:Tr-Aug eat.unchewed-after:S/A>A-Emph three
ted-shun che-quid nēishamē-n
as.many.as-Ev.Init:Tr eat.unchewed-Hab tapir-Erg
'They eat in pairs and then they eat in threes.'

C-III 001 shēcten 11

While the other comparative postpositions focus on isolated properties (size, length, or number), pad 'same as' and -bi⁷ 'like' make overall comparisons. These commonly take action nominalizations as their postpositional object thereby allowing a comparison of how actions are performed or events occur (91 & 92; §12.2.5).

- (91) chish-me-quid poshto-n matses-n
suck-Caus-Hab woolly.monkey-Erg Matses-Erg
chish-me-ac-bi-mbo-en
suck-Caus-Act.Nzr-like-Aug-Manr:Tr
'Woolly monkeys suckle in the same way that Matses do.'
- A-I 052 poshto 21
- (92) cuen-enda min bēnē utsi cuen-ac pad-ec
run.off-Neg.Imper 2Gen husband other run.off-Past.Act.Nzr same.as-Manr:Intr
ca-onda-mbi
tell-Dist.Past-1A
"Don't run off just like your brother-in-law [lit. 'other husband'] did," I told her.'
+ K-XXII 011 chema 107

⁷ Initially, I thought -bi was an independent root, but word-level stress provides convincing evidence that it is a phonetically-bound form, e.g.: [pják.bím.bwén] vs. *[pják bím.bwén] 'like he eats' and [tsíd.kak.bím.bwén] 'like he yells'

These two postpositions were the principal topic of Kneeland (1982), and while my grammatical analysis is completely different,⁸ her conclusions about the semantics of these postposition seem to be consistent with my text examples. The essential semantic distinction between -bi and pad, according to Kneeland (1982), is that -bi can refer to more general, vague, or inexact comparisons (93 & 94), while pad is restricted to more precise comparisons (95 & 96). It is possible to use both interchangeably in some circumstances.

- (93) budëd-bi-mbo-ec ic-quid antin ne-e-c
 palm.species-like-Aug-Manr:Intr be-Agt.Nzr palm.species be-Npast-Indic
 'The antin palm is one that is like the budëd palm.'

A-I 014 antin 05

- (94) chiun-bi-pambo-ec aton mentsis-dapa ic-e-c
 spoon-like-Aug-Manr:Intr 3Gen claws-large be-Npast-Indic
 'Its big front claws are like spoons.'

A-I 049 tsauesamë 10

- (95) mapiocos-dapa ic-ac pad-quo ic-quid-bi
 common.opossum-large be-Act.Nzr like-Aug be-Agt.Nzr-Emph
mapiocosëmpi ne-e-c
 mouse.opossum be-Npast-Indic
 'Mouse opossums are ones that are the same as the big common opossums are.'

A-IV 021 mapiocosëmpi 02

- (96) utsi-bo-n pe-ac pado-mbo-en-bi-di pe-e-c
 other-Pl-Erg eat-Act.Nzr same.as-Aug-Manr:Tr-like-Emph eat-Npast -Indic
 '[Mouse opossums] eat what others [opossums] eat... [lists foods: crickets, etc.]'

A-IV 021 mapiocosëmpi 13

Note in (96) that the form pado is used instead of -pad when the nominalized verb is transitive. This is the only situation where pado replaces pad. Except for pad in some

⁸ Kneeland (1982:127) does not call these postpositions, but -bi a (phonetically independent) verb and pad a polysemous pro-adverb/"derived adverb." She also does not recognize action nominalizations, and simply treats them as finite clauses.

very marginal examples, all of these postposition must have an overt postpositional object.⁹

8.3.4 Quantitative postpositions

The quantitative postpositions tedi ‘all of’ and daëdi ‘both of’ are obviously related to the comparative postposition -ted ‘as many as’ and the quantitative adverb daëd ‘two.’ The postposition ted has a comparative meaning (97a), while tedi has a function of accounting for the participants (97b).

(97a) mapidequid ted-shun tanac bë-o-sh
leaf.cutter.ants as.many.as-Ev.Init:Tr palm.species bring-Past-3
‘They brought tanac palm fronds (for thatch) with as many people participating as there are leaf-cutter ants [which carry leaves in huge numbers through the forest].’

(97b) mapidequid tedi-shun tanac bë-o-sh
leaf.cutter.ants all.of-Ev.Init:Tr palm.species bring-Past-3
‘All of the leaf-cutter ants brought tanac palm fronds.’
‘Only leaf-cutter ants brought tanac palm fronds (i.e., no other types of ants participated).’

The differences between daëd ‘two’ and daëdi ‘both of’ were already pointed out in the adverb chapter (§7.3.7). The quantitative postpositions commonly take personal pronouns as postpositional objects (98).

(98a) <u>ubi daëdi</u>	(98b) <u>nuqui daëdi</u>	(98c) <u>mibi daëdi</u>
1Abs both.of	1+2 both.of	2Abs both.of
‘both of us (1+3)’	‘both of us (1+2)’	‘both of you’

As noted in sections 4.4.1 and 11.2.4, the forms abi and ambi, which usually function as fourth person (= third-person co-referential) pronouns are required instead of covert

⁹ Two special uses of comparative postpositions are the idiomatic phrases: aton padi ‘his/her/its/their manner of being’ aton tembi ‘as big as it gets.’ These are irregular compared to the usual case with comparative postpositions in that the postpositional objects are in the genitive case.

third-person pronouns in some cases (without their co-referential semantics), such as when an enclitic is to be used. We find that the requirement of comparative and quantitative postpositions to occur with an overt object calls for the use these pronouns as well (99).

(99a)	<u>abi</u> <u>daēdi</u>	(99b)	? <u>ambi</u> <u>daēdi</u>	(100)	? <u>umbi</u> <u>daēdi</u>
	3Abs both.of		3Erg all-of		1Erg both.of
	'both of them'		'both of them (Erg)'		'both of us (Erg)'

The forms in (97b) and (100) are not accepted by some speakers, but their very existence is obviously problematic: an ergative postpositional object (full nouns would never be ergative marked in this position). I have no neat solution, except to accept that pronouns as postpositional objects is generally problematic (recall that postpositions like dayun require pronominal postpositional objects to occur in the genitive case), possibly a vestige of historical grammatical patterns.

8.4 Postposition functions performed by non-postpositions

There are four main forms that express spatial relations in addition to postpositions: i) verbs, ii) prefixes, iii) adverbs, and iv) nouns in part-whole noun phrases. Many Matses verbs specify orientational geometries such a horizontal and vertical orientation (which also imply an elongated Figure), and others specify a type of Ground. Table 8.4 lists some transitive verbs that could be translated as 'put' or 'place,' and Table 8.5 lists some intransitive locative verbs (many of which are formally related to transitive counterparts in Table 8.4) that could be translated as 'be at.' Note that many of the terms in Table 8.5 are posture verbs when referring to animate entities; see section 11.7.7, especially Table 11.12, for more on these intransitive verbs.

Table 8.4. Some transitive verbs meaning 'put' or 'place' that vary for relational and Ground geometries (some modified with location prefixes).

'place/put'	Singular	Plural
general/horizontally	<u>nan</u>	<u>san</u>
vertically	<u>tsadun</u>	<u>tabèc</u>
across	<u>tsincabed</u>	?
hanging (= 'hang')	<u>dectan</u>	<u>didica</u>
leaning	<u>dectan</u>	?
in closed container	<u>naued</u>	<u>saued</u>
in open container	<u>nando</u>	<u>sando</u>
in water/fire	<u>në-nan</u>	<u>në-san</u>
on top of	<u>ma-nan</u>	<u>ma-san</u> (?)
in hole (= 'insert')	<u>(an-)usun</u>	← (same)
on pile (= 'pile')	<u>tsindo</u>	← (same)

Table 8.5. Some intransitive location verbs that vary for relational and Ground geometries..

'be at'	Singular	Plural
general ('be/live/exist')	<u>ic</u>	<u>ic</u>
horizontally ('lay')	<u>ue</u>	<u>samèd</u>
vertically ('stand')	<u>nid</u>	<u>tabad</u>
hanging	<u>diad</u>	<u>didique</u>
sitting/perching	<u>tsad</u>	← (same)
in hole	<u>usud</u>	← (same)

Example (101) shows how a locative postposition is not necessary with these verbs.

- (101) ayash-mpi ma nëishamë-n bedbid ac-nu
vine.species-small let tapir-Erg trip.wire do-Intent:1
que-shun ayash-mpi tsincabed-quid
say-after:S/A>A vine.species-small **put.across**-Hab
'A little vine... so that the tapir will set off the trip wire, they they place the vine
across (the path).'

This brings us to the prefixes, three of which are included in Table 8.4, and the rest are listed in Table 4.16 in section 4.5.1. They mostly refer to body parts, but many have extended meanings relatable to inanimate objects (e.g., an- ‘mouth, inside, underside’; ma- ‘head, fruit, top’; da- ‘body, trunk, outer surface, perimeter’; etc.). When prefixed to a verb, prefixes provide information with respect to the absolutive participant. The prefix will either refer to a part of the absolutive participant (102), or it will provide orientational geometry information with the absolutive participant as the Figure and an external entity as the Ground (103). In the latter case, the external Ground can occur in the clause as a zero-marked participant (so in a sense the valence of the verb is increased and/or the prefix acts as a postposition that is phonetically bound to the verb (instead of to its object; see §11.5.4 for the syntactic effects of verb prefixation).

- | | | | | | | |
|-------|---|---------------------|-------|---|---------------------|------------------|
| (102) | <u>tsausēs-Ø</u> | <u>ma-cues-o-sh</u> | (103) | <u>cuēte</u> | <u>da-diad-quid</u> | <u>cuesban-Ø</u> |
| | armadillo-Abs | head-hit-Past-3 | | tree | body-hang-Hab | bat-Abs |
| | ‘He hit the armadillo on the head. ’ | | | ‘Bats hang (roost) on tree trunks. ’ | | |

Some adverbs express orientation geometries that postpositions do not. The most obvious examples are abiuc ‘right,’ opioc ‘left,’ and nēbi ‘near,’ which cannot occur with postpositional objects (§7.3.3). And then there are nouns like cuēma ‘edge’ (discussed above in §8.2.2), potse ‘half’ (104), and ana ‘extent’ (105), that function similarly to postposition roots when cliticized with the general locative postposition -n. These forms seem like likely candidates for future lexicalization into postposition roots (like dayun ‘beside’ and tayun ‘at the base of’), but at present, they are synchronically segmentable.

- (104) macuësh potse-n chedo-bi budəd ushu cani-e-c
 hill half-Loc etc-Emph palm.species white grow-Npast-Indic
 ‘Budəd ushu palms grow on hill inclines (i.e., halfway up the hill) and similar habitats.’

- (105) acte ana-n chedo capu-e-c
 river extent-Loc etc locomote-Npast-Indic
 ‘They fly along rivers and places like that.’

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Compass orientation (north, etc.) is not well developed in the Matses lexicon. They rely more on reference to rivers and features of the terrain. They do use the sun sometimes for orientation (note that the forest canopy obscures the sun and there is frequent cloud cover), and to talk about it they use adverbial phrases:

- | | |
|--|---|
| <p>(106) <u>ushë tsiban-quin</u>
 sun follow-while:S/A>A
 ‘west (lit. following the sun)’</p> | <p>(107) <u>ushë podte-ec</u>
 sun cross-while:S/A>S
 ‘north or south (lit. crossing the sun)’</p> |
|--|---|

Other non-spatial functions that are accomplished in English using prepositions, such as reason (as in *He did it for love*) and benefit (as in *He did it for her*) are accomplished by adverbial phrases (§12.4.2) or applicative verb forms (§11.5.3).

8.5 Analyzability of postposition roots

It is possible to describe the postposition roots with respect to their form in terms of whether and how they can be segmented into smaller components. The first pattern that we note is that almost all locative postpositions (ëquë ‘on the other side of’ being the sole exception) can be either synchronically segmented, contain “cranberry” morphemes, or contain an identifiable formative (that potentially represents a historical form), while none of the comparative postpositions are analyzable into smaller units (Table 8.6).¹⁰ The first four subsections of the present section discuss the analyzable postpositions, and the fifth discusses the historical implications of some of these patterns.

¹⁰ The distinctions between formatives, cranberry morphemes, and segmentable lexicalized forms are described in detail in section 3.2, and summarized in the preceding chapter (§7.5).

Table 8.6. Unanalyzable postposition roots

<u>ten</u>	‘as big as’	<u>tion</u>	‘as long as’	<u>ëquë</u>	‘on the other side of’
<u>ted</u>	‘as many as’	<u>pad</u>	‘same as’		

8.5.1 Postpositions containing formatives

A large subset of the locative postpositions end in the formative uc ‘Locative.’ The formative uc was already discussed in detail with respect to both adverb and postposition roots in the adverb chapter (§7.5.1, Table 7.11). See also section 8.3.2.7 above, where -uc ‘on the side where’ was described as a semi-productive postposition.

Another formative that can be identified is ta ‘Transitive Agreement,’ which occurs on comitative enclitics (§8.3.1). If we consider the -n to be the ergative/instrumental case marker, we could analyze the comitative enclitics as follows:

<u>bëd</u> ‘Comitative: S’	<u>bëd-Ø-Ø</u> ‘Comitative-Intransitive Agreement-Absolutive’
<u>bëta</u> ‘Comitative: O’	<u>bëd-ta-Ø</u> ‘Comitative-Transitive Agreement-Absolutive’
<u>bëtan</u> ‘Comitative: A’	<u>bëd-ta-n</u> ‘Comitative-Transitive Agreement-Ergative’
<u>bëtan</u> ‘Comitative: Inst’	<u>bëd-ta-n</u> ‘Comitative-Transitive Agreement-Instrumental’

What discourages this analysis as a synchronic one is that a form -ta does not occur anywhere else as a transitivity agreement marker.¹¹ And that the instrumental comitative marker occurs with both transitive and intransitive matrix verbs.

8.5.2 Postpositions with “cranberry morphemes”

Nine postpositions end in n (Table 8.7), seven of which are locative postpositions, suggesting that some might be segmentable into a root plus the locative postposition -n, as with cuëma-n (108) and other similar words presented in section 8.4.

¹¹ There is the imperative verbal inflectional suffix -ta, but the meanings are not relatable.

Table 8.7. Postpositions ending in n

<u>dayun</u>	'beside'	<u>tayun</u>	'at the foot of'
<u>nantan</u>	'on, in, among, at'	<u>nēnantan</u>	'in the middle of'
<u>nuntan</u>	'indoors'	<u>tēdion</u>	'below, underneath'
<u>tsidion</u>	'below, lower than'	<u>tion</u>	'as long as'
<u>ten</u>	'as big as'		

- (108) acte cuēma-n ic-quid poshto ne-e-c
 river edge-Loc be-Agt.Nzr woolly.monkey be-Npast-Indic
 'Woolly monkeys are ones that are found along rivers.'

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But the postpositions in Table 8.7 do not contain forms that are recognizable as roots anywhere else in the language (thus, the parts preceding n are cranberry morphemes). The postpositions tayun and dayun appear to contain the prefixes ta- 'foot' and da- 'body,' but the yu cannot be accounted for. The other postpositions in Table 8.7 do not contain recognizable parts (but see §8.5.4 for a possible analysis of nēnantan 'in the middle of'), and the final n in these postpositions may be the product of historical lexicalization of the postpositions followed by the loss of the bare noun roots from the lexicon. Or, for some, their ending in n may simply be a coincidence.

The postposition udi 'further than' appears to contain the locative adverb u (§7.3.3); di would then be a cranberry morpheme.

8.5.3 *Lexicalized segmentable postpositions*

The forms in this section are the ones that could be segmented into parts that exist elsewhere in the language, but because they have semantics or functions that cannot be predicted from their component parts, they are best added to the lexicon as lexemes (Table 8.8). The analyzability of dēbiatemi and taēmi has already been discussed in detail in section 8.2.2, so I will not repeat it here.

Table 8.8. Segmentable postpositions

Root		Analysis	
<u>dēbiatemi</u>	‘upriver from’	<u>dēbate-mi</u>	‘headwaters-Loc’
<u>taēmi</u>	‘downriver from’	<u>taē-mi</u>	‘foot-Loc’
<u>udibi</u>	‘closer than’	<u>udi-bi</u>	‘far-Emph’
<u>ēquēbi</u>	‘on this side of’	<u>ēquē-bi</u>	‘on.other.side-Emph’
<u>tedi</u>	‘all of’	<u>ted-bi</u>	‘as.many.as-Emph’
<u>daēdi</u>	‘both of’	<u>daēd-bi</u>	‘two-Emph’

The last four postpositions in Table 8.8 all contain the form -bi (allomorph -i after non-nasal consonants) which marks emphasis (including contrast, separateness, and identity), but with these it has special meanings. With udibi and ēquēbi, it creates antonym postpositions from other postpositions. With tedi, the function is changed from comparative postposition (ted) to a quantitative postposition, and with daēdi, a quantitative adverb (daēd) is changed into a quantitative postposition. These are not regular functions of -bi, but it is typical for -bi to have irregular lexeme-specific functions, such as creation of indefinite adverbs from interrogative adverbs (§7.6.8). See section 8.6.8 for (regular) emphatic usages of -bi with postpositions.

8.5.4 Prefixes

Postpositions cannot be prefixed. The only apparent exception is the postposition nēnantan ‘in the middle of’ (109a), whose form suggests that it could be analyzed as a combination of the prefix nē- ‘in water or fire’ (109b) and the postposition nantan ‘within/amidst/in/on.’ (109c).

(109a) moco tied nēnantan ne-o-sh
 ax farm **in.the.middle.of** toss-Past-3
 ‘He tossed the ax in the middle of the farm.’

- (109b) moco nē-ne-o-sh
 ax water/fire-toss-Past-3
 'He tossed the ax into the water/fire.'
- (109c) moco tied nantan ne-o-sh
 ax farm in toss-Past-3
 'He tossed the ax into the farm.'

However, since the meaning of nēnantan is not predictable at all from its parts, and since prefixation of postpositions is otherwise absent in the language, this does not seem to be a valid synchronic analysis.

8.5.5 Historical implications for genesis of postpositions

The patterns in the first two subsections, along with the observation that postpositional enclitics have more general semantics than roots, have strong implications about how postpositions come into the language, and how postpositions can become parts of adverbs or more specific postpositions. The formative uc gives a look at a historical process, where it seems that nouns commonly suffixed with a locative postposition -uc became lexicalized adverbs (incorporating the Ground into the locative adverbial, e.g., anshantuc 'in a swamp') or are becoming a new postposition specifying a more specific Ground or relation geometry (probably when the noun was one often used as a modifier of a head noun in a part-whole, e.g., bēyuc 'before' probably contains an old noun [(bēy or bēyu)] meaning 'front' or 'face'; i.e., bēy-uc might have at one time have meant 'at the front' or 'toward the face'). Interestingly, this same process appears to be going on now with the general locative postposition -n. In other words, I propose that in Matses nouns plus postposition enclitics are a source of postposition roots and adverb roots.

8.6 Postpositional phrase enclitics and particles

There are 20 different enclitics that may occur phonologically attached to postpositions (Table 8.9). There is also the particle chedo (and sometimes -penquio) that can occur in the postpositional phrase among the enclitics, phonologically independent of

preceding roots/enclitics, but phonologically attached to enclitics following it. Most of these enclitics (and the particle) also occur on noun phrases (§4.6), adjectives (§6.6), and adverbs (§7.6). In fact, there are no enclitics or particles that occur exclusively on postpositions. Because these enclitics and particles have already been discussed in the noun, adjective, and/or adverb morphology chapters, in this section I will only describe in detail those enclitics that behave differently on postpositions. For those enclitics and particles that function similarly on postpositions and the other lexical classes, I will provide only brief description and illustration, then refer the reader to those sections where the enclitic was previously introduced and described in detail.

Table 8.9. Relative positions of postpositional morphology.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	10	11	12	
NP	post	<u>-ec</u>	<u>chedo</u>	<u>-uid</u>	<u>-mbo/-quio</u>	<u>-shë</u>	<u>-ba</u>	<u>-tsen</u>	<u>-bi</u>	<u>-di</u>	<u>-en</u>	<u>-penquio</u>	<u>-da</u>
		<u>-en</u>		<u>-pambo</u>						<u>-c</u>			
		<u>-uësh</u>		<u>-patséc</u>									
		<u>-shun</u>		<u>-pabi</u>									
				<u>-quimbo</u>									
				<u>-tséc</u>									
				<u>-tsécquio</u>									

- | | | |
|------------------------------|---|------------------------------|
| 1. Transitivity Agreement | 5. 2 nd level Aug. (follows 4) | 9. Same/Separate (follows 8) |
| 2. et cetera/too | 6. first | 10. Contrast |
| 3. only (followed by 4 or 8) | 7. next | 11. Negative |
| 4. Augmentative/Diminutive | 8. Emphatic | 12. Uncertainty |

Note: the particle chedo (and sometimes -penquio) is not phonologically attached to the element that it follows, but is attached to any enclitics it precedes.

The relative order of the postpositional enclitics is somewhat flexible, but often particular orders are preferred (in a few cases, minor differences in meaning are associated with inverted enclitic ordering, as will be pointed out the relevant sections below). Table 8.9 reflects these preferred orders. Numbers in parentheses indicate position classes that exhibit flexible relative order in the noun phrase. Enclitics listed in

the same column occur in paradigmatic contrast; -mbo/-quio, which may occur more than once in the noun phrase (emphasizing the noun, the postposition, and/or one or more enclitic; §8.6.4.1), is the exception to this. The order of some pairs of enclitics (e.g., -mbo/-quio and -shë) cannot be reversed; otherwise the general trend is that the further apart two enclitics are in Table 8.9, the less likely speakers are to approve a postpositional phrase with those two enclitics' relative order reversed. Some enclitics cannot occur unless they co-occur with another enclitic, for example, -shë cannot occur unless it follows one of the enclitics in position class 4 (indicated in Table 8.9 as "follows").

8.6.1 Transitivity agreement

As with adverbs, most postpositions are cliticized to exhibit one of two types of transitivity agreement: manner transitivity agreement (-ec and -en) or event initiation transitivity agreement (-uësh and -shun); no postpositions exhibit both types.

Table 8.10. Postpositions that take transitivity agreement enclitics.

Adverb class	<u>-ec</u>	<u>-en</u>	<u>-uësh</u>	<u>-shun</u>	<u>ta</u> ^a
comitative	none	none	none	none	one (of 3)
locative	none	none	all (27)	all (27)	none
comparative					
dimension	none	none	none (?)	all (2)	none
number	none	none	none	all (1)	none
overall/action	all (2)	all (2)	none	none	none
quantifier	none	none	one (of 2) ^b	all (2)	none

^a This is actually a formative, as discussed in section 8.5.1.

^b Sociolinguistic variation: some older speakers use -uësh with a few quantifiers.

The following two subsections describe how these two types of transitivity agreement function with postpositions. A general description can be found in section 7.6.1.

8.6.1.1 *Manner transitivity agreement: -ec & -en*

Only two of the postpositions take manner transitivity agreement enclitics, which are the overall- or action-comparing postpositions, pad ‘same as’ and -bi ‘like.’ The postposition pad (except in reference to the time of an event) occurs only in copular clauses with the copula ic (for example, 110a was corrected with 110b by one speaker), unless suffixed with one of the two manner transitivity agreement suffixes, -ec ‘Manner: Intransitive Agreement’ or -en ‘Manner: Transitive Agreement’ (110c).

(110a) *cun shubu pad min shubu-ua-ta
 1Gen house same.as 2Gen house-Vzr:make-Imper
 ‘Make your house the same kind as my house.’

(110b) cun shubu pad ic-nuc min shubu-ua-ta
 1Gen house same.as be-while:Diff.Ref 2Gen house-Vzr:make-Imper
 ‘Make your house so that it is the same kind as my house.’

(110c) cun shubu pad-en min shubu-ua-ta
 1Gen house same.as-Manr:Tr 2Gen house-Vzr:make-Imper
 ‘Make your house the same as my house.’

The form -bi ‘like’ is an even less prototypical postposition in that it evidently never occurs without one of the manner transitivity agreement enclitics (111).

(111) ad-quoio-bi-di titado podo-bi-tsēc-ec ic-e-c
 like.that-Aug-Emph-Same peach.palm frond-like-Dim-Manr:Intr be-Npast-Indic
 ‘Similarly, the [piushën titado palm] fronds are like small peach palm fronds.’
 A-I 010 piushën titado 03

8.6.1.2 *Event Initiation transitivity agreement: -uësh & -shun*

The enclitics -uësh ‘Event Initiation: Intransitive’ or -shun ‘Event Initiation: Transitive’ can follow postpositions (either postposition enclitics or postposition roots) as well as adverbs. These enclitics exhibit transitivity agreement with the matrix verb of the clause that they occur in: -uësh is used with intransitive matrix verbs, and -shun with

transitive ones. In most cases, with locative postpositional phrases or adverbs, the presence of -uësh or -shun indicates that the location being specified by the locative adverbial refers to the location where the event is initiated, as opposed to where the event ends or where the middle of the event transpires. This is particularly clear with events that involve movement across space (112 & 113a). When these enclitics are absent from the locative phrase in an event involving real or metaphorical movement, the postpositional or adverbial phrase refers to the location where the event ends (113b). Two locative phrases can (but seldom) occur in the same sentence, with one referring to where the event starts and one to where the event ends (113c).

- (112) nuntan-uësh cho-ec tu tu
 inside-Ev.Init:Intr come-while:S/A>S chasing.away.yell chasing.away.yell
 ‘He came out from inside [the hut] yelling, “tu tu...”’

K-XXI 011 dëmushbo 46

- (113a) tied nantan-uësh cho-o-bi (113b) tied nantan cho-o-bi
 swidden on-Ev.Init:Intr come-Past-1S swidden on come-Past-1S
 ‘I came from the swidden.’ ‘I arrived at the swidden (from direction other than speech act).’

- (113c) tied nantan-uësh shubu nuntan cho-o-bi
 swidden on-Ev.Init:Intr house inside come-Past-1S
 ‘I came from the swidden to inside the house.’

With transitive punctual events that involve A and O participants at separate locations (e.g. seeing someone far away), a postpositional phrase with -shun will be associated with the A argument (114 & 115a); and if -shun is absent from the postpositional phrase, the specified location will be associated with the location of the O argument (115b).

- (114) quëuëte-ua-shun toncondo cuës-quid cuëte
 hook-Vzr:make-after:S/A>A tree.species gather-Hab dicot.tree
utsi-n-shun
 other-**Loc-Ev.Init:Tr**
 ‘They make a hook and then gather toncondo pods from another tree (i.e., by climbing an adjacent tree).’

A-XIII 008 quëuëte 14

- (115a) idancha-n-shun chotac-Ø is-o-mbi
 river.boat-**Loc-Ev.Init:Tr** non-Indian-Abs see-Past-1A
 ‘I saw the non-Indian from/on the boat.’ [first-person definitely on boat;
 non-Indian on boat or on shore]

- (115b) idancha-n chotac-Ø is-o-mbi
 river.boat-**Loc** non-Indian-Abs see-Past-1A
 ‘I saw the non-Indian on the boat.’ [first-person on boat or shore; non-Indian
 definitely on boat]

However, this association with the A and O arguments appears to be an epiphenomenon. With transitive punctual events, it is perhaps impossible to show that -shun does not code an association with the A rather than with the initiation of the event, considering that As are generally associated with event initiation. Sentences comparable to those in (115) using punctual, non-motion *intransitive* verbs, however, discourage the analysis of association with an argument as basic: the use of -shun in (116a) splits the punctual event into two parts, identifying the boat as the source, and the goal as a location off the boat; (116b) simply presents the event as restricted to the specified locality.

- (116a) idancha-n-uësh cuëd-o-bi (116b) idancha-n cuëd-o-bi
 river.boat-**Loc-Ev.Init:Intr** yell-Past-1S river.boat-**Loc** yell-Past-1S
 ‘I called out **from** the boat.’ ‘I yelled **on** the boat.’

With non-punctual transitive events that involve movement across a physical distance, as in (117), it can be shown that -shun is not necessarily associated with the A. For example, there does not seem to be any difference in the location of the A with respect to the O in (118a) and (118b) that would cause the postpositional phrase to refer to the A in

(118b), but not in (118a). But the difference with respect whether the postpositional phrase refers to the initiation or the end of the event is evident.

(117) tabote dete-ua-tanquin matses-n shubu-no bē-quid
 copal tumpline-Vzr:make-after:S/A>A Matses-Erg house-Loc bring-Hab
 ‘After making a tumpline for the copal resin, Matses bring it home (to the house).’
 A-XIII 004 tabote 09

(118a) tied-no pachid bē-o-sh
 swidden-Loc manioc bring-Past-3
 ‘He brought manioc to the swidden.’ (from a direction other than speech act)

(118b) tied-no-shun pachid bē-o-sh
 swidden-Loc-Ev.Init:Tr manioc bring-Past-3
 ‘He brought manioc from the swidden’

It should be noted that with verbs that involve locomotion (spatial displacement of the subject), the postposition enclitics -no ‘(precise) Locative/Directional’ and -mi ‘(general) Locative/Directional’ can code direction of movement as opposed to only goal-oriented movement. Thus, it is tempting to analyze -no and -mi as being allatives as well as locatives, and -noshon, -noësh, -mishun, and -miuësh as ablative postpositions (Table 8.11). This would be a useful analysis only if these forms were restricted to verbs that involve locomotion, but as will be seen below, these same forms are also used with verbs that do not involve displacement of the participants.

Table 8.11. Possible analysis of locative postpositions as allatives and ablatives.

	‘Locative/Allative’	Ablative	
		Transitive	Intransitive
Specific	<u>-no</u>	<u>-noshon^a</u>	<u>-noësh^b</u>
General	<u>-mi</u>	<u>-mishun</u>	<u>-miuësh</u>

^a this form is predictable from vowel harmony rules

^b this form is irregular in that the /w/ has been lost (but it is not surprising)

With events that involve a single location, it is harder for me to predict when a speaker will include -uësh/-shun. In these cases, speakers seem to use -uësh/-shun to provide orientation with respect to the location of preceding events or conditions, or about a concurrent event involving other participants that is not otherwise coded linguistically. For example, one speaker's explanation for including -uësh in (119) is that while the tree toad does not move across space, its call moves from the location of the toad to where people hear it.

- (119) acate chian cuëma-no-uësh acate cuëdën-quid
 tree.toad lake edge-**Loc-Ev.Init:Intr** tree.toad sing-Hab
 'The tree toad...the tree toad sings in lakeside forest/calls from lakeside forest.'
 A-XIII 019 acate 21

One speaker explained that although (120a) and (120b) would mean the same thing, (120b) was strange because dolphins never leave the water, but if one substituted 'otter' for 'dolphin' in (120b), it would be better because otters are not always in the water (but still awkward because otters do not eat inside the water). It seems that in this case -shun indicates that the locative phrase applies to both the event coded in the clause, and an event preceding the clause, which may or may not be mentioned overtly in the narrative (Note that -shun is also a clause-chaining suffix meaning 'before'). What -shun appears to be conveying in (120a) is that prior to initiation of the event in the clause, the subject of the sentence was already in the specified location.

- (120a) ad-quid-n-bi chishcan-n acte ëquëduc-shun nuëcquid
 like.that-Agt.Nzr-Erg-Emph dolphin-Erg water **inside-Ev.Init:Tr** fish
pe-e-c
 eat-Npast-Indic
 'That one, the dolphin eats underwater.'

(120b) ?ad-quid-n-bi chishcan-n acteëquëduc nuëcquid pe-e-c

The pair in (121) provides an interesting example of the use of -shun apparently providing deictic information rather than event initiation information. Sentence (121a) would be appropriate when someone has told you that they are going to go to your house, especially when you know from where the visitor is coming. Thus the person waiting at his house knows that the expected path of the visitor is directly toward his house. Sentence (121b) would be appropriate for announcing that one plans to wait for a thief that may or may not come to rob at night. Or it could be used when one is going to wait for some pest animal that he wants to shoot. Thus, in (121b) the person doing the waiting does not know whether the person or animal that he is waiting for will arrive, and is unaware of the path or direction that the potential visitor might come from.

(121a) cun shubu-no-shun cain-e-mbi
 1Gen house-Loc-Ev.Init:Tr wait-Npast-1A
 'I'm going to wait (for him) at my house.'

(121b) cun shubu-no cain-e-mbi 'I'm going to wait at my house.'
 1Gen house-Loc wait-Npast-1A

Speakers were not able to elucidate how the otherwise almost identical sentences in (122) and (123), differ and so perhaps in some cases where an event transpires at a single location, the use of -shun/-uësh has a very subtle function at the discourse level or is merely optional.

- (122) nidaid shëcuë-n-shun tish-shun cuëte
 ground hole-**Loc-Ev.Init:Tr** give.birth.to-after:S/A>A dicot.tree
shëcuë-n-shun tish-shun que-quid bëdi chëshë
 hole-**Loc-Ev.Init:Tr** give.birth.to-after:S/A>A do-Agt.Nzr jaguar black
ne-e-c
 be-Npast-Indic
 ‘The jaguarundi cat [lit. ‘black jaguar’] is one that gives birth in burrows and in hollow logs.’

A-IV 039 bëdi chëshë 12

- (123) cuëte shëcuë-n tish-shun nidaid shëcuë-n
 dicot.tree hole-**Loc** give.birth.to-after:S/A>A ground hole-**Loc**
tish-shun que-tsëc-quid tëstuc
 give.birth.to-after:S/A>A do-Dim-Agt.Nzr epiphyte.species
maue-quid ne-e-c
 lie.under-Agt.Nzr be-Npast-Indic
 ‘The margay [lit. one that lies under epiphytes] is one that gives birth in hollow logs and in burrows.’

A-IV 040 tëstuc mauequid 10

So, even with just locative adverbials, -uësh and -shun have multiple functions. When the basic function of event initiation is not clearly applicable to the event, other functions like referring to vantage point, deixis, location of preceding events (and others that I don’t completely understand yet) obtain. The following pairs of elicited examples help illustrate these related meanings, including starting point (124b), vantage point (125b) and focus on “pre-event” circumstances/events (126b).

- (124a) min shubu ic-ac-no bë-tan-Ø
 2Gen house be-Act.Nzr-Loc bring-go-Imper
 ‘Go bring the machete to your house!’ (e.g., from a swidden beyond the house)
- (124b) min shubu ic-ac-no-shun bë-tan-Ø
 2Gen house be-Act.Nzr-Loc **-Ev.Init:Tr** bring-go-Imper
 ‘Go bring the machete **from** your house!’
- (125a) min shubu ic-ac-no is-tan-Ø
 2Gen house be-Act.Nzr-Loc look-go-Imper
 ‘Go look (e.g., for a machete) **at** your house!’

- (125b) min shubu ic-ac-no-shun is-tan-Ø
 2Gen house be-Act.Nzr-Loc-Ev.**Init:Tr** look-go-Imper
 ‘Go look (e.g., at a passing boat) from your house!’
- (126a) min shubu ic-ac-no bed-tan-Ø
 2Gen house be-Act.Nzr-Loc get-go-Imper
 ‘Go get the machete from your house (and then bring it here; i.e., no preceding relevant event at the site of the interlocutor’s house)!’
- (126b) min shubu ic-ac-no-shun bed-tan-Ø
 2Gen house be-Act.Nzr-Loc-Ev.**Init:Tr** get-go-Imper
 ‘Go get a machete at your house (e.g., where they are passing out machetes)!’

These forms are also used with body parts and instruments to indicate which part of the body or which part of the instrument proceeds first (127-129). The extension from disjunct locations does not seem too far-flung.

- (127) ad-quid-bi tsitsu-mi-uësh capu-e-c
 like.that-Agt.Nzr-Emph butt-Loc-Ev.**Init:Intr** locomote-Npast-Indic
mëincanchush
 three.toed.sloth
 ‘That one, the three-toed sloth, walks backwards [lit ‘butt first’].’
 A-IV 023 mëincanchush 06
- (128) tsitsu-mi-shun se-quid tambis
 butt-Loc-Ev.**Init:Tr** pierce-Hab paca
 ‘They spear pacas with the “butt end” [of the bamboo-head spear].’
 A-XIII 032 cuda shëta 14
- (129) ado-shun mëdante utsi-uc-shun cues-o-mbi
 do.thus:Tr-after:S/A>A hand other-side-Ev.**Init:Tr** hit-Past-1A
 ‘Then, I hit him with my other hand.’

These enclitics do not work in the temporal domain. That these enclitics are used only when the postpositional phrase refers to a physical location can be shown with the postposition mëduc ‘during/in’ (Table 8.12).

Table 8.12. Meaning of some postpositional phrases with mëduc.

	physical location	temporal location
<u>uë mëduc</u>	‘in the rain’	‘in the rainy season’
<u>ushë mëduc</u>	‘in the sunshine’	
<u>seta mëduc</u>		‘in the dry season’

What we find is that -shun/-uësh can only be used with mëduc, when the postpositional phrase is referring to a physical location (130-132; cf. meanings in Table 8.12).

(130a) uë mëduc-shun mibi is-o-mbi
rain in.the.middle.of-Ev.Init:Tr 2Abs see-Past-1A
‘I saw you as I stood in the rain.’/*‘I saw you in the rainy season’

(130b) uë mëduc-uësh chonuad-o-bi
rain in.the.middle.of-Ev.Init:Tr work-Past-1S
‘I worked in the rain.’/*‘I worked in the rainy season’

(131) ushë mëduc-shun mibi is-o-mbi
sun in.the.middle.of-Ev.Init:Tr 2Abs see-Past-1A
‘I saw you as I stood in the sun.’

(132) *seta mëduc-shun mibi is-o-mbi

The enclitic -shun is also used commonly with quantitative adverbs, with the comparative postposition ted ‘as many as’ and with the quantitative postpositions tedi ‘all of’ and daëdi ‘both of’ (133; see also examples 89, 90 and 97 above).

(133) mibi daëdi-shun pe-ta ‘You two eat.’
2Abs both.of-Ev.Init:Tr eat-Imper

Somewhat infrequently, size comparison postpositions can occur with -shun (134).

(134) abi tion-bi-shun bë-o-mbi
3Abs as.long.as-Emph-Ev.Init.Tr bring-Past-3
‘I brought the whole way.’ (i.e., no-one else helped)

The use of -uësh with quantitative adverbial and postpositional phrases is extremely limited for some speakers and completely unallowable for other speakers (§7.6.1.2). When -shun is attached to a quantitative adverb or postposition, it indicates that the quantifier is to be linked with the ergative participant (134 & 135a); the absence of -shun indicates that the quantifying phrase is to be linked to the absolutive participant (135b).

(135a) bacuë-mpi-n mēdante ted-shun dectad che-o-sh
 child-small-Erg hand as.many.as-Ev.Init:Tr papaya eat.unchewed-Past-3
 ‘Ten little kids ate papaya.’

(135b) bacuë-mpi-n mēdante ted dectad che-o-sh
 child-small-Erg hand as.many.as papaya eat.unchewed-Past-3
 ‘(One or more) little kids ate ten papayas.’

See section 7.6.1.2 for examples of the use of -shun and -uësh with adverbs.

Homophones of -shun are found elsewhere in the language similarly associated with transitivity: the same form is an applicative verb valence increasing suffix (§11.5.3), and a clause-chaining suffix associated with transitivity (§12.4.2.2).

8.6.2 chedo ‘*et cetera/too*’

This particle (described in §9.3.1) functions essentially as an enclitic in that it cannot occur alone as a constituent of a sentence and its position among phrasal enclitics is relatively fixed. The only catch is that it is not phonologically bound to the word or enclitic that *precedes* it (as evidenced by patterns in word-level stress; §2.7.1). Other postpositional enclitics that *follow* chedo are phonologically attached to chedo (136)

- (136) nuntan chedo-bi che-e-c nuntan-bi
 inside etc-Emph eat.unchewed-Npast-Indic inside-Emph
pudued-pudued-tsēc-ec-bi
 enter-(redup=Distr)-Dim-while:S/A>S-Emph
 ‘They eat plantains indoors, too, continually coming inside the house.’

G-XV 063 cuesban 14

The scope of chedo is the entire postpositional phrase rather than just the postposition. So, in sentences like (137), the ‘et cetera’ could be interpreted as ‘...and in buildings and other places’ or ‘...and in holes in trees and holes in other places,’ but not ‘...and beside holes in the ground and other locations near holes in the ground.’

- (137a) nidaid shēcüē ëquëduc chedo ‘inside holes in the ground, etc.’
 ground hole inside etc

The particle chedo follows postposition roots (136 & 137) and usually precedes postposition enclitics (138). We note, however, that there are some instances where chedo follows postposition enclitics. The cases found so far all involve the enclitic -n ‘Locative’ (139 & 140). Cases where -n precedes chedo all appear to involve locative phrases that appear to be in the process of being lexicalized into postpositions (i.e., cases where the root seldom occurs without a locative postposition enclitic). So, the positioning of chedo could be explained as generally preceding postposition enclitics, unless the postposition is either a root or an enclitic that is part of a habitually-used postpositional phrase.

- (137b) *nidaid shēcüē chedo ëquëduc

- (138) nidaid shēcüē chedo-n ush-quid tsatsin ne-e-c
 ground hole etc-Loc sleep-Agt.Nzr acouchi be-Npast-Indic
 ‘Acouchis are ones that sleep in holes in the ground and place like that, too.’

A-IV 013 tsatsin 19

- (139) macuësh potse-n chedo-bi budëd ushu cani-e-c
 hill half-**Loc** etc-**Emph** palm.species white grow-Npast-Indic
 ‘Budëd ushu palms grow on hill inclines and similar habitats.’

A-I 017 budëd ushu 06

- (140) acte ana-n chedo capu-e-c
 river extent-**Loc** etc locomote-Npast-Indic
 ‘They fly along rivers and places like that.’

G-XV 063 cuesban 12

The particle chedo seldom occurs with the comparative postpositions, perhaps due to the awkward semantics that result; however, this restriction does not seem to be grammaticalized as speakers allow chedo to occur with comparative postpositions if a plausible enough situation can be conjured up (141)

- (141) piacbo tion chedo pudun-o-sh
 corn **as.long.as** etc jump-Past-3
 ‘They jumped as high as a corn plant and other various heights.’

8.6.3 -uid ‘only’

The enclitic -uid is used to mean ‘only’ either in the literal sense, as in (142)¹² or as an exaggeration meant to be interpreted in a looser sense (143; Matses know that the naked-tailed armadillo does not spend *all* its time underground).

- (142) tied nantan-uid-bi titado-bi-mbo-ec cani-quid
 swidden **on-only**-**Emph** peach.palm-like-Aug-Manr:Intr grow-Hab
 ‘It (the coconut palm) grows only in swiddens, like the peach palm.’

A-I 021 coco 05

¹² In the Amazon basin, the coconut is an exotic palm that is a cultivated and does not grow wild.

- (144d) nuntan-uid-tsēc-bi tabad-o-sh
 inside-only-Dim-Emph be-Past-3
 ‘They (few people) were all only indoors.’ (no one was outside)
- (144e) nuntan-uid-patsēc tabad-o-sh
 inside-only-Deintens be-Past-3
 ‘They (few people) were all only indoors (in few houses).’ (no one was outside)
- (144f) nuntan-uid-pambo tabad-o-sh
 inside-only-Aug be-Past-3
 ‘They (many people) were all only indoors.’ (no one was outside)

These differences in meaning may be absent or very subtle in some contexts, and because we cannot contrast different forms with -uid alone it is difficult to isolate these meanings.

The deixis transitivity agreement enclitics, -uësh and -shun (§8.6.1) can go either before -uid or following -uid + -quio/-bi/-tsēc/-pambo/-patsēc, with a slight difference in meaning associated with the different arrangement of enclitics. For example, in (145a), with -uësh at the end of the postpositional phrase, a habitual reading is produced (-e ‘Nonpast’ codes present habitual, present continuous, and future); while in (145b) a present continuous reading is produced.

- (145a) cueshcuesho abuc-uid-quio-uësh cuəd-e-c
 screaming piha high-only-Aug-Ev.Init:Intr call-Npast-Indic
 ‘The screaming piha (bird species) calls only from high up.’
- (145b) cueshcuesho abuc-uësh-uid-quio cuəd-e-c
 screaming piha high-Ev.Init:Intr-only-Aug call-Npast-Indic
 ‘The screaming piha is calling only from high up.’

A sentence like (145a) would be more appropriate for teaching about bird natural history, and (145b) might be said when trying to get a good look at a particular screaming piha when it will not come down into the lower canopy to call. With a verb inflection that does not vary for aspect, like -quid ‘Present Habitual,’ the difference is more subtle: in (146a), where -shun is placed at the end of the postpositional phrase, the meaning is that

that is the way it always is, while with (146b) it is understood that they only always eat indoors when some special condition applies, as in response to the Matses belief that if one eats game that a dog has found outdoors, the dog's hunting prowess will deteriorate.

- (146a) nuntan-uid-quo-shun pe-quad 'They always only eat indoors.'
 inside-only-Aug-Ev.Init:Tr eat-Hab
- (146b) nuntan-shun-uid-quo pe-quad 'They only eat indoors (e.g., when a
 inside-Ev.Init:Tr-only-Aug eat-Hab dog finds the game).'

Similarly, (147a) could be used to describe the habits of a species of animal, like pacas or armadillos, while (147b) would be more appropriate to describe a particular dog's newly-acquired peculiar habit of only giving birth inside holes.

- (147a) shëcuë ëquëduc-uid-quo-shun tish-e-c
 hole inside-only-Aug-Ev.Init:Tr give.birth.to-Hab
 'It only gives birth inside burrows.'
- (147b) shëcuë ëquëduc-shun-uid-quo tish-e-c
 hole inside-Ev.Init:Tr-only-Aug give.birth.to-Hab
 'It has taken to only giving birth inside holes.'

The deictic transitivity enclitics can never go directly after -uid (147c).

- (147c) *shëcuë ëquëduc-uid-shun-quo tish-e-c

8.6.4 *Augmentatives, Diminutives, De-intensifiers, and Derogative*

The enclitics in this section compose the only large group of postpositional phrase enclitics that occur in paradigmatic contrast; i.e., they all occur in the same position class. These enclitics have similar functions and meanings when attached to adjectives, and so I refer the reader to section 6.6.2 where the analyzability and the semantics of these forms are treated in more detail. I note further that while all of these enclitics occur commonly

on adjectives, only -mbo/-quio occurs regularly with postpositions in texts. In the following subsection I will provide a brief description as to how these enclitics function with postpositions.

8.6.4.1 -mbo/-quio 'Augmentative'

The enclitic -mbo/-quio¹³ can function to intensify the meaning of the postposition (148 & 149).

- (148) nidaid ëquëduc-quio uëdëshca-ban-ec nid-quid-quio
 ground **inside-Aug** dig-Iter-while:S/A>S go-Agt.Nzr-Aug
tsauesamë ne-e-c
 giant.armadillo be-Npast-Indic
 'The giant armadillo is truly one that digs **very deep** inside the ground as it goes.'
 1-p49-B tsauesamë 03
- (149) shubu dayun-quio ic-o-sh 'It was **right** (very close) beside the house.'
 house beside-Aug be-Past-3 'It **really** was beside the house.'

But note in (149) that -mbo/-quio can also express an emphatic meaning at the clausal level. The enclitic -mbo/-quio can occur in several different positions within the postpositional phrase in relation to other enclitics that may occur in the postpositional phrase. The relative position of -mbo/quio can have an effect on the meaning that it carries (150).

- (150a) shëcuë ëquëduc-quio-uësh cho-o-sh
 hole inside-Aug-Ev.Init:Intr come-Past-3
 'It came out from **deep within** the hole.'
 'It **really did** come out of the hole.'
- (150b) shëcuë ëquëduc-uësh-quio cho-o-sh
 hole inside-Ev.Init:Intr-Aug come-Past-3
 'It came out from **deep within** the hole.'
 *'It **really did** come out of the hole.'

¹³ These are phonetically-conditioned allomorphs, -mbo following vowels and -quio consonants.

- (150c) shëcuë ëquëduc-**quio**-uësh-**quio** cho-o-sh
 hole inside-**Aug**-Ev.Init:Intr-**Aug** come-Past-3
 ‘It really **did** come out from **deep within** the hole.’

Also, recall from section 8.6.3 that -mbo/-quio can modify other enclitics like -uid ‘only.’ Thus, -mbo/-quio can serve up to three functions when it occurs in a postpositional phrase: i) intensification of the postposition’s meaning; ii) emphasis at the clause level; and iii) modification of another (preceding) postpositional phrase enclitic. It is possible to elicit sentences with -mbo/-quio serving all three of these functions in a single postpositional phrase (151).¹⁴

- (151) shëcuë ëquëduc-**quio**-uid-**quio**-shun-**quio** tish-quid
 hole inside-**Aug**-only-**Aug**-Ev.Init:Tr-**Aug** give.birth-Hab
 ‘It really does **always** give birth only **deep within** burrows.’

8.6.4.2 -pambo ‘Augmentative’

The enclitic -pambo carries de-intensification and/or large-size semantics when attached to a postposition. The de-intensification semantics are very slight, and are linked to the meaning of the postposition (152), but most frequently -pambo carries only large size semantics, which are tied to the Ground (the postpositional object), rather than the postposition itself (153; see also 144 above).¹⁵

- (152) ëquëduc-**pambo** ‘well inside, but not too deep inside (of a large thing)’
 inside-**Aug**

¹⁴ It is my impression that most of these enclitic were historically independent adverbs that were regularly modified with -mbo/-quio, and when they became bound morphemes over time, they kept -mbo/-quio as a morphological possibility.

¹⁵ Recall from section 6.6.2.3, that these size semantics appear to be more part of system of “size agreement” (analogous to gender and number agreement in Romance languages) rather than an assertion about size.

- (153) tied nēnantan-pambo ic-o-sh 'It was in the middle of the large swidden.'
 swidden in.the.middle-Aug be-Past-3 *'It was in the big middle of the swidden.'

8.6.4.3 -patsēc 'Diminutive'

The enclitic -patsēc carries de-intensification and/or diminutive semantics when attached to a postposition. The de-intensification semantics are considerably more pronounced than with -pambo (preceding section). In some cases, as in (154), the de-intensification and diminutive semantics go hand-in-hand, i.e., if you do not dig very deep, the hole will most likely not be very large (although it could possibly be a large, shallow trench).

- (154) ēquēduc-patsēc uēdēshca-Ø 'Dig not very deep.'
 inside-Dim dig-Imper

By contrast, in sentences like (155), there is no necessary association between diminutive and de-intensification meanings, and so context must be relied upon to know whether the diminutive or de-intensification (or both) semantics is present. However, -patsēc is not appropriate for large entities, and so in the second interpretation of (155), it is understood that the entity may be small or medium, but not large. The enclitic -pambo (§8.6.4.2) is more appropriate for large entities.

- (155) tied nēnantan-patsēc ic-o-sh
 swidden in.the.middle-Dim be-Past-3
 'It was somewhat near the middle of the swidden.'
 'It was in the middle of the small swidden.'

Note that as with -pambo, the de-intensification semantics modifies the postposition and the diminutive semantics is associated with the noun phrase.

8.6.4.4 *-pabi* 'De-intensifier'

Unlike *-pambo* and *-patsēc*, the enclitic *-pabi* has no size semantics associated with it. Rather its de-intensification semantics are connected with the speaker's attitude about the action. Specifically, when a speaker uses *-pabi*, he is being nice, asserting that some action, while not carried out to completion or perfection, is good enough. For example, a father might use (156) when his son did not dig the hole as desired, but the speaker does not wish to criticize, discourage, or shame his son when reporting the event (and the speaker may even have to finish or fix the hole himself).

- (156) ëquëduc-pabi uëdëshca-o-sh 'He dug deep enough.'
 inside-Deintens dig-Past-3 (but not quite as deep as it should be)

8.6.4.5 *-quimbo* 'Augmentative'

The enclitic *-quimbo* simply modifies postpositions with augmentative semantics (157 & 158). Note that it does not necessarily intensify the meaning of the postposition, as in (158).

- (157) ëquëduc-quimbo uëdëshca-o-sh 'He dug really deep.'
 inside-Aug dig-Past-3

- (158) tanete tion-quimbo ic-o-sh
 electric.eel as.long.as-Aug be-Past-3
 'It was very long, as long as an electric eel.'
 *'It was exactly the size of an electric eel.'

8.6.4.6 *-tsēc* 'Diminutive'

The enclitic *-tsēc*, which also occurs on nouns, verbs, and adverbs, carries a diminutive and/or de-intensifying meaning with postpositions. The diminutive meaning is connected with the noun phrase (159 & 160, first readings) and the de-intensifying meaning is connected with the postposition itself (159 & 160, second readings).

- (159) tied nēnantan-tsēc ic-o-sh 'It was in the middle of the **little** swidden'
 swidden in.the.middle-**Dim** be-Past-3 'It was **more or less** in the middle of...'
- (160) chotac pad-tsēc ic-o-sh 'They were **small**, like non-Indians.'
 non-Indian like-**Dim** be-Past-3 'They were **a bit** like non-Indians.'

8.6.4.7 *-tsēcquio* 'Derogatory'

The enclitic *-tsēcquio* is obviously formally a combination of the enclitics *-tsēc* (preceding section) and *-quio* (§8.6.4.1), however, its meaning does not seem to be predictable from its parts, so it is treated here as a single form. There is no diminutive meaning present in *-tsēcquio*, and the de-intensification meaning, if present, exists only as connected with a derogatory attitude toward an action or a resulting state (161). What is always present with *-tsēcquio* is the derogatory meaning (162 & 163).

- (161) nuntan-tsēcquio ic-o-sh 'It was halfway indoors (badly placed).'
 inside-**Derog** be-Past-3
- (162) chotac pad-tsēcquio ic-o-sh
 non-Indian like-**Derog** be-Past-3
 'They were like non-Indians (lazy, dishonest, and/or some other negative stereotyped trait).'
- (163) shubu ëquëduc-tsēcquio nibën-o-sh
 house inside-**Derog** search-Past-3
 'He searched inside the house (like an idiot).'

8.6.5 *-shë* '(2nd level) Augmentative'

The suffix *-shë* can only occur following *-mbo/-quio*, *-pambo*, *-quimbo*, or *tsēcquio*, conveying the second level of augmentation conveyable morphologically (164).

- (164) ëquëduc-quio-shë ic-o-sh 'It was very, very deep inside.'
 inside-Aug-**Aug** be-Past-3

8.6.6 -ba 'first'

The enclitic -ba conveys that the action was done first, before some other action. The "firstness" meaning can be associated with the postposition itself, the postpositional phrase or the whole clause. Thus, (165) could mean 'I'm going to look first inside his house, and then under or beside his house, or '...and then inside someone else's house, in the jungle or some other completely different location,' or '...and then I'm going to ask him where it is or some other action besides searching.'

- (165) aton shubu ëquëduc-ba nibën-nu 'I'm going to look inside his house first.'
 3Gen house **inside-first** search-Intent:1

The addition of -mbo/-quio after -ba modifies the -ba (166a) as opposed to the meaning of the postposition (166b).

- (166a) shubu ëquëduc-ba-mbo nibën-o-sh
 house **inside-first-Aug** search-Past-3
 'The very first thing he did was look inside the house.'/*'...way inside the house'

- (166b) shubu ëquëduc-quio-ba nibën-o-sh 'He looked way inside the house first.'
 house **inside-Aug-first** search-Past-3

8.6.7 -tsen 'next'

The syntactic and morphological properties of -tsen and -ba are almost identical and their meanings are related in that both convey sequential information, with -tsen conveying that the action was performed after some other previously mentioned or understood action (167).

- (167) aton shubu ëquëduc-tsën nibën-nu
 3Gen house **inside-next** search-Intent:1
 'I'm going to look inside his house next.'

Despite their morpho-syntactic and semantic similarity, -tsen and -ba do not occur in the same position class, as the two can occur together, with -ba always preceding -tsen (168).

(168a) shubu ëquëduc-ba-tsen nibën-o-sh
 house inside-first-next search-Past-3
 'Next, he looked first inside the house.' (i.e., after doing something besides searching, the first place he searched was in the house)

(168b) *shubu ëquëduc-tsen-ba nibën-o-sh

In postpositional phrases where they occur together, as in (168a), the scope of -tsen is the whole phrase, while that of -ba is only either the postposition (first inside the house, then under or beside the house), or the postpositional phrase (first inside the house, then by the river). Neither -ba nor -tsen can be used with comparative or quantitative postpositions.

8.6.8 -bi 'Emphatic'

The enclitic -bi¹⁶ marks emphasis, confirmation or contradiction, and may or may not occur together with one of the suffixes in the preceding position classes (169).

(169a) ëquëduc-quo-bi ic-o-sh
 inside-Aug-Emph be-Past-3
 'It really was deep inside.'

(169b) ëquëduc-bi ic-o-sh
 inside-Emph be-Past-3
 'It really was right inside.'

The enclitic -bi might be translated into English using 'actually,' 'really,' or 'right' with postpositions. For example, when telling someone to go fetch your machete, you might indicate its location using (170a). If that person comes back empty-handed saying he didn't find your machete, and you ask a second person to go look for it and he

¹⁶ The enclitic -bi shows some sociolinguistic variation. Most speakers use [bi] following vowels and n and [i] following other consonants, while other speakers (apparently mostly younger ones) occasionally use [bi] following consonants, more frequently with some enclitic combinations.

finds it right where you said it was, he might exclaim (170b). Sentence (171) is a text example.

- (170a) tsadte tēdion ic-o-sh
 seat under be-Past-3
 'It was under the bench.'
- (170b) tsadte tēdion-bi ic-o-sh
 seat under-**Emph** be-Past-3
 'It actually was right under the bench.'

- (171) dadpen-quo capu-quid cuesban nuntan-bi
 many-Aug locomote-Hab bat inside-**Emph**
 'Many [bats] (actually) fly around right inside the house.'

D-X 057 cuesban 06

8.6.9 Second level emphasis: *-di* 'Same' & *-c* 'Separate'

The emphatic meaning enclitic *-bi* described in the preceding section can be further emphasized using *-di* or *-c* (which can only occur following *-bi*). The enclitic *-di* increases the amount of sameness, not always just the extent of sameness, but also additional ways of being the same, which can be realized as repetition or increased number of comparisons, as in (172), which makes reference to a directly preceding text where woolly monkeys are also said to suckle their young just like people do (example 91 above is the specific sentence being referred to in 172).

- (172) matses-n chish-me-ac-bi-mbo-en-bi-di
 Matses-Erg suck-Caus-Act.Nzr-like-Aug-Manr:Tr-**Emph-Same**
chish-me-quid chëshëid ne-e-c
 suck-Caus-Agt.Nzr spider.monkey be-Npast-Indic
 'Spider monkeys are ones that suckle their young in the exact same way that Matses suckle their young.'

+ A-I 053 chëshëid 19

Meanwhile, *-c* further emphasizes a different facet of the meaning of *-bi*: it marks separateness, in the case of (173b), separateness from the locality and participants in the preceding sentence in the texts (173a).

- (173a) aid itia tayun dayumenquid tsad-quid
 that.one swamp.palm at.the.base anaconda sit-Hab
 ‘Anancondas sit at the base of those swamp palms.’

A-I 029 itia 14

- (173b) aid itia shëcuë-n-bi-c cana-n madad-quid
 that.one swamp.palm hole-Loc-**Emph-Separ** macaw-Erg give.birth.to-Hab
 ‘And in the holes in those swamp palm trunks, macaws lay their eggs.’

A-I 029 itia 15

8.6.10 -en ‘Contrast’

The enclitic -en expresses different types of contrast. A sentence like (174) can be used either to voice a difference of opinion (i.e., it could be said to someone who suggests digging a shallow hole), or it can be used when one wants to change the way that he and his partner have started to dig. And a sentence like (175) might be used to contradict a statement that someone makes.

- (174) ëquëduc-quoio-en uëdëshca-tiad ‘Let’s dig very deep (**instead**).’
 inside-Aug-**Contr** dig-Abil
- (175) ëquëduc-quoio-en uëdëshca-o-sh ‘But he really did dig very deep.’
 inside-Aug-**Contr** dig-Past-3

Similarly, (176a) could be uttered when you see someone looking in the wrong place, or for correcting someone’s incorrect assertion that it was not inside a particular container. The enclitic combination -bi ‘Emphasis’ plus -en ‘Contrast’ is common, but in some phonetic environments (after nasals) -bi seems to be required for -en¹⁷ to be used, but in some phonetic environments, we find that /en/ and /bien/ have contrasting meanings, albeit subtle (176). In sentence (177), there may be no meaning associated with -bi, but sentence (176b, first reading) could be used in the following situation: you tell someone

¹⁷ There is some socio-linguistic variation associated with this suffix combination; after vowels and /en/, [en] varies with [jen], and after other consonants, [jen] varies with [bjen]

to fetch your machete from inside your house and he returns saying that it was not there; then a second person goes to fetch it, and after finding it he utters (176b) to the person who said it was not there. In some tense-aspects, the enclitic -en can be used to express uncertainty (176, second readings), but there is still a sense of contrast in that the posited possibility contrasts with all other possibilities in that it is the only likely possibility (and can be translated with the English ‘must’).

- | | |
|--|--|
| (176a) <u>ëquëduc-en</u> <u>ic-o-sh</u>
inside- Contr be-Past-3
‘It was inside (not outside).’
‘It must have been inside.’ | (176b) <u>ëquëduc-bi-en</u> <u>ic-o-sh</u>
inside- Emph-Contr be-Past-3
‘It really was inside (not outside).’
‘It must have really been inside.’ |
|--|--|

- (177) cuëte shëcuë-n-shun-bi-en
dicot.tree hole-Loc-Ev.Init.Tr-**Emph-Contr**
tish-chit-e-c isa-n
give.birth.to-**Uncert-Npast-Indic** porcupine-Erg
‘The porcupine must give birth in tree holes.’

A-IV 041 isa 14

When -en occurs in a clause where the main verb is suffixed with the uncertainty suffix -chit, as in (177) and (178), the only meaning associated with -en is that the postpositional phrase (or whatever constituent it is attached to) is the constituent that there is uncertainty about. There is a higher level of uncertainty in sentences containing -chit with -en than in sentences containing only -en.

- (178) sedquequid-dapa ic-ac-no-en sipi chëshë
open.forest-large be-Act.Nzr-Loc-**Contr** tamarin black
ic-chit-e-c
be-**Uncert-Npast-Indic**
‘Perhaps it is found in the big open-canopied habitat.’

1-p54-B sipi chëshë 02

The constituent that is cliticized with -en occurs first in a sentence, where focused constituents go in Matses. See section 4.6.10.1 for a full discussion of -en.

8.6.11 -penquio 'Negative'

This morpheme is sometimes pronounced as a bound form and sometimes as a phonologically independent form, and is discussed in section 9.3.3. When -penquio/penquio follows a postposition, its scope could be the postposition, the postpositional object (the Ground) or the whole postpositional phrase; (179a) is vague in this sense. To specify what exactly is being negated, the emphatic enclitic -mbo/-quio can be located after the constituent that is to be negated (179b & 179c).

(179a) cun shubu nuntan-penquio ic-o-sh
 1Gen house inside-Neg be-Past-3
 'It wasn't inside my house.'

(179b) cun shubu nuntan-**quio**-penquio ic-o-sh
 1Gen house inside-Aug-Neg be-Past-3
 'It wasn't *inside* my house.' (it was under or beside my house)

(179c) cun shubu-**mbo** nuntan-penquio ic-o-sh
 1Gen house-Aug inside-Neg be-Past-3
 'It wasn't inside *my house*.' (it was in someone else's house or not in any house)

8.6.12 -da 'Uncertainty'

The second-position enclitic -da follows the first postpositional, adverbial, noun or adjective phrase in a sentence, or the first non-finite verb. Its position within the noun phrase is not variable: when it occurs, it is always the last element in the postpositional phrase. Among other usages (§9.4.1), it is mainly used in yes-and-no questions accompanied by rising intonation at the end of the sentence and, for the first and second person, also interrogative verbal inflection (180).

(180) nuntan-bi-da na-o-Ø
 inside-Emph-Uncert do-Past-Interr:1/2
 "‘‘Did you do it (kill them) inside (their house)?’’.’

The scope of the enclitic *-da* is everything to the left of it in the sentence. The enclitics *-mbo/-quio* can be used to signal specifically which part of the postpositional phrase there is uncertainty about (181).

(181a) cun shubu-mbo nuntan-da ic-pa-e-c 'Perhaps it is inside *my house*.'
 1Gen house-Aug inside-Uncert be-Comment-Npast-Indic

(181b) cun shubu nuntan-quio-da ic-e-c 'Is it *inside* my house?'
 1Gen house inside-Aug-Uncert be-Npast-Interr:3

8.6.13 *-mpi* 'small' and *-dapa* 'large'

A few postpositions take the diminutive enclitic *-mpi*, which is otherwise restricted to noun phrases. However, when a postposition or postpositional phrase is followed by *-mpi*, the phrase does not behave syntactically as an adverbial postpositional phrase. In fact, the syntax associated with postpositions taking *-mpi* is anomalous, in that they can be considered complete sentences in the absence of a verb (182), a syntactic property that postpositional phrases otherwise do not possess.

(182) shubu ëquëduc-mpi 'This house is small inside!'
 house inside-small [must be spoken while inside house]

Also, when suffixed with *-mpi*, postpositions can occur in some (183 & 184a), but not all (185a) adjective syntactic positions, and not in adverbial position (186a), as is expected of postpositional phrases.

(183) deibi-n shubu ëquëduc-mpi is-nu nid-Ø
 Davy-Gen house inside-small see-Intent:1 go-Imper
 'Lets' go see Davy's house that is small inside.'

- (184a) ëquëduc-mpi ic-o-sh (184b) ëquëduc ic-o-sh
 inside-small be-Past-3 inside be-Past-3
 ‘It was small inside.’ ‘It was inside.’
 *‘It was inside (a small place).’

- (185a) *deibi is-nu nid-Ø shubu ëquëduc-mpi-
- (185b) deibi is-nu nid-Ø shubu piu-mpi-n
 Davy see-Intent:1 go-Imper house red-small-Loc
 ‘Let’s go see Davy at the little red house.’
- (186a) *deibi is-nu nid-Ø shubu ëquëduc-mpi
- (186b) deibi is-nu nid-Ø shubu ëquëduc
 Davy see-Intent:1 go-Imper house inside
 ‘Let’s go see Davy inside the house.’

Postpositions behave similarly when followed by the enclitic -dapa ‘large size’ (187) or an adjective (188). I don’t fully understand these constructions, yet. It is as if the lexical class of the postposition was being changed, but I’m not sure into which category, and the sentence type (verbless) is also anomalous. These forms appear to be very rare in the language (I have none in texts).

- (187) shubu ëquëduc-dapa (188) shubu ëquëduc piu
 house inside-large house inside red
 ‘This house is big inside!’ ‘This house is red inside!’

The postpositions that take -mpi and -dapa include a subset of the locative postpositions (189); no comparative postpositions take these enclitics (190).

- (189) *umanuc-mpi (190) *tanete tion-mpi
 outdoors-small electric.eel asl.long.as-small

8.7 Reduplication

Postpositions can be reduplicated. Reduplication of postpositions is usually accompanied by one of the manner transitivity agreement suffixes, -ec or -en (§8.6.1.1).

When it is not accompanied by -ec or -en, reduplication carries de-intensification semantics (191a), as with reduplicated adjectives, and when it is, it carries a distributive/iterative/plural meaning (191b & 191c), as with reduplicated adverbs.

(191a) chancho shubu tédion tédionpambo iccosh
chancho shubu redup tédion-pambo ic-o-sh
 pig house **Deintens** under-Aug be-Past-3
 ‘The pig(s) was partly or barely under the house.’

(191b) chancho shubu tédion tédionquiec iccosh
chancho shubu redup tédion-quoio-ec ic-o-sh
 pig house **Distr** under-Aug-Manr:Intr be-Past-3
 ‘The pig(s) was under many houses.’

(191c) chanchon shubu tédion tédionshunquien piosh
chancho-n shubu redup tédion-shun-quoio-en pe-o-sh
 pig-Erg house **Distr** under-Ev.Init:Tr-Aug-Manr:Tr eat-Past-3
 ‘The pig(s) ate under many houses.’

While the postpositional object of (locative) postposition roots do not participate in the reduplication (191), the objects of postposition enclitics do (192)

(192) bosenën acten-actenquien nuëcquid pec
bosen-n redup acte-n-quoio-en nuëcquid pe-e-c
 Otter-Erg Distr **stream-Loc-Aug-Advzr:Tr** fish eat-Npast-Indic
 ‘Otters eat fish in all rivers and streams.’

A-IV 032 bosen 06

Comparative postpositions can also be reduplicated, with semantic and morphological patterns similar to that of locative postpositions (193 & 194).

Comparative postpositions differ from locative postposition roots in that sometimes the

whole multi-word comparative postpositional phrase is reduplicated, rather than just the postposition (195).

- (193) cun mēdante ted tedquiec iccosh
cun mēdante redup ted-quoio-ec ic-o-sh
 1Gen hand Distr as.many.as-Aug-Manr:Intr be-Past-3
 'There were several groups of ten.'
- (194) nisi tanete tion tionpambo iccosh
nisi tanete redup tion-pambo ic-o-sh
 snake electric.eel Deintens as.long.as-Aug be-Past-3
 'The snake(s) was more or less as big as an electric eel.'
- (195) nisi tanete tion tanete tionquiec iccosh
nisi redup redup tanete tion-quoio-ec ic-o-sh
 snake Distr Distr electric.eel as.long.as-Aug-Advzr:Intr be-Past-3
 'There were many snakes that were as long as electric eels.'

Reduplication of the comparative postpositional phrase seems to be simply an option for expressing the same meaning as reduplication of just the postposition. It points to a tighter bond than exists between locative postposition roots and their objects.

8.8 Overview of postposition syntax

Now that I have introduced the postposition morphological possibilities, here I will briefly outline four aspects of postposition syntax that are relevant for the morpho-syntactic classification of postpositions.

Only subset of the locative postpositions may take animate objects (§10.4.3).

When locative postpositions take animate objects, the postpositional object must be in the genitive case (196a; cf. 196c),¹⁸ or for the first or second person, the object must be a

¹⁸ tsidion and tēdion, described in section 8.3.2.5, may be exceptions to this, in that they can apparently sometimes take animate, non-human objects with or without the genitive-marked object. When the object is genitive, the meaning is slightly different.

genitive pronoun rather than an anaphoric one (197); comparative postpositions, by contrast, can take non-genitive animate postpositional objects (198).

- (196a) cun shanu-n dayun nid-e-bi
1Gen female.cross.cousin-Gen beside go-Npast-1S
'I'm going to go/be beside my girlfriend/female cross cousin.'
- (196b) *cun shanu dayun nid-e-bi (196c) cun shubu dayun nid-e-bi
1Gen house beside go-Npast-1S
'I'm going to go beside my house.'
- (196d) *cun shubu-n dayun nid-e-bi
- (197a) min dayun nid-e-bi (197b) *mibi dayun nid-e-bi
2Gen beside go-Npast-1S 2Abs beside go-Npast-1S
'I'm going to go beside you.'
- (198) mibi tion ic-o-sh 'He was as tall as you.'
2Abs as.long.as be-Npast-3

Only locative postpositions can occur without an overt postpositional object (199), while comparative postpositions can never occur without an overt object (200).

- (199a) titado tayun ic-o-sh (199b) tayun ic-o-sh
electric.eel at.base.of be-Npast-3 at.base.of be.Npast-3
'It is at the base of the peach palm.' 'It was at its base.'
- (200a) titado tion ic-o-sh (200b) *tion ic-o-sh
peach.palm as.long.as be-Npast-3
'It was as tall as a peach palm.'
- (200c) *daëdi ic-o-sh

Rather, the other categories of postpositions take a or abi when a third-person pronoun is called for as postpositional object.

- (201) abi tion 'its entire length' (202) a-bëtan 'with him/her/it/them'
3Abs as.long.as 3-Com:A

The only exception to this generalization is the temporal/locative postpositions mëduc 'in the middle of/during,' which cannot occur with a pronoun, overt or covert (203).

- (203) ue mēduc cho-o-sh
 rain during come-Npast-3
 ‘He came during the rainy season/in the rain.’
- (203b) *mēduc cho-o-sh
- (203c) *abi mēduc

Most locative postpositions can be combined with other locative postpositions in a single postpositional phrase in different combinations (204-206; §10.4.4). No other subcategory of postpositions can be combined.

- (204) podquedēquē cuēmatsiuc ic-o-sh
 path other.side other.bank be-Past-3
 ‘It was on the other side of the path.’
- (205) cun shubu nuntan ēquē tsad-o-sh
 1Gen house inside other.side sit-Past-3
 ‘They sat in my house on the other side (of the inside of my house).’
- (206) sanuan udi dēbiatemi nēishamē-n podte-ac-o-sh
 San.Juan further.than upstream.of tapir-Erg cross-Infer-Past-3
 ‘A tapir crossed (the river) a bit further than just upstream from of San Juan.’

As described above (§8.4) prefixes can replace postpositions, but only locative ones. There are no prefixes that could replace other categories of postpositions.

8.9 Morphosyntactically-based classification of postpositions

Table 8.13 is a summary of the associations between morpho-syntactic processes and the 40 postpositions (roots and enclitics). The full table was formed as follows: a column was made for each postposition, and a row for every enclitic and syntactic process, and either a plus or minus was put in the relevant cells (ideally every cell would have been filled, but some cells were blank due to lack of text or elicited data); Table 8.13 summarizes those morphological and syntactic properties that were useful for identifying categories, and the rows list the identified categories.

Table 8.13. Grammatical properties that distinguish sub-categories of postposition roots.

Semantic categories	Grammatical properties							
	1	2	3	4	5	6	7	8
Comitative	-	-	-				-	-
Locative	-	+	+	-	+	+	+	+
<u>mēduc</u> 'in/during'	-	+	-	+		-	-	+
Comparative	size	-	-	+	-	-	-	-
	overall/action	+	-	-	-	-	-	-
	number	-	+	-	+	-	-	-
Quantifiers	-	+	-	+	-	-	-	-

+ = all in category; - = none in category; % = some in category

note: enclitics excluded from analysis in columns 4-6.

Key to grammatical properties in Table 8.13:

1. manner transitivity agreement unreduplicated (§8.6.1.1; Table 8.10)
2. event initiation transitivity agreement (§8.6.1.2; Table 8.10)
3. takes -mpi and -dapa (§8.6.13)
4. postpositional object can be reduplicated along with postposition root (§8.7)
5. animate postpositional objects occur in genitive case (§8.8)
6. can occur with an overt postpositional object (§8.8)
7. postpositions can be combined with other postpositions (§8.8)
8. postpositions in postpositional phrase can be replaced by prefixes (§8.8)

Three main categories emerge in Table 8.13: comitative, locative, and comparative-quantitative, with mēduc occupying a position intermediate between locative and comparative-quantifier postpositions. Quantifier postpositions, though semantically different from the number comparative postposition (ten 'as many as'), is identical to it and there is little motivation to call it a separate category. Enclitics fit well in their classification with the roots as in Table 8.1, if we overlook the fact that their being bound forms is obviously going to result in some syntactic differences (e.g., requirement of overt objects). Overall, this is another example of a positive correlation between semantics, function, and morpho-syntax.

CHAPTER 9

PARTICLES

9.1 Introduction

Here I use the term “particle” to refer to those roots that have no (or extremely limited) morphological possibilities. This is a residual category, and part of its defining characteristic is that the roots cannot be classified as nouns, verb, adjectives, adverbs, or postpositions. Unlike nouns, verbs, and adjectives, there is no single semantic property that unifies all of these forms. Nor do they share enough grammatical properties that we could describe this class as having a prototype structure (except for the general lexicalized-unlexicalized continuum). My classification of particles is based on their syntactic properties, but as can be seen in Table 9.1, there are some common semantic themes within some subclasses. Despite the large number of subcategories, particles compose a closed class, and a small one at that. The 55 particles listed in Table 9.1 are all that I know, and there are surely not many more; only exclamations are likely to be underrepresented here. There are no productive particle-forming processes, but several particles can be tentatively analyzed historically. Since the particles have few or no morphological possibilities, this chapter will concentrate on their meaning, allomorphy, and analyzability. Their syntax is best described in the syntax chapters, so here I will only briefly mention their syntactic properties and refer the reader to the relevant sections in the syntax chapters.

A few exclamations are gender-specific, the only case of gender-specific speech in the Matses language. Exclamations also tend to exhibit phonetic patterns that are outside the language’s phonological system.

Table 9.1. Syntactic classification of the 55 known particles in Matses.

grammatical particles

phrase-level particles

<u>chedo</u>	'et cetera/too'	<u>chued</u>	'Characterizer'
<u>penquio</u>	'Negative'	<u>pado</u>	'late/deceased'
<u>icbo</u>	'close'	<u>amano</u>	'adopted'
<u>uis</u>	'hawk screech'	<u>tec tec</u>	'hawk call'
<u>shuish</u>	'ant swarming noise'	<u>cudu</u>	'squirrel chatter'

clause-level particles

<u>ada/-da</u>	'Uncertainty'	<u>ba</u>	'Dubitative'
<u>ma</u>	'how about, but, so that'	<u>adoedic</u>	'but instead'

lexical particles

sentence margin particles

dependent particles

<u>en</u>	'hey'	<u>chun</u>	'just kidding'
<u>aa</u>	'see?/I told you so'	<u>qui</u>	'see?/admit it!'
<u>adaca</u>	'umm'		

independent particles

<u>ai</u>	'yes/okay/right'	<u>mc</u>	'yeah'
<u>padi^a</u>	'no thank you/stop it'	<u>padenquio^a</u>	'no'
<u>padabi^a</u>	'not yet (Perfect)'	<u>padambo^a</u>	'not yet (Perfect)'
<u>tsaon</u>	'I don't know'	<u>tsaodi</u>	'I don't know'

exclamations (non-discourse verbalizations)

imprecatives (curses):

<u>biuc</u>	'curse you!'
-------------	--------------

exclamations of reaction (interjections)

<u>ehc</u>	'Displeasure' (♀)	<u>unc</u>	'Displeasure' (♂)
<u>oc</u>	'yipes/whoops' (♀)	<u>edic</u>	'yipes/whoops' (♂)
<u>ooo</u>	'ouch (sudden pain)' (♀)	<u>eee</u>	'yikes/ouch' (♂)
<u>oo oo oo</u>	'ooh (in pain)' (♀)	<u>ee ee ee</u>	'ooh (in pain)' (♂)
<u>oooooo</u>	'oh, my goodness' (♀)	<u>ëëë^b</u>	'help, halloo' (♂)
<u>yee</u>	'yuck' (♀)	<u>ënh</u>	'Displeasure'
<u>ubi</u>	'whoa'	<u>tso</u>	'shoot'
<u>mmh</u>	'Understanding'	<u>adac</u>	'Impatience (Well?)'
<u>cuaa</u>	'Distress call'	<u>ya</u>	'Distress call'
<u>cuë</u>	'Taunt'	<u>edee</u>	'I knew it'

animal commands

<u>cushe</u>	'go, dog, go'	<u>newash</u>	'come, dog'
<u>ëëë^b</u>	'go, dog, go'	<u>ee</u>	'go, dog, go'
<u>sh</u>	'scram, dog'	<u>tdu</u>	'scram, jaguar'
<u>aac</u>	'scram, jaguar'		

^a adjectivalized verbs with marginal particle status^b listed twice

9.2 Distinguishing particles from other lexical classes

As mentioned above, the primary distinguishing property of particles as a class is their lack of morphological possibilities. Most enclitics in Matses are characterized by their ability to occur following most constituent types. The rarity of some of these enclitics on adjectives, for example, can be attributed to the awkward semantics that would result. But in the case of particles, restriction against using enclitics with particles is a grammatical one. Phrase-level particles can have phrasal enclitics attached to them when they are the last element in a phrase, but these enclitics are not modifying these particles, but the head or the phrase as a whole. The only morphemes that can be phonologically attached to a clause-level particle are the first-person pronominal enclitics *-bi* '1S' and *-mbi* '1A,' but these are associated with the verb of the clause, not the particles. The different words for saying 'no' (§9.5.2.2) have marginal particle status and are really adjectivalized verbs, and so it is not surprising that these are the only forms in this category with real morphological properties (they can take adjectival enclitics). Other than that, particles have no morphological possibilities.

We can also make a sweeping statement that particles are not involved in class-changing processes. Particles cannot even be zero-verbalized, a process that occurs without any overt morphology; this distinguishes particles from all other lexical classes. Similarly, there is no productive means to change a word into a particle; this distinguishes particles and postpositions from the open classes. Many particles have fairly transparent sources, such as onomatopoeia, historical wearing down of analyzable forms, etc. Some of these particle-forming processes are explored while attempting to analyze the different particles in the sections below.

One syntactic property that unifies the particles is that they have consistently restricted word order, unlike all the other word classes. Nouns, verbs, adjectives,

adverbs, and postpositions (with covert postpositional objects) can occur as independent one-word constituents (i.e., not as a part of a larger phrase) and as independent constituents they have very few word order restrictions. In fact, it is only within phrases that there is strict ordering of words in Matses (chapter 10). Matses particles have restricted word ordering specific to their syntactic category: i) phrase-level particles can only occur inside phrases and therefore are always restricted in their word-order possibilities (in the sense that phrases have strict word ordering and that phrase-level particles can never occur as independent constituents), usually occurring as the last element in the phrase; ii) clause-level particles must either be the first or the last element in a clause; iii) sentence-margin particles must occur in front of or following a full clause; and iv) exclamations do not occur as part of sentences. Additionally, particles do not occur as heads of multi-word phrases (therefore there is no such thing as a “particle phrase” in Matses). Thus, particles seem to always be marginalized, occurring at the phrase margin, at the clause margin, at the sentence margin, or outside sentences.

9.3 Phrase-level particles

These particles have in common that their domain is the phrase. As such, their syntax is best described in the chapter on phrasal syntax (especially §10.3.6). Generally speaking, these particles occur as the last element in a phrase (never the head), though more than one particle can occur on a phrase. All occur as part of noun phrases, most of them exclusively so. Many are adjective-like. One particle, ada ‘Uncertainty,’ described with the clause-level particles (§9.4.1), can also have a phrase as its domain.

Syntactically, these can be likened to phrasal enclitics, which have relatively fixed order (particularly with respect to the head element), cannot occur as independent constituents, and some phrasal particles even occur among enclitics in a phrase. In fact, as will be seen in the subsections of the present section, several phrasal particles behave as

phonetically bound forms in some contexts (a property not shared with other subclasses of particles). In this sense, phrasal particles are similar postpositions.

9.3.1 chedo 'et cetera/too'

The particle chedo 'et cetera/too' occurs as part of noun, adverb or postpositional phrases. This particle is never phonologically attached to any element that precedes it, as evidenced chiefly by its non-varying stress pattern (/tʃe.dó/, */tʃé.do/). It is interesting syntactically in that it occurs among the phrasal enclitics, i.e., it occurs following some enclitics and preceding others (that are phonologically attached to it). For example, in (1), chedo occurs after the plural/collective marker, but before the ergative marker, which normally would occur cliticized to the same word, as in (2). Other phonologically independent noun phrase elements would precede *all* enclitics (3).

- (1) bacuë-bo chedo-n unca-quid uncate-n
 child-Pl etc/too-Erg paddle-Hab paddle-Inst
 'Children as well paddle with paddles.'

A-XIII 028 uncate 15

- (2) canti-ua-shun bacuë-bo-n sanan-quid
 bow-Vzr:make-after:S/A>A child-Pl-Erg hold-Hab
 'After making bows, kids shoot them.'

A-I 037 chonco 05

- (3) cumpa padobon cainec
cun papa pado-bo-n cain-e-c
 1Gen father deceased-Pl-Erg wait-Npast-Indic
 'My late father and his companions wait for them.'

K-XXI 010 demushbo 35

The semantic basis for this is not surprising, considering that the enclitics that go to the left of chedo are for the most part intrinsic to the characterization of the head element, and often not appropriate to the other members of the category indicated by chedo (4).

- (4a) opa piu-mpi-n pe-o-sh (4b) opa-mpi chedo-n pe-o-sh
 dog red-small-Erg eat-Past-3 dog-small etc/too-Erg eat-Past-3
 'The little yellow dog ate it.' 'The little dog also ate it.'
 'The little dog and the other dogs ate it.'
 'The little dog and the other dogs also ate it.'

However, it does create the unusual situation that in describing the position classes or relative ordering of enclitics in a noun, adjective, adverb, or postposition word, one must stick chedo in among the enclitics even though it is not phonologically bound (Table 4.17, §4.6; Table 6.3; §6.6; Table 7.14, §7.6; Table 8.8, §8.6).¹

As indicated in (4b), chedo has three possible functions: i) 'et cetera,' which indicates that the phrase is part of a larger category, of which no other members have been listed; ii) 'also' or 'too,' which indicates that the phrase is part of a larger category, of which at least one other member has already been listed; or iii) a combination of these two functions, in which some members of the category have been listed, and others have not. Essentially, these functions all stem from a single simple meaning: 'part of a larger relevant category.' Often more than one member of the category is listed in the same sentence (in which case meaning iii must apply), and, as such, chedo is involved in phrasal conjunctions following one, some, or all of the listed phrases. But chedo itself is not a coordinator. This conjunction accompaniment function is discussed in some detail in section 10.9.1.

As mentioned, chedo can modify nouns (5 & 6), adjectives (infrequently), adverbs (7), or postpositional phrases (8 & 9). (Phrases are in brackets.)

¹ The disinclination of chedo to be phonologically bound may be due to its two-syllable make-up, but this is not a general rule in Matses, as -shenda 'Mirative' occurs as a phonologically bound enclitic (§4.6.10.2). In fact, if chedo were a bound form, it would simplify our description of phrasal syntax in Matses, as the only type of multi-word adjective and adverb phrases in Matses are those that contain chedo.

- (5) [senad chedo]pe-quid bēdi-dapa ne-e-c [shēcten chedo]
 deer etc/too eat-Agt.Nzr jaguar-large be-Npast-Indic collared.peccary etc/too
 ‘Jaguars are ones that eat deer and animals like that, collared peccaries, too.’
 A-IV 036 bēdi dapa 09
- (6) [ubi chedo]
 1Abs etc/too
 ‘Me too!’
- (7) [abuc chedo] capu-quid
 high etc/too locomote-Hab
 ‘It climbs around high up, too.’
- (8) sipi ca-bēdi [tied shēni nantan chedo]
 tamarin back-variagated swidden old on etc/too
nadeque-quid ne-e-c
 bound through.trees-Agt.Nzr be-Npast-Indic
 ‘Saddleback tamarins [squirrel-sized primates] are ones that jump around in
 abandoned swiddens and other similar habitats.’
 1-p53-B sipi cabēdi 01
- (9) [nidaid shēcuē-chedo-n] ush-quid tsatsin ne-e-c
 ground hole-etc/too-Loc sleep-Agt.Nzr acouchi be-Npast-Indic
 ‘Acouchis [rat-sized rodents] are ones that sleep in holes in the ground, too.’
 A-IV 013 tsatsin 19

Note that if the postposition is phonologically independent, chedo follows it (8), while if the postposition is an enclitic, chedo precedes it (9), the opposite of what one might expect. More on properties of chedo specific to noun, adjective, adverb, and postpositional phrases can be found in sections 4.6.3, 6.6.4, 7.6.2, and 8.6.2.

The particle chedo does not just specify that any category is involved, but that it is a *heterogeneous* category. If the group is homogenous enough, it can usually be encoded in a single word or phrase. One can optionally use -bo ‘Plural’ to refer to a homogenous group of human or a heterogeneous groups of animals or inanimate objects (1-3; §4.6.1.1). The particle chedo, by contrast, is especially used to refer to groups that would require a listing of different terms. Even if a group was homogenous enough to be coded by a single word (e.g., several men), one could list some of the names using chedo, to imply heterogeneity in the sense that “all men” is not the relevant category and that men differ at least with respect to the situation at hand.

9.3.2 chued ‘Characterizer’

The particle chued is used commonly to refer to an entity, especially a place, that is characterized by the referent of the head noun (10).

(10a) tanete chued
 electric.eel Charzr
 ‘a stream, lake, or area with many streams or lakes that have many electric eels.’

(10b) chichan chued
 intestinal.parasites Charzr
 ‘a term used to teasingly refer to a pot-bellied man.’

The particle chued is especially common in names of rainforest habitats (11). Fleck and Harder (2000) describe a large number of these.

(11a) mio chued
 palm.species Charzr
 ‘habitat characterized by having many *Attalea racemosa* palms’

(11b) isitodo chued
 liana Charzr
 ‘vine forest’

It is also found in some animal names, especially fish:

(12a) ca-ush chued
 back-white Charzr
 ‘species of fish characterized by having a white dorsum’

(12b) shêta chued
 tooth Charzr
 ‘piranha’

The particle chued has the phonological property that it is monosyllabic, and this syllable is a “heavy” syllable. While heavy syllables in Matses do not draw stress, it is often hard to tell when they are stressed and when they are not (§2.7.1). As a result, it has been difficult to determine if this is an enclitic or a particle, and this may also contribute to real (as opposed to my perceived) variability in its pronunciation. It seems that it is generally pronounced as a separate word in slow speech, while, especially with the more lexicalized terms, it is often pronounced as part of the preceding word in regular speech.

Two exceptions are the terms for *tayra* (13a) and a species of fish (13b), which are always pronounced as a single word.

- | | |
|-----------------------------------|-------------------------------------|
| (13a) [ba.tá.tʃwɛd] | (13b) [in.tʃiʃ.tʃwɛd] |
| <u>bata</u> _____ <u>chued</u> | <u>in-chěshě</u> <u>chued</u> |
| tree.species Charzr | tail-black Charzr |
| ‘ <i>tayra</i> (dog-like mammal)’ | ‘species of fish with a black tail’ |

Note that in (13b), the word chěshě is regularly reduced when prefixed (§2.6.6.3), but here, the /i/ is pronounced as /i/, a phonological alternation that is associated only with this word, and attests to its lexicalized status. Meanwhile, the term for ‘*tayra*’ shows *semantic* signs of lexicalization. The word bata is polysemous in Matses in that it can refer to several species of trees with very sweet fruits, or it can be an adjective meaning ‘sweet.’ In either case, the term batachued does not add up: if bata refers to the tree species, the *tayra* is not being characterized as having these fruits, but by eating them, and if it means ‘sweet,’ it mean does not mean that the *tayra* is sweet (plus this would be the only case where chued is used with an adjective). In any case, suffice it to say that chued is a particle that is commonly used in coining names for entities, and tends to become phonetically fused with commonly used lexicalized terms.

The root chued is probably of recent origin as it is still transparently historically analyzable. It most likely comes from the combination of the transitive verb cho, which means ‘have’ and the formative ed that can be ascribed the meaning of ‘general participant nominalizer’ (but is not currently productive; §4.7.8). Thus, the possible meaning of the word would be ‘one that has X.’ In fact, this first meaning is exactly the meaning of the similar, but synchronically segmentable word cho-quid ‘have-Agent Nominalizer,’ and one of the alternate names for ‘piranha’ is the one in (14; cf. 12b)

- (14) shëta cho-quid 'piranha' lit. 'toothed one (as opposed to most fish,
tooth have-Agt.Nzr which don't have teeth)'

But the meaning of chued is a bit more than just 'one that has X,' it means something more like: 'one whose most prominent characteristic is having a lot of, much, or a big X.'

Compare the pair in (15), and also (16) with (17).

- (15a) cuibu cho-quid (15b) cuibu chued
beard have-Agt.Nzr beard Charzr
'the one with a beard' / 'bearded one' 'one with a prominent beard'

- (16) incuente utsi nibëd-nuc-bi utsi [incuente cho-quid]
tail other not.be-while:Diff.Ref-Emph other tail have-Agt.Nzr
tambisëmpi ne-e-c
spiny.rat be-Npast-Indic
'Spiny rats are ones that while some have no tail, others have a tail.'

A-IV 014 tambisëmpi 07

- (17) [incuente choed] shaë ne-e-c 'Giant anteaters are all tail.'
tail Charzr giant.anteater be-Npast-Indic

9.3.3 penquio/-penquio 'Negative'

This form occurs usually as a bound enclitic, but sometimes as a free form. It depends on the speaker and the morphological complexity of the word (phonological union is more regular when the word has few morphemes). It occurs following nouns/noun phrases (18), adjectives (19), adverbs (20), or postpositional phrases (21) to create negative words/phrases (examples below show -penquio/penquio as a bound enclitic, but note that at least some of these may be pronounced as independent words by other speakers or perhaps even by the same speaker on another occasion).

- (18) [abuc cani-quid-penquio] shëcmaucudanmës ne-e-c
high grow-Agt.Nzr-Neg palm.species be-Npast-Indic
'The shëcmaucudanmës palm does not grow tall.'/lit. '... is a not tall growing one.'

A-I 036 shëcmaucudanmës 11

- (19) abi cues-nu que-sho pe-tsen pe-tsen-quid
 4Abs kill-Intent:1 say-when:S/A/O>O (redup=Distr) bite-almost-Hab
bēdad-quoio ic-quid-n bēdad-penquoio ic-quid-n padenquoio
 fierce-Aug be-Agt.Nzr-Erg fierce-Neg be-Agt.Nzr-Erg no
 ‘When they; [Matses] are trying to kill them (lit, ‘when they say “I’m going to kill it”), those [sloths] that are fierce try to bite [the Matses]; repeatedly, almost biting him; ones that are **not fierce** do not.’
 A-IV 022 shuinte 28
- (20) cacsi-n ubuëshē-dapa nua-mbo ic-tsēc-quid
 pygmy.squirrel-Gen testicles-large large-Aug be-Dim-Hab
[nua-mbo-penquoio] dada ic-nuc-bi
 large-Aug-Neg body be-while:Diff.Ref-Emph
 ‘The pygmy squirrels big testicles are very large, while their bodies are not large.’
 A-IV 007 cacsi 14
- (21) [cun shubu nuntan-penquoio] ic-o-sh ‘It wasn’t inside my house.’
 1Gen house indoors-Neg be-Past-3

Whether phonologically attached to the words it follows or not, like chedo, -penquoio/penquoio occurs among the phrasal enclitics. It occurs after all the phrasal enclitics and particles but one, the enclitic -da (§9.4.1), which follows -penquoio/penquoio (phonologically attached to it) in phrases that mark uncertainty associated with the phrase, as in (22).

- (22) [nē-mbo penquoio-da] ic-o-sh ‘Wasn’t it here?’
 here-Aug Neg-Uncert be-Past-3

The form -penquoio/penquoio strikes one as an unusually long word for a negative particle or enclitic, and comparison with other forms suggests that it is analyzable. But it is not synchronically segmentable. It may contain the formative pen, which has been identified as associated with a negative meaning (§7.5.1). It also most certainly contains the enclitic -quoio ‘Augmentative/Adjectivalizer.’ It is similar in form to the (analyzable) answer particle padenquoio ‘no’ (§9.5.2.2). If related to this form, then it would contain the suffix-enclitic sequence en-quoio ‘Negative-Adverbializer/Augmentative’ described in

section 12.3.2, but there is no morpheme p (or pe) that would complete the word. In short, -penquio/penquio is related formally, and probably historically to other negative forms, but it is not presently segmentable.

9.3.4 Human modifiers

These particles are semantically similar to adjectives in that they modify the noun phrase with respect to some property.² They always modify humans, especially relatives. One of these, pado ‘deceased’ (23; see also 3) follows terms referring to humans, including kinship terms, people’s names, etc., to indicate, perhaps with a sense of respect, that the person being talked about has passed away (as of the moment of the speech act, not at the time of the related event). It is not obligatory, since in a single text the same person will be mentioned with or without pado.

- (23) cuen-enda ca-o-sh-i que-onda-sh [cun chido pado]
 run.off-Neg.Imper say-Past-3-1O say-Dist.Past-3 1Gen woman **deceased**
 ‘My late wife told me “He told me, ‘Don’t run off!’”.’

+ K-XXII 003 chema 027

A second particle, the particle amano ‘adopted,’ only follows kinship terms to indicate that the person is related through adoption. For example, a non-Matses would be referred to using amano by the person who adopted him/her and by the adopter’s relatives, and the adopted person would also modify terms with this particle to refer to these people. Or it could be used to refer to an otherwise unrelated person that is related *distantly* by a marriage, such as a “cousin-in-law,” or a “nephew-in-law,” but not a close in-law like a brother-in-law or a mother-in-law, which have their own kinship

² They are also analogous to adjectives syntactically in that the noun phrases that phrasal particles form are similar to attributive adjective phrases (i.e., N-Adj noun phrases; e.g., *my late father*). However, these particles can be readily distinguished from true adjectives by their inability to occur in predicative adjective clauses (e.g., *My father is late*), and their inability of take enclitics independently of the noun phrase.

terminology. Unlike pado, amano exhibits phonologically conditioned allomorphy, where, if the kinship term ends with an /a/, one /a/ will be deleted and the two words will be pronounced as a single word (24b & 24d).³

- | | |
|--|---|
| (24a) [kúnj.ku a.má.no]
<u>cun cucu amano</u>
1Gen cross.uncle adopted
'my adopted cross uncle.' | (24b) [kun.tá.ma.nó]
<u>cun tita amano</u>
1Gen mother adopted
'my adopted/step mother.' |
| (24c) [kum pja? a.má.no]
<u>cun piac amano</u>
1Gen cross.nephew adopted | (24d) [kun tʃa.já.ma.nó]
<u>cun chaya amano</u>
1Gen female.cross.cousin adopted |

Similarly, but less consistently across speakers, if the kinship term ends in an /i/, it will form an onglide with the /a/:

- | | |
|--|---|
| (25a) /kúm.pa u.tsjá.ma.nó/
<u>cun papa utsi amano</u>
1Gen father other adopted | 'my adopted uncle'
("other father" is the term for father's brother) |
|--|---|

A third human modifying particle is icbo 'close,' which is used especially after kinship terms to indicate that the kinship term is meant to refer to a close relative, such as a brother or a first cousin, as opposed to a second cousin or more distantly related cousin. It also contrasts with amano, in that it excludes any adopted relatives. It can also be used to indicate that a person is close affectionately. For example, the term shanu can refer to a male's female cross cousin, his wife's sister (among other more distant female kin), or it can refer to an unrelated or non-cross-cousin sweetheart. With icbo, the reference is narrowed:

³ See section 2.6.1.3 for phonological union of genitive pronouns and kinship terms, and see section 4.3.1 for abbreviatable kinship terms, and kinship terms in general.

- (26) cun shanu icbo (27) aton amicu icbo
 1Gen female.cross.cousin close 3Gen friend close
 ‘my female cross first cousin’ ‘His best friend/his good friend’
 ‘my sweetheart whom I love’
 ‘my female cross cousin that I’m close to/have been courting’

Unlike pado and amano, the particle icbo is polysemous with a noun root that it surely historically originated from. The noun root icbo can mean ‘owner’ or ‘host (including termites),’ but semantically, icbo cannot mean ‘owner’ or ‘host’ in this human modifying usage.

The particles pado, amano, and icbo could be considered to be simply modifying or sub-classifying the terms they follow. But pado seems to also be used as a means of showing respect for the dead, and, while amano is not really a term of endearment, the very fact that the person is calling you by a kinship term can be thought of as a kind gesture. In this sense, these particles are semantically similar to the suffix -sio ‘dear’ (§4.6.1.3), which, in its endearment function, is likewise restricted to terms referring to humans (see example 4 in §4.3.1 for a paradigm of human modifier particles and enclitics).

As is expected of particles, these do not have their own morphology, but since most noun-phrase morphology are phrase-level enclitics that attach to the last word in the noun phrase, these human modifier particles are often encliticized (28 & 29).

- (28) nē-uēsh-bi pudun-quin [cun papa pado-n]
 here-Ev.Init:Intr-Emph jump-while:S/A>A 1Gen father **deceased-Erg**
cun tita bed-quid chedo-n uidēnua-onda-sh
 1Gen mother grab-Agt.Nzr etc-Erg hold-Dist.Past-3
 ‘Jumping out from very near (to where the Dēmushbo Indian was passing by), my late father who captured my mother, and his group, grabbed him.’

- (29) dēmushbo dēmushbo dēmush dē-tabēd-quid
 Dēmushbo.Indians Dēmushbo.Indians nose.whisker nose-be.in.hole-Agt.Nzr
 [cun papa pado-bo-n] istuid-onda-sh matses
 1Gen father **deceased-Pl-Erg** find-Dist.Past-3 Indian
 ‘The Dēmushbo people, the Dēmushbo people, the ones that wore nose whiskers
 in holes pierced in their noses... my late father and his brothers and his parallel
 cousins [the speaker’s “other fathers”] found them, the (Matses-like) Indians.’
 K-XXI 007 dēmushbo 09

9.3.5 Onomatopoeic adjective-like particles

Most words of obvious onomatopoeic origin are nouns or verbs in Matses (§§2.8.3, 2.9, 9.7), but a few occur as adjective-like particles with very restricted distribution in the language. The number of particles of this type is very limited, the four in (30) are all I have found, despite the fact that my data are most complete for biological terminology. The distribution of these particles is likewise very restricted, to the extent that each occurs only after one specific noun.

- | | |
|---|--|
| <p>(30a) <u>chiqui uis</u>
 hawk screech
 ‘hawk species characterized by its
 high-pitched call’</p> | <p>(30b) <u>chiqui tec tec</u>
 hawk hawk.call
 ‘hawk species characterized by its
 <u>tec tec</u> call.’</p> |
| <p>(30c) <u>bucu</u> <u>shuish</u>
 tree.genus swarming.noise
 ‘<i>Cecropia</i> species characterized by
 swarming ants that rattle the tree
 when they emerge to attack’</p> | <p>(30d) <u>capa</u> <u>cudu</u>
 squirrel squirrel.chatter
 ‘Amazon dwarf squirrel’
 lit. ‘squirrel characterized by
 its <u>cudu</u> call’</p> |

As with the other particles in this section, these particles take no morphology of their own, nor can they occur independently as one-word constituents. This contrasts with animal names of onomatopoeic origin that are nouns, which can occur as the single element in a noun phrase:

- (31a) on cuëd-e-c tree.frog.species call-Npast-Indic
 ‘The on tree frog is calling.’
- (31b) chocoyo tantia-e-mbi nightjar hear-Npast-1A
 ‘I hear a nightjar (nocturnal bird).’

More discussion of noun phrases with onomatopoeic adjective-like particles can be found in section 10.3.6.

9.4 Clause-level particles

Clause-level particles occur within clauses, either at the very beginning or at the very end. Epistemic modality (certainty/uncertainty) is the function of the first two of these. The other two have conjunction-like functions. Two have allomorphs that can occur optionally as bound forms: ada as the enclitic -da, and ba ‘Dubitative’ as the verbal suffix -ba. The domain of these enclitics is always the clause, except for ada/-da, whose domain can also be the first non-finite verb, or the first noun, adjective, adverb, or postpositional phrase in the clause.

9.4.1 ada ‘Uncertainty’

The particle ada is the most frequently encountered of the clause-level particles. It occurs clause initially to signify ‘Uncertainty.’ It most frequently occurs as an optional component of yes/no questions (32; quoted question in **bold**; §11.9.2).

- (32) ada cues-o-Ø ca-ua-paid [abi ëëë ca]-sho
Uncert kill-Past-Interr:1/2 say-again-Hab 4Abs halloo say-when:S/A/O>O
aton utsi matses-n
 3Gen brother Matses-Erg
 ‘Matses_i ask their brother_j, ‘Did you kill (something)?’ when he_j yells to him_i saying ëëë.’

Frequently, in fast speech ada is pronounced simply as a. The particle ada is also realized as the second-position enclitic -da, which follows the first constituent in a clause that is not a finite verb (33); following voiceless consonants and /d/, it occurs as /ta/ (34).

- (33) anobida diade papa caondash
ano-bi-da diad-e-Ø papa ca-onda-sh
there-Emph-Uncert hang-Npast-Interr:1/2 father say-Dist.Past-3
‘He asked him, “Are you hanging there (in your hammock), father?”.’
+ K-XXII 007 chema 066
- (34) ëquëducta iccosh ‘Was it inside?’
ëquëduc-da ic-o-sh
inside-Uncert be-Past-3

However, ada/-da is not an interrogative marker *per se*. It also occurs as in (35) - (38) expressing uncertainty in sentences that are not direct requests for information. The verbal suffix -pa ‘Comment’ (§5.5.9) generally accompany ada/-da in non-question uses.

- (35) cuesban podo cacho-no-mbo aton pete dayunua-te-da
bat arm back-Loc-Aug 3Gen food store-Inst.Nzr-Uncert
pad-pa-aid-bi-ec ambo ic-e-c ana utsi
like-Comment-Pat.Nzr-be.like-Manr:Intr there be-Npast-Indic mouth other
a-uc-bi daëd-bi ic-ac-bi-mbo-ec
there-side-Emph two-Emph be-Act.Nzr-like-Aug-Manr:Intr
‘On their shoulders on both sides there is a “food grabber” or something (I don’t know), as if it had two mouths.’ [referring to the glandular wing sacks of some bat species]
C-V 016 cuesban 04
- (36) shubu bacuë-bi-mbo-ec-da ic-pa-e-c-que
house fruit-like-Aug-Advzr:Intr-Uncert be-Comment-Npast-Indic-so
‘Perhaps they [shubu quëdë palm fruits] might be like shubu palm [fruits].’
A-I 028 shubu quëdë 11
- (37) ada debi cho-pa-tsia-sh ba
Uncert Davy come-Comment-Npast:Cond-3 Dub
‘I doubt that Davy would/could come.’

- (38) nē-mbo-da mibi cho-pa-e-c
 here-Aug-Uncert 2Abs come-Comment-Npast-Indic:1/2/3
 ‘I doubt/don’t know if you’re going to come *here*.’
- (39) mibi chonoc adabi nēmbo icpeque
mibi cho-nuc ada-bi nēmbo ic-pa-e-c-que
 2Abs come-while:Diff.Ref Uncert-1S here be-Comment-Npast-Indic-so
 ‘If/When you come, I might or might not be here.’

Despite its strong association with question sentences, without the interrogative intonation (none of 35-39 have interrogative intonation) or interrogative inflection (38 clearly marks indicative mode) ada/-da simply marks uncertainty.

The scope of this particle, is either the first constituent in the sentence, or the whole sentence (if the sentence is in SOV order), and the scope of the enclitic allomorph is similarly either everything preceding it (i.e., the first constituent), or the entire clause (if the clause is in SOV order). This is discussed in the clause syntax chapter (§11.9.2). There is also discussion of this particle in the noun, adjective, adverb, and postposition chapters, where this particle is described in reference to the other morphology (§§4.6.12, 6.6.7, 7.6.12, 8.6.12).

Like with the particle ma, first-person pronominal enclitics are the only morphemes that can occur phonologically bound to ada (39 & 40). And they are the only morphemes that can occur following -da (41 & 42), except for cases of contraction of the verb ic (43).

- (40) ada-bi nid-e-Ø ‘Am I going?’
 Uncert-1S go-Npast-Interr:1/2
- (41) min bacuë utsi-da-bi ne-e-Ø que-onda-sh
 2Gen child other-Uncert-1S be-Npast-Interr:1/2 say-Dist.Past-3
 ‘“Do you think I’m your age-mate?” she said.’

- (42) adac cues-quin-da-**mbi** ic-pa-e-Ø chompian-n
 well kill-while:S/A>A-Uncert-1A be-Comment-Npast-Interr:1/2 shotgun-Inst
 ‘Well? Shall I kill (them) with the shotgun?’
 + K-XXII 002 chema 017
- (43) cuesunnequind**accosh** mado “‘Did they kill him, son?’ (he asked).’
cuessunne-quin-da ic-o-sh mado
 kill-while:S/A>A-Uncert be-Past-3 son
 + K-XXII 010 chema 095

9.4.2 ba ‘Dubitative’

The particle ba always occurs clause-finally, directly after the verb (requiring that the clause be verb-final). It expresses doubt (but at a low level, more like “improbable uncertainty”) that the proposition is or will be true. The construction in several ways looks as if the speaker is asking himself a yes/no question and answering it himself saying ‘I doubt it’ (44).

- (44) ada debi cho-pa-ash ba
 Uncert Davy come-Comment-Conjec Dub
 ‘I’m not sure if Davy has arrived.’
 possible literal interpretation: ‘Might Davy have arrived? Probably not.’

Therefore, it is interesting in analyzing this construction type to consider the properties of questions, but keeping in mind that these are not questions functionally (they are comments, not requests for information), intonationally (the main part has declarative intonation, and ba, if phonologically free, has separate, lowering intonation, sometimes with the vowel drawn out), or grammatically (while they share some morpho-syntactic properties with questions, they differ in several ways from real questions).

The first commonality with questions is that the uncertainty particle/enclitic ada/-da (preceding section) is usually involved, just as it frequently accompanies yes/no questions:

- (45) ada shēctenamē cues-pa-ash ba
 Uncert white.lipped.peccary kill-Comment-Conjec Dub
 ‘I wonder if he just might have killed white-lipped peccaries.’ [might be said
 when you learn a hunter has come back and you are speculating about what he
 might have brought back, but you have no clue.]

The “comment”/irrealis suffix -pa also frequently accompanies questions, but in this construction type it appears to be completely obligatory. The other marker of interrogative mode, interrogative inflection, also interacts with the construction in a peculiar way. Some inflections, like -ash ‘Recent Past Conjecture’ in (45), do not distinguish between the indicative (declarative) and the interrogative mode, but other inflections, those two-suffix inflections that occur with tenses like -e ‘Nonpast’ and -o ‘Past: Experiential,’ do make a distinction, but only for the first and second person (§5.6.5). In first- and second-person interrogative inflections with these tenses, the person/mode marker that follows the tense suffix is zero, but not for the third person (46; §11.9).

- (46a) ada cho-e-Ø
 Uncert come-Npast-Interr:1/2
 ‘Will you come?’
- (46b) ada cho-e-c
 Uncert come-Npast-Interr:3
 ‘Will he/she/it/they come?’

What we find is that when the particle ba occurs with the Nonpast inflection -e, the person/mode suffix is similarly lost, even in the third person (in fact, I’m not sure if this construction can be used at all for first or second person), and the particle ba is phonologically attached to the tense marker (47 & 48).

- (47a) ada chopeba
ada cho-pa-e ba
 Uncert come-Comment-Npast Dub
 ‘I wonder if he might come?’
- (47b) *ada chopec ba

- (48a) nuenda pepeba (48b) *nuenda pepec ba
nuen-da pe-pa-e ba
worm-Uncert eat-Comment-Npast Dub
‘Perhaps it eats worms.’

With other mode-sensitive inflections, this does not occur (49)—the phonological union is apparently restricted to the -e tense, but I have not yet systematically tested all the inflections.

- (49) ada debi chopondash ba ‘I don’t think Davy came.’
ada debi cho-pa-onda-sh ba
Uncert Davy come-Comment-Dist.Past-3 **Dub**

Thus, the sentences in (47a) and (48a) seem to have a special interrogative mode inflection (-Ø), that, unlike in other questions where this marks interrogative mode only for the first and second person, marks interrogative mode for the third person. But, remember that this construction is not a real question since it does not have full interrogative grammar and is not a request for information. And note that the loss of /k/ at morpheme boundaries occurs (irregularly) in several other cases (§2.6.6.1).

This particle is unusual, then, since the intonation and its answer-like quality suggest that it is not a clause-level particle, but a lexical particle that follows clauses, and is itself the equivalent of a clause (as an answer to a question). On the other hand, the fact that it occurs occasionally phonologically bound, and that the preceding clause has the grammatical conditions that the verb it occurs on must be verb-final and contain -pa ‘Comment’ when followed by ba, suggests a clause-internal analysis. I consider it a clause-level particle here. And, as such, I distinguish it from lexical particles that have no grammatical or phonological effects on the clauses they occur with.

- (52a) ma ubi nid-tan-pa-boc 'But I did go!'
but 1Abs go-go-Comment-Past:Counter
- (52b) ma mibi nid-tan-pa-boc 'But you did go!'
but 2Abs go-go-Comment-Past:Counter
- (52c) ma Ø nid-tan-pa-boc 'But he/she/it/they did go!'
but 3Abs go-go-Comment-Past:Counter

The first-person pronominal enclitics can be attached to ma (53), and these are the only two morphemes that can be phonologically attached to ma (or ada, preceding section).

- (53a) ma-bi nid-tan-pa-boc 'But I did go!'
but-1S go-go-Comment-Past:Counter
- (53b) ma-mbi is-tan-pa-boc 'But I did go see!'
but-1A see-go-Counter-Past:Counter

In a third, rather different function, ma precedes a verb, and could be translated as something like 'let (someone) V (, I don't care)' (54).

- (54a) ma nid-nu (54b) ma paēd-nu
let go-Intent:1 let fall-Intent:1
'Let him go (what do I care!).' 'Let it fall (what do I care!).'

The verbs in these clauses are inflected with the suffix -nu, which, in clauses without ma, always marks 'Intention' with the speaker (first person) as the specified subject. The fact that in sentences like those in (54), -nu refers to a third-person subject suggests that these constructions involve a change in person deixis, or just a different meaning of -nu that only obtains with ma.

A related function is to code reason or purpose in complex sentences. The meaning of ma in these sentences is similar to that in clauses like (54), but usually better translated as 'so that' (55).

- (55a) atotsi-mbi na-e-Ø ma Ø bēda-mbo ic-an-nu
 what-1A do-Npast-Interr:1/2 so.that 3Abs good-Aug be-Incep-Intent:1
 ‘What can I do so that he/she/it/they will be okay/happy?’
- (55b) atotsi-mbi na-e-Ø ma mibi bēda-mbo ic-an-nu
 what-1A do-Npast-Interr:1/2 so.that 2Abs good-Aug be-Incep-Intent:1
 ‘What can I do so that you will be okay/happy?’

Note in (55b) that in these constructions, the ma clause can have a second-person subject if it is stated overtly (otherwise it is assumed to have a third-person covert subject, as in 55a), unlike those in (54), which only occur with third-person subjects. Interestingly, the subject of the ma clause in these constructions apparently can never be first person. To express the notions in (55) with a first-person subject in both clauses, a same-subject adverbial subordinate clause is used instead, without ma (56).

- (56) atotsi-mbi na-pa-tsia-Ø bēda-mbo
 what-1A do-Comment-Npast.Cond-Interr:1/2 good-Aug
ic-an-nun
 be-Incep-Purp:S/A>A
 ‘What could I do to be happy.’

The similarity of the syntax in sentences in (55) and (56) and of the form of suffixes -nu and -nun, suggests that -nu in (55) might actually be an adverbializing suffix meaning ‘Purpose: S/A>O.’ This is an interesting proposition, but it has the problem that while -nun creates a dependent clause, clauses with -nu can occur independently, as in (54). Also the presence of ma makes these constructions different from other purpose adverbial clauses (§12.4.2.7), and there is also the peculiarity that the main clause must have a first-person subject. One version of this construction involves the ma clause as a quoted clause (57). Note that the alternate version without ma (which carries a somewhat different meaning) involves the suffix -nuen (58)

- (57) chushca-o-mbi ma nëish-nu que-shun
 reprimand-Past-1A so.that get.mad-Intent:1 say-after:S/A>A
 ‘I yelled at him so he would get mad.’/ ‘I yelled at him not caring if he got mad.’
- (58) chushca-o-mbi nëish-me-nuen
 reprimand-Past-1A get.mad-Caus-Purp:S/A>A
 ‘I yelled at him intending to make him mad.’

The sentence type in (58) is discussed in more detail in section 12.4.2.7.

9.4.4 *adoedic* ‘but instead’

The particle *adoedic* (which is not neatly segmentable; possibly *ado* ‘do thus’ + *?-ec* ‘while: S/A>S + *?-bi* ‘Emphasis’ + *-c* ‘Separate/Contrast’) means something like ‘but (unfortunately) instead.’ It can be used at the beginning of a sentence to contrast a preceding sentence (59), or it can be used following an adverbial clause within a sentence to contrast the adverbial clause with the matrix clause (60).

- (59) adoedic utsi-n aton shanu bed-ac-o-sh
 but.instead another-Erg 3Gen female.cross.cousin take-Infer-Past-3
 ‘But someone else married his girlfriend.’
- (60) [pe-nu que]-quin adoedic [tacbid umu
 eat-Intent:1 say-while:S/A>A but.instead venter grue
cues-ac]-sho [checa ne-e-c
 kill-Infer-when:S/A/O>O worthless.small.mammal be-Npast-Indic
que]-quin ne-quid matses-n
 say-while:S/A>A toss-Hab Matses-Erg
 ‘Matses say, “I’m going to eat it,” **but then, instead**, they end up killing a rice rat and throwing it away saying, “It’s a worthless small mammal”.’

A-IV 017 tacbid umu 09

9.5 Sentence margin particles

The particles in this category can be considered the equivalent of a clause. They do not occur as part of another clause, but at sentence margins, adjacent to a full clauses.

One set is comprised of particles that are dependent in that they cannot occur alone as independent utterances (§9.5.1), and the others are independent, in that they can optionally occur as independent utterances (§9.5.2). Independent sentence margin particles all happen to be answers to questions, and they can optionally occur with a clause or series of clauses elaborating it, in which case the particle is always at the sentence margin, preceding the rest of the material in the sentence.

9.5.1 *Dependent particles*

These particles are found in sentences, outside of the main clause, either preceding, or following it. They cannot really be considered an internal part of the clauses they occur with, having their own intonation and having no phonological or grammatical effect on the main clause. But at the same time they cannot occur as independent utterances. Thus they are the morpho-syntactic equivalent of a dependent clause. They have absolutely no morphological possibilities.

9.5.1.1 *en* 'hey'

This particle is used at the beginning of a sentence to draw someone's attention to something. It always occurs with the imperative form of *is* 'see/look,' and can be translated together as 'Hey Look!' or 'Look here!' (61). Often, the other sentence is marked as a dependent clause with the suffix *-que* 'so' (§12.6.1), making the *is* clause the only independent clause in the sentence.

- (61) en is-Ø ad-en chancho-n ma-ud-ac-que
 hey see-Imper like.that-Advzr:Tr pig-Erg top-root-Infer-so
 'Hey! Look! at how the the pig has dug this up.'

The function of en is essentially to draw a person's attention toward a relevant entity or proximate landmark. As such, the adverb nē 'here' has a similar function: it draws a person's attention when handing him something (62).

- (62) nē mimbi daēdca-ta ca-boed cun utsi uitsun que-quin
 here 2Erg weave-Imper say-Past.Nzr 1Gen brotherbracelet say-while:S/A>A
mene-quid
 give-Hab
 'Saying, "Here! What you asked me to weave, my brother, a bracelet," she gives it to him.'

A-XIII 043 uitsun 11

9.5.1.2 chun 'just kidding'

This particle is used at the end of a sentence to let the hearer know that the speaker is kidding about what precedes it (63). I have only heard young people (<25 years old) use it.

- (63) piucquid cho-quid ne-e-bi chun 'I am a rich man... just kidding!'
 money have-Agt.Nzr be-Npast-1S just.kidding

It is reminiscent of the word *psych* (as in *I psyched you out*), that we would utter as kids when I was growing up, after tricking someone into believing something. It is similar in some ways to how young people now say *Not!* at the end of a sentence.

9.5.1.3 aa 'see?'

This particle follows a clause to essentially say "I told you so!" It co-occurs with the contrast marker -en (64).

- (64) chotac-bi-en cho-o-sh aa
 non-Matses-Emph-Contr come-Past-3 see
 'See, it was non-Matses that came.'

9.5.1.4 qui 'see?/admit it!'

The meaning of the particle qui overlaps partly with that of aa (preceding section):

- (65) mibi pien-o-c _____ qui
 2Abs have.diarrhea-Past-3 see
 'See, you got diarrhea.' (see what happens when you drink milk?/I told you not to eat that)

It can also be used to get someone to admit something (66), to assert oneself (67), or to express a high level of certainty (68).

- (66) min mado ampe ne-e-c _____ qui 'Your son is obviously a thief, admit it!'
 2Abs son thief be-Npast-Indic see

- (67) ubi nid-e-c _____ qui 'I'm going (with you all), got it?'
 1Abs go-Npast-Indic see
- (68) debi qui 'I assure you it was Davy!'
 Davy see

9.5.1.5 adaca 'umm'

The particle adaca (or sometimes just daca) is pronounced anywhere in a sentence when the speaker is trying to remember the right word to say. It is similar to English *umm...* (69).

- (69) adashic istuid-onda-sh istuid-onda-sh daca dēmushbo
 then find-Dist.Past-3 find-Dist.Past-3 umm Dēmushbo.Indians
 'And then they [the old men] found them, they found...umm... the Dēmushbo people.'

+ K-XXII 002 chema 011

9.5.1.6 ca 'tell'

Tag questions are formed by uttering a sentence in the declarative mode and following it with the imperative form of ca 'tell/say to' (70).

- (70) nuë-mbo ic-e-c ca-Ø ‘It’s delicious, isn’t it?’
delicious-Aug be-Npast-Indic tell-Imper lit. ‘It’s delicious; tell!’

As far as its lexical class is concerned, ca is a transitive verb, not a particle. However, I have included it here just to point out that it behaves similarly to particles like aa ‘see?’ and chun ‘just kidding’ in that it occurs following a clause, but not within it. And it similarly takes no (overt) morphology and cannot occur as an independent utterance. Tag questions are discussed in section 11.9.3. Note the disproportionately large number of clause-level and dependent particles that contain an /a/ as their only vowel: ada/-da, ba, ma and aa (and ca).

9.5.2 *Independent particles: answers to questions*

These particles can all stand as the equivalent of a sentence, and are all possible one-word answers to yes/no questions. Just like answers to content questions (*wh*-questions) are often composed of a single word or an incomplete clause, these particles are often uttered alone. They can, however, be followed by a clause elaborating the answer, but they occur at the sentence margin; they cannot occur within a clause unless they are part of a quotation. This distinguishes them from dependent particles, which are also the equivalent of a clause, but cannot occur alone, and from exclamations (§9.6), which generally do not occur with a sentence, but are uttered alone. Refer to section 11.9.5 for a general discussion on answering questions. Here, I just describe the particles that function as answers to questions.

9.5.2.1 *ai* ‘yes, right, okay’ and *mc* ‘yeah’

Matses has an agree/disagree system (rather than a yes/no system) for answering yes/no and tag questions (Sadock and Zwicky 1985:189-190), so the particle ai can be

translated as ‘yes’ when answering a positive yes-no question (71), but it must translated as ‘right’ when answering a negative yes-no question, or else, if answered as a single word, it would not capture the answerer’s intent, and if answered with an elaborating sentence, the answer will sound funny in English (72).

(71a) në-mbo-bi-da mi-ben-tsëc-bi ush-e-Ø
 here-Aug-Emph-Uncert 2-alone-Dim-Emph sleep-Npast-Interr:1/2
que-onda-sh
 say-Dist.Past-3
 ‘‘Are you going to sleep here alone?’’ he asked me.’
 + K-XXII 010 chema 099

(71b) ai u-ben-tsëc-bi ush-e-bi ca-onda-mbi
 yes 1Abs-alone-Emph sleep-Npast-1S say-Dist.Past-1A
 ‘‘Yes, I’m going to sleep alone,’’ I said.’
 + K-XXII 010 chema 100

(72a) cho-en-quio-da ic-e-Ø ‘Are you not coming?’
 come-Neg-Aug-Uncert Aux-Npast-Interr:1/2

(72b) ai cho-en-quio ic-e-bi (72c) padenquio cho-e-bi
 yes come-Neg-Aug Aux-Npast-1S no come-Npast-1S
 ‘Yes, I’m not coming.’ ‘No, I’m coming.’

The particle ai can also mean ‘okay’ when it represents agreement to follow an order:

(73a) cuen-enda cun tita que-onda-sh
 run.off-Neg.Imper 1Gen daughter-in-law say-Dist.Past-3
 ‘‘Don’t run off, daughter-in-law!’’ he told her.’
 + K-XXII 012 chema 118

(73b) ai cuen-en-quio ic-e-bi ‘Okay, I won’t run off, ...’
 yes run.off-Neg-Aug Aux-Npast-1S
 + K-XXII 012 chema 119

Additional examples and a more detailed discussion of the agree/disagree system can be found in the section on answering questions (§11.9.5).

The particle ai is unusual phonologically in that it is probably the only word where adjacent [a] and [i] do not form a glide:

(74) [ai] / *[aj] ‘yes, right, okay’

The particle mc ‘yeah’ is just an alternative to saying ai ‘yes’; there appears to be no meaning difference. People simply say mc (said without one’s mouth closed, ending in a glottal stop), as more laid-back way of responding affirmatively or agreeing with the interlocutor.

9.5.2.2 Different ways to say ‘no’

There are four different but related way to express ‘no/disagreement’:

<u>padenquio</u>	‘no/absolutely not’ (any aspect)
<u>padambo</u>	‘no/not yet’ (perfect)
<u>padabi</u>	‘no/not yet’ (perfect with higher degree of expectation)
<u>padi</u>	‘no/no thanks’

Before beginning to distinguish the differences among the different negative words, it should be mentioned that they are marginally synchronically segmentable, so their status as particles is intermediate, unlike ai ‘yes.’ They all seem to be based on the pro-verb/postposition root pad ‘do/be like X’ (§8.3.3), followed either by a negative suffix (-en ‘Negative’ or -a ‘Negative: Perfect’) and an enclitic (-mbo/-quio ‘Augmentative/Adjectivalizer’ or -bi ‘Emphatic’), or else just by the enclitic -bi. The meaning of pad is most appropriate considering that Matses has an agreement/disagreement system, so, padenquio, for instance, could be literally translated as ‘not like that/not so.’ However, these literal meanings do not always add up to a logical answer to questions, and so, at least in their question answering function, it makes

sense to simply treat these as particles meaning ‘no’ or ‘not yet,’ without the comparative meaning that a pro-verb/postposition has.

The meanings associated with these particles parallels the meanings of the sentential negation forms -en-quoio -a-mbo, and a-bi, which are discussed in detail in section 12.3.2. Briefly, the particle padenquoio, the most commonly heard answer to yes/no question, means ‘no,’ but is often implies ‘never’ or ‘no way’ (75).

(75a) istuid-shun mitsipad-en nuqui ic-e-c
 find-after:S/A>A how-Manr:Tr 1+2 be-Npast-Indic
cues-quin-da nuqui ic-e-c que-onda-sh
 kill-while:S/A>A-Uncert 1+2 be-Npast-Indic say-Dist.Past-3
 ‘After finding them, they said: “What should we do? Should we kill them?”.’
 + K-XXII 002 chema 012

(75b) padenquoio bed-Ø tsid-nu na-Ø que-onda-sh
 no grab-Imper gather-Intent:1 do-Imper say-Dist.Past-3
 ‘(Others said) “No! Capture them! Let’s join up with them”.’
 + K-XXII 002 chema 013

The forms padambo and padabi, specify perfect aspect, and as answers to questions can be translated as ‘not yet’ (76). The difference between these two is that padabi implies a higher degree of expectation that the action will be done or become true soon.

(76a) ada debi cho-ac-o-sh (76b) padambo ‘not yet’
 Uncert Davy come-Infer-Past-3
 ‘Has Davy come?’

(76c) padabi ‘not yet (but he soon will)’

The particle padi is used more frequently for turning down an offer or telling someone to stop doing something. It is not really used so much to reply to a question requesting information. It might be best translated as ‘no thank you’ or ‘stop that’ (77).

(77a) pachid utsi-da bun-e-Ø (77b) padi
 manioc another-Uncert want-Npast-Interr:1/2
 ‘Would you like another piece of manioc?’
 ‘No thank you.’

- (82) tsaon tantia-en-quio ic-e-mbi 'I don't know, I don't understand it.'
 I.don't.know know-Neg-Aug Aux-Npast-1A

See section 12.6.3 for more on constructions like (82) and complex constructions involving tsaodi/tsaon.

9.6 Exclamations

Exclamations are conventionalized words that are not usually incorporated into discourse, except as quoted material.

9.6.1 *Imprecatives (curses)*

There is only one word that I have learned, that is what we might want to call a real curse word. It is biuc (sometimes pronounced yuc) 'curse you.' I have no text examples, nor have I overheard it used. I learned it while asking about name taboos. In Matses there is a taboo that when a person dies, people cannot say the person's name or several other words that sound like the person's name for a period of time, especially in the presence of one of the person's close relatives. When I asked, "What happens if you say the person's name in front of his close relative." The answer was, that if the relative believes that it was said on purpose, or that the person was not being appropriately careful enough to follow the taboo, the relative might say, "biuc" (just this one word, without any other sentences or words), which, as I was told, essentially means 'I hope you or someone in your family dies next.'

Some Matses believe that when you sneeze, it is because someone is talking about you behind your back. Some of these people will then say "biuc" after sneezing, meaning that they are cursing whomever is talking behind their backs. Other people say it is very bad to say this in this situation.

9.6.2 Interjections: vocal expressions of reaction and emotion

These particles are conventionalized utterances that people say in reaction to some stimulus, which can be linguistic or not. They don't really have a meaning, but since they are conventionalized, they reveal the speaker's emotions. *Wow* and *dang* would be examples in English. These are not generally incorporated into discourse, except in quotations.

- (83) eee tsid-nu ca-bo-ac-bi-en
Surprise gather-Intent:1 say-Prior-when:O>S/A-Emph-Contr
nique-pa-ac que-onda-sh
run.off-Comment-Infer say-Dist.Past-3
‘‘**Hey!** I told him ‘Let’s join up’ but nevertheless he ran off,’’ he said.’
+ K-XXII 008 chema 076

A few interjections are gender-specific. These are listed in Table 9.2. There are probably a few more gender-specific interjections, as I have not done intensive research on this topic.

Table 9.2. Gender-specific interjections.

Female	Male	English counterpart	Situation
<u>ehc</u>	<u>unc</u>	<i>augh</i>	displeasure, doesn't want to be hugged
?	<u>eee</u>	<i>yikes</i>	very startled, distress call
<u>oc</u>	<u>edic</u>	<i>yipes, whoops</i>	mild surprise, make a mistake
<u>ooo</u>	<u>eee</u>	<i>ouch</i>	hurt oneself
<u>oo oo oo</u>	<u>ee ee ee</u>	<i>ooh</i>	bleeding after injury, sick complaining
<u>oooooo</u>		<i>oh, my goodness</i>	some else is injured
	<u>ëëë</u>	help, halloo	distress call (example 84), dog command
<u>yee</u>		yuck	bad food, see gross insect, step on dog feces

- (84) cues-tanec matses ëëë que-quid aton utsi cuën-ec
kill-after:S/A>S Matses **halloo** say-Hab 3Gen brother call-while:S/A>S
‘When they kill it they call their brothers saying, ëëë.’

The rest of the interjections, as far as I know, are gender-neutral. These include the term is ēnh ‘Displeasure.’ This particle is uttered when someone does or says something you are unhappy about, but it does not express surprise. When one is falling down or some other unfavorable or unforeseen event occurs slowly enough that one can make an exclamation before the event finishes happening, the Matses may yell out “ubi” ‘whoa.’ The interjection tso (or to) expresses the notion ‘too bad’ or ‘how unfortunate’ similar to English *Shoot!* The interjection mmh ‘Understanding’ (pronounced with one’s mouth closed, with a long drawn out nasal with rising intonation, followed by an abrupt glottal fricative) is used when one finally understands something, meaning ‘Oh!, I see!’ The interjection adac ‘Impatience’ is used when someone is waiting for the go-ahead to do something (see 42 above), or is waiting for someone to do or say something, in order to get the person to hurry up. It can be translated as *Well?* or *Now?* There are at least two distress calls in addition to the one listed in Table 9.2, that seem to mean the same, cuaa (85) and ya.

- | | | | | |
|------|---|-------------------------|-------------------|---------------|
| (85) | <u>ado-ac-bi-en</u> | <u>cuaa</u> | <u>cuaa</u> | <u>cuaa</u> |
| | do.thus-when:O>S/A-Emph-Contr | distress.call | distress.call | distress.call |
| | <u>padasque</u> | <u>padasque-mbo-ec</u> | <u>sidque-nuc</u> | |
| | (redup=Distr) kick-Adjzr-Advzr:Intr | vocalize-while:Diff.Ref | | |
| | ‘When they did that to him, he yelled, “ <u>cuaa cuaa cuaa</u> ,” kicking and screaming.’ | | | |

K-XXI 011 dēmushbo 44

The interjection cuē ‘well done’ is rather impolite. One says it when someone else hurts themselves, misses a shot while hunting, or does something else unwanted. Mainly children use it; it is considered antagonistic behavior when adults use it, except marginally during a game. The interjection edee ‘see?’ also used mostly by children and somewhat unfriendly, is used when someone says they are going to do something, the

speaker expresses doubt, and then when the person fails or is caught going back on his word, the speaker exclaims “edee.” An example is when a kid claims he is going to hit something with an arrow and misses, or when a man says he is through with women and then is caught writing a love letter. There are certain to be a handful more similar interjections, which I have simply missed, due partly to the fact they do not occur frequently in texts.

9.6.3 Animal commands

The Matses have a system of commands for their hunting dogs (they hunt with a single dog or more frequently with a pack of up to five or six dogs). These include whistles, the multi-functional long distance interjection ëëë listed in Table 9.2 (exemplified in 84 in the preceding section and 86 below), and four lexicalized terms for communicating with hunting dogs. The particle cushe ‘let’s go, dog/go, dog, go’ is a general term for encouraging a dog while pursuing an animal (reminiscent of English *sic ‘em* for hunting dogs or *mush* for sled dogs), or when a hunter is leaving the village to go hunting, to get the hunting dogs to follow him (86).

- (86) ad-en bedan-sho tantia-shun icbo-n
do.thus-Advzr:Tr follow-when:S/A/O>O listen-after:S/A>A owner-Erg
ëca-anec ëëë ëëë cushe
command.dog-after:S/A>S dog.command dog.command dog.command
cushe ëëë ëëë cushe ëëë
dog.command dog.command dog.command dog.command dog.command
‘While listening to the dogs following like that, the owner encourages the dogs saying, “ëë ëë cushe cushe ëë ëë cushe ëë”.’

G-XV 001 shëcten 07

The term newash is used to call a dog to the hunter, either to get the dog to follow him when leaving the village, or to get the dog to return after having been separated from the owner. The command newash is also used to call a dogs back to the owner when they

encounter a jaguar, because the dogs will otherwise want to fight the jaguar and will be injured or killed. The interjection ëëë (also a distress call) is used to encourage dogs to follow a tapir (a donkey-sized mammal), a collared peccary (a pig-like mammal), or an agouti (a dog-sized rodent). This sound is believed to travel the farthest distance in the jungle, and the hunter yells this very loudly because the dogs follow these animal far and will stop pursuing if they don't hear their master encouraging them. The call ee is used to encourage dogs to follow pacas (another dog-sized rodent). It is not yelled loudly since pacas don't run far. Saki monkeys have several types of distress calls, including one for warning of an arboreal predator (hawk, arboreal felines, etc.). The troop of sakis drops to ground when a member gives arboreal predator distress call. Matses hunters imitate the saki monkeys' arboreal predator distress call, and then use the general term cushe 'go, dog, go' to direct the dogs to pursue the saki monkeys. Because women often assist men during hunts, these animal commands do not necessarily represent male-specific speech.

At home, the exclamation sh 'scram, dog' is used to get a dog to scam when it is trying to steal food, going where it is not supposed to, or when it is hassling a visitor (there is a verb ishca, which means to shoo away a dog). The exclamations tdu (pronounce [tru]) and aac (pronounced [a:ʔ]) are believed to be effective for scaring off jaguars. When a hunter see a jaguar or senses that a jaguar is around, he may yell this to get the jaguar to run off. And, after killing a tapir, a hunter may yell out tdu and/or aac as a precaution to keep away any jaguars that might be attracted to the kill.

9.7 Calls and imitations

While transcribing texts, one finds many utterances that are obviously not words, but that one has to transcribe nevertheless. For me, many of these were imitations of animal vocalizations, Matses hunting calls, imitations of banging and cutting sounds, etc.

An equivalent example from English would be where someone telling about a dog chooses to actually imitate barking, rather than use the lexicalized terms *woof*, *bow-wow*, *ruff*, etc., or where one tries to imitate a firearm report instead of saying *bang*. In Matses texts, anytime someone imitates non-linguistic noises, they are nevertheless frequently treated as quoted utterances and followed by the quotative verbs *que* ‘say’ or *ca* ‘tell, say about’ (87), or else, for rhetorical or dramatic effect they are just inserted among the sentences (88). But lexicalized terms will have the verb *que* or *ca* phonologically attached to them, and the word will conform phonologically to other words in the language (89 cf. 87; 90 cf. 88; see also *ēca* vs. *ēēē* in 86 and *ishca* vs. *sh* at the end of the preceding section).

- (87) chooc que-ec poshto tsid-ad-quid
woolly.monkey.call say-while:S/A>S woolly.monkey gather-Rflx-Hab
 ‘The woolly monkeys holler, “chooc” as they gather into a group.’
 A-I 052 poshto 12
- (88) natia shayaque-e-c ucosh ucosh ucosh
 many locomote:Pl-Npast-Indic **flapping.noise** **flapping.noise** **flapping.noise**
 ‘They fly around in groups: [bat flapping imitations].’
 G-XV 063 cuesban 03
- (89) matses-n ēctan-ac ēcbedan-quid
 Matses-Erg imiatate.monkey-when:O>S/A respond.to.imitation-Hab
chodocque-ec
make.woolly.monkey.call-while:S/A>S
 ‘After Matses imitate them [their call], they answer back saying “chodoc”.’
 2-p86-L poshto 02
- (90) cuesban-dapa cuen-quid aton podo tuscuduca-pambo-ec
 bat-large pass.by-Hab 3Gen wing **make.flapping.noise-Aug-Advzr:Intr**
 ‘Big bats fly by audibly flapping their wings.’
 E-XI 049 cuesban 28

Lexicalized terms like the ones in (89) and (90) are equivalent grammatically to English verbs like *neigh*, *caw*, or *swoop*. Once lexicalized, the word can be pronounced with

normal intonation (like we would say *bow-wow*), but the non-lexicalized terms attempt to imitate the sounds in pitch, volume, vowel length, etc. (this makes it less necessary to use the quotative verb). Thus, here I prefer to only consider those terms ending in que as part of the lexicon (they are all verbs, and this verb class is presented in section 5.3.1.4, and many examples can be found in §2.9), while the other imitations and animal calls without the phonologically attached que will not be considered part of the lexicon, despite the fact that many are conventionalized to some degree. The following table lists some examples of unlexicalized sound imitations from texts, similar to those in (87) and (88).

Table 9.3. Some unlexicalized sound imitations from texts.

Animal vocalizations			
dog bark:	<u>oc</u>	dog howl:	<u>oo</u>
spider monkey call:	<u>aac</u>	saki monkey calls:	<u>she, aa</u>
howler monkey howl:	<u>yoo</u>	uakari monkey call:	<u>cacaca</u>
night monkey call:	<u>ii</u>	titi monkey calls:	<u>tsocon, oon</u>
pygmy squirrel call:	<u>piss</u>	tamarin calls:	<u>sii, pishtanac</u>
deer call:	<u>mia</u>	jaguaroundi call:	<u>shon</u>
tree toad call:	<u>boc</u>	bat call:	<u>tsecque</u>
capuchin monkey calls:	<u>bëtsiton, coo, oo, cad</u>		
Other animal noises:			
gnawing sound:	<u>sos</u>	teeth clacking:	<u>tetetete</u>
choking sound:	<u>eed</u>	flapping noises:	<u>tododosh, shuc, ucosh</u>
Human-made sounds:			
cutting sound:	<u>tosh</u>	tapping a pot:	<u>ten, toc</u>
blowing sound:	<u>bush</u>	spindle spinning:	<u>toshcododododo</u>
shotgun report:	<u>tec</u>		

9.8 Conclusions

The Matses category “particle” is the lexical class that is most questionable in terms of suggesting it has some status as a cognitively-recognized unit. However, it is a

handy one for grammatical description. Two general patterns can be recognized.

Schachter (1985:23-24) notes the following correlation:

Not surprisingly, closed word classes tend to play a more prominent role in analytic languages than they do in synthetic languages. This is because much of the semantic and syntactic work done by the members of closed word classes in analytic languages is done instead by *affixes* in synthetic languages.

This correlation holds true in Matsigenka. With respect to postpositions, the other closed lexical class, we note that a fair proportion of postpositions are enclitics, instead of free roots. With particles, we similarly find a small number of grammatical particles, and multiple enclitics and suffixes that might be expected to occur as particles in a more analytic language, such as *-que* 'so' (a clause-level conjunction suffix), *-uid* 'only,' *-ba* 'first,' *-tsen* 'next' (noun phrase enclitics), *-chit* 'Uncertainty' and *-tsen* 'almost' (verbal suffixes). Additionally, of the 14 grammatical particles, five have optional or conditioned phonologically bound alternates, each via a different process: the enclitic version of *chued* is conditioned by lexicalization; the enclitic version of *amano* is phonologically conditioned; the enclitic version of *ba* is grammatically conditioned; *penquio/-penquio* exhibits sociolinguistic variation; and the enclitic version of *ada* is optional. It is as if there was a tendency toward phonological union with this category of particles, and conversely a tendency for roots in word classes with freer word order to not bind phonologically to each other, even in compound-like lexicalized terms (§3.2.6).

For independent lexical particles and exclamations, there is a different phonological peculiarity. A large number of these contain sounds or sequences of sounds not found elsewhere in the language. For example, the following particles have unusual phonological patterns: the disyllabic particle *ai* 'yes' is perhaps the only word in the language where an /ai/ sequence does not form a offglide; the optional way to express

agreement, mc and the interjection mmh 'Understanding' are perhaps the only vowelless words in the language; mmh and unh 'Displeasure' contain glottal fricatives, a sound that does not otherwise occur in the language; tdu and other terms contain intervocalic consonant sequences, which are otherwise absent in Matses words; and ëëë, eee, aac, etc. are the only cases of a geminate vowel/long vowels. Interestingly, when verbs are coined with the ending /ke/ and /ka/ following the interjection, they are regularized to conform to the language's usual phonological patterns, even while the phonologically unusual interjection continue in productive usage.

With these trends in mind, we can identify a correlation: the more integrated a particle is grammatically, the more likely it is to conform to the language's phonology and to become a phonologically fused form. For example, we could say that the phrase-level particles are the most integrated grammatically, and accordingly we find alternation with bound allomorphs and no irregular phonology. Similarly, interjections are the least integrated grammatically, and accordingly none have bound allomorphs and most have unusual sounds and sound combinations.

CHAPTER 10

SYNTAX PART I: PHRASES

10.1 Introduction

A very general observation about Matses syntax is that while constituent order is relatively free in Matses clauses, word order within phrases is fixed. A **phrase** is series of words (see §3.2.2 for a definition of the grammatical word in Matses) that function as a single constituent that occupies a position within a clause. A **clause** is a combination of phrases, consisting minimally of a verb phrase (the head of a clause), that represents a complete, grammatical utterance (an independent clause), or a subordinated verb phrase in combination with any other phrases associated with it. Technically, a single word can be considered a one-element phrase. But this is not very interesting; rather, in this chapter I focus on describing the ways in which two (or more) words come together to form a single constituent that functions as a single unit within a clause. The aim is to learn which classes of words associate with which other classes of words to form constituents, and to elucidate the semantic and syntactic relationships that exist between these linked words. For example, for the English phrase *John's book*, we can make the following observations: both elements are nouns, the nouns are in a possessive relationship, the possessed item is the head of the phrase, the genitive noun (the possessor) precedes the possessed item, the genitive noun is marked with *s*, the possessed noun remains unmarked, etc. The justification for describing syntax at this level is to be able to recognize and understand multi-word series whose interrelations and composite meaning are best interpreted *before* considering their role in the clauses in which they occur. For example, try to interpret the meaning of the English sentence: *The pet shop clerk fed the giant anteater carpenter ants*, without first considering phrasal constituents.

The constituency status of a phrase is evaluated using several constituency criteria, and verified using several diagnostic tests as outlined below in section 10.2.

Phrases can be simple or complex. By my definition, a **simple phrase** contains one head, and any other words that occur in the phrase are related to it *directly*. A **complex phrase**, by contrast, contains at least one word that is associated *indirectly* to the head or contains more than one head. Three types of complex phrases exist in Matses: i) phrases containing a nested phrase; ii) phrases containing non-finite clauses; and iii) coordinated phrases. Often, complex noun phrases contain more than two words. But this does not distinguish complex from simple noun phrases, as the latter can similarly contain more than two words. The noun phrases in examples (1) - (4) illustrate the distinction between simple and complex noun phrases (head nouns in **bold** in this section). Example (1) is a simple noun phrase where the genitive element and the attributive element are semantically directly related to the head noun, and independently from the other non-head element. In other words, the properties of this phrase type do not raise a question of hierarchical constituency. By contrast, in (2), an example of nesting, the genitive pronoun cannot be related directly to the head noun (i.e., the shotgun is not the first person's property), but must be related first to the genitive-marked noun, buchin. Example (3), a relative-clause-like construction, contains two elements (ubi and debin) that cannot be related directly to the head noun, but must first be related to the non-finite verb. And sentence (4) contains two conjoined head nouns.

- | | | | |
|-----|---|-----|---|
| (1) | <u>cun</u> chompian shëni
1Gen shotgun old
'my old shotgun' | (2) | [<u>cun</u> <u>buchi</u>]-n chompian
1Gen older.brother-Gen shotgun
'my older brothers' shotgun' |
| (3) | chompian [<u>ubi</u> <u>debi</u> -n <u>mene</u>]-boed
shotgun 1Abs Davy-Erg give-Past.Nzr | | 'the shotgun (that) Davy gave me' |

- (4) cun chompian cun moco chedo ampe-ac-o-sh
 1Gen shotgun 1Gen ax too/etc steal-Infer-Past-3
 'Someone stole my shotgun and my ax.'

Examples of phrases containing nesting are described in section 10.3.1. Any class-changed clause that consists of words that act as a single constituent (e.g., a nominalization) can function as a phrase. But in this chapter I will only point out those constructions where a non-finite clause is associated with another element to form a more complex phrase. I reserve a full description of subordinate clauses for chapter 12. What we find is that the only non-finite clauses that act as a constituent in combination with another element to form a phrase are nominalizations (§§10.8, 12.2), which can occur in head noun position in noun phrases, in postpositional object position in postpositional phrases, and as a noun modifier in N N noun phrases (the relative-clause-like construction in 3). Coordination (conjunction and disjunction) in Matses is accomplished by apposition of phrases (though particles, verbs, and adverbs are often involved), but the apposed elements do not exhibit syntactically identifiable constituent structure (§10.9).

Phrases can also be classified by the syntactic positions they fill, that is, with respect to the lexical class that the words which they can substitute for belong. Matses has five such syntactically defined phrase types: noun phrases, postpositional phrases, adverb phrases, adjective phrases, and verb phrases. These can be further subcategorized with respect to the different word types that exist within the phrase, e.g., a noun phrase composed of two nouns vs. a noun phrase composed of a noun and an adjective. These subtypes can be subcategorized further still with respect to the grammatical and semantic relationships that exists between the two words; e.g., part-whole vs. possessive two-noun noun phrases, or part-whole noun phrases where the first noun is genitive case-marked vs. ones where the first noun is not case-marked. There are many different types of

simple noun phrases, and noun phrase formation is very common and productive (§10.3). Postpositional phrases are not so varied in type, but are similarly very common in the language (§10.4). Multi-word adverb phrases and adjective phrases, by contrast, occur to a limited extent, namely, involving the ‘et cetera/too’ particle chedo, and the negative enclitic -penquio, which is sometimes pronounced as a phonologically independent word (§§10.5, 10.6). In most constructions, verbs do not combine with other words to form phrasal/sub-clausal constituents; the partial exception being that in sentential negation constructions, the main verb and an auxiliary verb form units that have intermediate phrasal status. Therefore, a study of phrases in Matses is mainly a study of noun phrases, and secondarily of postpositional phrases; the rest is minor or marginal.

Another distinction relevant to phrases is their status as lexicalized or *ad hoc* phrases. Lexicalized labels vs. *ad hoc* descriptive terms is the topic of Fleck *et al.* (2002), and has already been discussed in section 3.2.6. Nevertheless, it is worthwhile to define this terminology here in the context of phrasal syntax. A **lexicalized phrase** is a multi-word lexeme that is regularly used to refer to some culturally relevant category (entity, situation, or event type), and is for all intents and purposes treated morpho-syntactically as a single grammatical word, despite the lack of phonological union. Matses lexicalized phrases are comparable to English compounds, such as *rainforest* or *tree frog*. By contrast, ***ad hoc* phrases** are nonce combinations of words that may not necessarily have been heard previously by the speaker. *Ad hoc* phrases may be novel designations used to refer to a culturally relevant category, which may or may not already have a lexicalized label. Or the *ad hoc* term may be a reference to a new (unlabeled) category. Lexicalized and *ad hoc* phrases, of course, represent endpoints in a continuum, and it is obvious that lexicalized phrases must be derived historically from an *ad hoc* usage (and not vice versa). Just the same, it is important to distinguish these phrase

types, as Matses grammar treats them differently. For example, the following correlations exist between noun phrase types and lexicalization. Noun phrases containing a dimension adverb (§10.3.4) are restricted to lexicalized usages, and therefore novel usages of this phrase type are interpreted as attempts to coin a new term. Noun-adjective noun phrases (§10.3.3) most naturally occur as lexicalized terms. Possessive noun phrases (§10.3.2) can represent lexicalized terms or *ad hoc* labels for known or novel categories. And phrases containing certain particles (§§10.3.6, 10.4.5, 10.5, 10.6) never form lexicalized phrases. More details on these patterns are discussed in the relevant sections below.

10.2 Constituency criteria and apposition

There is a tendency for grammar to treat multi-word phrases as though they were single units, presumably because they fill a single syntactic slot. Phrases that behave as units tend to exhibit multiple properties that allow us to identify them as phrasal units. There are at least four observable properties that indicate phrasal unity for a series of words in an utterance: i) linear ordering; ii) separability; iii) clitics and second position particles; and iv) intonation and pauses (Givón 1995; Meira 1999). Furthermore, constituency status can be verified using diagnostic tests, such as those suggested by Radford (1981:69).

A given string of elements is a constituent just in case it has one or more of the following properties:

- (i) It behaves distributionally as a single structural unit — i.e. it recurs as a single unit in a variety of other sentence-positions
- (ii) It can be coordinated with another similar string
- (iii) It does not readily permit intrusion of parenthetical elements internally (intrusion generally being permitted only at the boundaries of major — especially phrasal — constituents)
- (iv) It can be replaced by, or serve as the antecedent of, a proform
- (v) It can be omitted, under appropriate discourse conditions

Phrases in Matses have fixed linear ordering, so inversion of the relative order of any two elements in a phrase will result in either ungrammaticality (5) or a significant change in meaning (6).¹

- | | | | |
|------|---|------|---|
| (5a) | <u>capa</u> <u>piu</u> 'red squirrel'
squirrel red | (5b) | * <u>piu</u> <u>capa</u> |
| (6a) | <u>tsanca</u> <u>chido</u>
squirrel.monkey woman
'female squirrel monkey' | (6b) | <u>chido</u> <u>tsanca</u>
woman squirrel.monkey
'attractive woman' (squirrel monkeys are considered cute; cf. English <i>foxy lady</i>) |

Similarly, the words in a phrase are expected to be inseparable; i.e., one does not observe words that are not part of the phrase between two words in the phrase. It is possible for a series of words to have fixed linear ordering, yet be separable. An example is negative verb phrases, which have intermediate phrasal status in that interposition is possible, but reordering is not, as illustrated in (7). Example (7c) shows that it is possible to insert the subject of the clause between the non-finite verb and its auxiliary verb without a change in meaning, but examples (7d-f) show that it is ungrammatical to place the auxiliary verb before the non-finite verb.

- | | | |
|------|---|-----------------------|
| (7a) | <u>debi cho-en-quo</u> <u>ic-e-c</u>
Davy come-Neg-Aug Aux-Npast-Indic | 'Davy is not coming.' |
| (7b) | <u>cho-en-quo ic-e-c</u> <u>debi</u> | 'Davy is not coming.' |

¹ By "significant" I mean a completely different referent or situation. Contrast this with relative ordering of constituents in a clause (6'), where only discourse effects such as focus accompany changes in the order of the elements.

- | | | | |
|-------|--|-------|---|
| (6a') | <u>tsanca-Ø</u> <u>chido-n is-o-sh</u>
squirrel.monkey-Abs woman see-Past-3
'The woman saw a squirrel monkey.' | (6b') | <u>chido-n tsanca-Ø is-o-sh</u>
'The woman saw a squirrel monkey.' |
|-------|--|-------|---|

- (7c) cho-en-quio debi ic-e-c 'Davy is not coming.'
- (7d) *debi ic-e-c cho-en-quio (7e) *ic-e-c debi cho-en-quio
- (7f) *ic-e-c cho-en-quio debi

Example (8) shows another non-constituency property of Matses negative verb phrases: the second-position phrasal enclitic -da 'Uncertainty' occurs following the first element of the negative verb phrase. The enclitic -da follows the first word in a sentence, but if a series of words composes a prototypical phrase, -da will follow the last word in the phrase, as shown in (9) (see §9.4.1 for details about the enclitic -da).

- (8) cho-en-quio-da ic-e-c debi 'Isn't Davy coming?'
 come-Neg-Aug-Uncert Aux-Npast-Indic Davy
- (9a) senad piu-da cues-o-Ø (9b) *senad-da piu cues-o-Ø
 deer red-Uncert kill-Past-Interr:1/2
 'Did you kill a red brocket deer?'

Similarly, case markers and postpositions (both postpositional enclitics and postposition words) always follow the last element in a noun phrase (§4.6 & chapter 8), and all other enclitics in the language follow the last element in the phrase (§§6.6, 7.6, 8.6). Perhaps I have not spent enough time studying phrase-level intonation, but I have not found this useful for identifying phrases or for arguing in a systematic way to argue for constituency status of phrases. Rather, intonation is very helpful for identifying words within phrases. Speakers often insert pauses in natural speech when they stop to think, or for emphasis, and in Matses we find a tendency for these pauses to not break up phrases. However, most of the time one cannot hear any pauses within the clause, and pauses do occasionally do break up constituents, so this is hard to use as in a consistent way. Pauses can be inserted in elicitation to see if pauses are associated with changes in

meaning,² however, despite repeated attempts, to my surprise, I found no cases where a pause between two words vs. a lack of a pause elicited either ungrammaticality or a change in meaning.

Elements that do not meet any of these constituency criteria can still be linked by apposition. **Apposition**, as I use it here, refers to the situation where two elements are linked semantically in that they refer to the same entity (e.g., as in a relative clause) or a pair or set of entities that are treated as a group (e.g., as in conjunction). These two elements can together fill a single syntactic position in a clause (e.g., the ergative argument position lexically specified by transitive verbs; see §11.2.1), despite not having any of the constituency properties described above. Although the term “apposition” implies that the two elements are adjacent to each other, it is often possible for one of the elements to be dislocated, usually (but not always) to the end of the clause. The reality of the situation, however, is that apposed phrases generally have some syntactic properties that would lead one to suggest that they together form a single constituent, and other syntactic properties that point to their lack of constituency status. And some pairs of apposed phrases are more constituent-like than others. So, as is so frequently the case in language, there is a continuum, with some series of words never treated as constituents by the grammar, other series of words always treated as constituents by the grammar, and others in between, such as apposed phrases and negative verb phrases, that are treated as constituents by only some grammatical properties. Here I try to point out any groups of words that form constituents, even if only with respect to a single grammatical pattern and so I include apposed phrases in this chapter. But keeping in mind that they do not have the same status as prototypical phrases, which have all or most of the properties of constituents mentioned above. To remind readers of this lack of prototypicality, I

² Philip Davis provided the following example for English: “Q: Do you know how long babies should be burped? A: The same as short ones.”

generally qualify these as “apposed phrases” or mention that they are “related by apposition.” Examples of apposition can be found in some adverb-noun noun phrases (§10.3.4), in relative-clause-like noun phrases (§10.8), and in coordinated noun phrases (§10.9.1). One generalization that can be made about apposed phrases is that is that they do not form lexicalized terms.

10.3 Noun phrases

The basic template for the Matses noun phrase is the following:

NP = (Genitive/Locative) Noun (Attributivizer) (Particle)

The positions of **genitives** (genitive pronouns, genitive-case-marked nouns, and certain unmarked nouns), **locatives** (locative adverbs and locative postpositional phrases) and **modifiers** (adjectives, dimension adverbs, and modifying nouns) are fixed, occurring respectively before, before, and after the head noun. The position of particles is similarly fixed relative to other words: they occur at the end of the noun phrase. Noun-phrase enclitics may occur before or after the particles (depending on the particle and the enclitics; recall that particles are free forms and enclitics bound forms), but otherwise follow the last word in the noun phrase. Some adverbs, particularly quantifier adverbs, can modify nouns from positions preceding or following the head nouns, and even from positions that are not adjacent to the noun phrase; thus while these adverbs form a unit with the noun phrase semantically, they have few syntactic properties of constituents. In the subsections of the present section, I address possessive (next section) and locative (§10.3.2) noun phrases, and noun phrases modified by adjectives (§10.3.3), adverbs (§10.3.4), other nouns (§10.3.5), and particles (§10.3.6). The issue of verb nominalizations in noun phrases and as noun phrases is introduced in section 10.8 and

taken up again in the discussion of complex constructions in chapter 12 (§12.2).

Coordinated noun phrases do not form a single syntactically identifiable constituent, as explained in section 10.9.

10.3.1 Possessive noun phrases

Possessive noun phrases mark at least three semantic relations between the two words involved. These include ownership (e.g., *my ax*), interpersonal relations (e.g., *my father*, *my teacher*), and part-whole relations (e.g., *my arm*). One of the two possessive noun phrase types marks all three of these possession types identically, while the other possessive noun phrase type distinguishes between body-part relations and the other two types of relations. (See §4.3.1 for inherently possessed kinship terms as a subclass of nouns, §4.6.4 for morphological properties of the genitive case marker *-n*, and §4.4.2 for genitive pronouns.)

In all possessive noun phrases, the genitive element (the possessor) always precedes the element representing the possessed entity (the possessee/possessum). Generally, possessive noun phrases consist of at least two separate words, both nouns (the first noun can be a genitive pronoun). The clearest exception to this two-word trend is noun phrases consisting of a genitive element (i.e., a genitive pronoun or a noun/noun phrase cliticized with the genitive case marking enclitic *-n*) followed by the pronominal enclitic *-a* '3 Possessee' (10). (The possessee pronominal enclitic *-a* only occurs in the language only after genitives; §4.4.2.) In these cases, the second noun (the possessed entity) is replaced by the pronominal enclitic. The noun replaced by *-a* could be any *third person* referent, human, animate, or inanimate; for example the sentences in (11) could both be proper responses to either question in (12).

- (10) cachina-n intac chish-e-c matses-n-a chedo-bi
 chicken-Gen blood suck-Npast-Indic **people-Gen-3Poss** too/etc-Emph
 ‘They [vampire bats] suck chickens’ blood, even **people’s**.
 C-V 016 cuesban 18
- (11a) cun-a ne-e-c
 1Gen-3Poss be-Npast-Indic
 ‘It/he/she/they is/are mine.’
 *‘You’re mine.’
- (11b) debi-n-a ne-e-c
 Davy-Gen-3Poss be-Npast-Indic
 ‘It/he/she/they is/are Davy’s.’
- (12a) tsundan mado ne-e-c
 whose son be-Npast-Interr:3
 ‘Whose son is it?’
- (12b) tsundan di ne-e-c
 whose hammock be-Npast-Interr:3
 ‘Whose hammock is it?’

The noun naming the entity replaced by -a may occur overtly in the sentence in addition to -a, but always producing a somewhat different meaning (13) and always externally to (i.e., in apposition to, not forming a prototypical constituent with) the noun phrase containing -a, whether adjacent to it or not (13b & 14).

- (13a) aton di bed-o-mbi
 3Gen hammock get-Past-1A
 ‘I took his hammock.’
- (13b) aton-a di bed-o-mbi
 3Gen-3Poss hammock get-Past-1A
 ‘For him (lit. ‘His’), I got a hammock.’
- (14) aton bēnē-n-a-tsen daēdca-e-c uitsun
 3Gen husband-Gen-3Poss-next plait-Npast-Indic **bracelet**
 ‘She weaves her husband’s next, bracelets.’

A-XIII 043 uitsun 17

Suffixation with -a does not change the lexical class membership of the noun roots. It is clear that they remain nouns from their morphological and syntactic possibilities, such as instrumental case marking (15) and their ability to occur as a postpositional object (16).

- (15) debi-n-a-n cues-Ø
 Davy-Gen-3Poss-**Instr** kill-Imper
 ‘Kill it with Davy’s (shotgun).’
- (16) cun-a dayun sia cani-e-c
 1Gen-3Poss **beside** pepper grow-Npast-Indic
 ‘Chili peppers grow beside mine (house).’

In a sense, possessive noun phrases involving genitive pronouns are the most easily identified noun phrase type because genitive pronouns only occur in possessive noun phrases and are formally distinct from other pronouns and any other words (see Table 4.6). The constituency of possessive noun phrases like that in (17a) is clear: the order of the two constituents cannot be inverted (17b), nor can the genitive pronoun occur alone without the possessed noun (17c), although the possessed noun normally can (17d).

- (17a) cun nĕnĕ beccho-Ø '...Bring me my tobacco snuff!...'
 1Gen tobacco give.me-Imper
 + A-XIII 022 nĕnĕ 23
- (17b) *nĕnĕ cun bĕccho-Ø
- (17c) *cun bĕ-ec cho-Ø
- (17d) nĕnĕ bĕccho-Ø
 tobacco give.me-Imper
 'Bring me (some/the) tobacco snuff!'

The constituency status of these phrases is supported by syntactic tests using the second-position enclitic -da 'Uncertainty,' which follows the first constituent of the sentence. What we find is that -da can follow the possessed (second) noun (18a) but not the genitive (first) element (18b). In fact, the enclitic -da can never occur directly following a genitive pronoun (i.e., without -a '3 Possessee' intervening) under any circumstances.

- (18a) min cano-da ne-e-c
 2Gen canoe-Uncert be-Npast-Interr:3
 'It is your canoe?'
- (18b) *min-da cano ne-e-c
- (18c) mitsana-da cano ne-e-c 'Is the canoe yours?'
 2Gen:3Poss-Uncert canoe be-Npast-Interr:3

To express a notion like ‘Is the canoe yours?’, which one might expect would be expressed with a sentence like the ungrammatical (18b), a sentence like (18c) is used instead (see §4.4.2 for suppletive pronoun forms with -n-a).

The other (minor) exception to the generalization that genitive noun phrases are composed of at least two words involves the first-person genitive pronoun and “abbreviatable” kinship terms (listed in Table 4.1, §4.3.1), where there is obligatory phonological union of the genitive pronoun and the possessed noun when the abbreviated form is used (as discussed in §2.6.1.3):

- | | | | |
|-------|---|-------|---|
| (19a) | /kúm.pa nek/
<u>cun papa ne-e-c</u>
1Gen father be-Npast-Indic
‘He is my dad.’ | (19b) | /kun pa.pá nek/
<u>cun papa ne-e-c</u>
1Gen father be-Npast-Indic
‘He is my father.’ |
|-------|---|-------|---|

Another fairly straight forward type of noun phrase is that composed of a genitive-case-marked full noun preceding a possessed full noun (10 & 20).

- (20) shaë-n pabiate pictsëc ic-e-c
giant.anteater-Gen ear small be-Npast-Indic
‘The giant anteater’s ears are small.’

A-IV 027 shaë 26

Nesting of possessive noun phrases is allowed and produced spontaneously in texts to a least one level (21) and to two and three levels in elicitation.

- (21) umbi bed-ac-sho is-ash cun mado-n chido
1Erg grab-Infer-when:S/A/O>O see-after:S/A>S 1Gen son-Gen woman
que-ash cun tita que-onda-sh
say-after:S/A>S 1Gen daughter.in.law say-Dist.Past-3
‘After seeing that I had taken her, he [the speaker’s father] said, “My son’s wife,” and then said, “My daughter-in-law”.’

+ K-XXII 012 chema 116

While possessive noun phrases of the N-n N type can be used to represent part-whole relationships (20, 22, & 23), many of these same relationships can be represented just as well by a noun phrase composed of two nouns in series without the possessor being marked with the genitive case marker -n (24 & 25).

- (22) bëui-n mapi dë-uisac-quo ic-e-c bëui-n mapi
 tamandua-Gen head nose-long-Aug be-Npast-Indic tamandua-Gen head
 ‘The tamandua’s head is long-nosed, the tamandua’s head.’
 A-IV 026 bëui 04
- (23) podo bushcu-tséc tsad-quid shaë-n sinnad-n podo
 frond short-Dim be:Pl-Hab giant.anteater-Gen palm.genus-Gen frond
 ‘The fronds are short, the shaën sinnad palm’s fronds.’
 2-p09-L shaën sinnad 05
- (24) ad-sho-bi aton bacuë-bo-n mapi maishuc-quid
 do.thus-when:S/A/O>O-Emph 3Gen child-Pl-Erg head eat.head-Hab
chompish mapi
 small.two.toed.sloth head
 ‘When they get it, their children eat the head, the small two-toed sloth head.’
 A-IV 024 chompish 18
- (25) acte cuëma-n bucu podo pe-quid mëincanchush ne-e-c
 river edge-Loc cecropia leaf eat-Agt.Nzr three.toed.sloth be-Npast-Indic
 ‘Three-toed sloths are ones that eat leaves of cecropia trees along rivers.’
 A-IV 023 mëincanchush 15

The part-whole relations that can be marked in both of these ways seem to be only those involving plant or animal parts. House or artifact parts do not occur in genitive-marked possessive phrases (26-28).

- (26a) cun shubu quënë-ua-nu (26b) *cun shubu-n quënë-ua-nu
 1Gen house enclosure-Vzr:make-Intent:1
 ‘I’m going to make my house walls.’
- (27a) moco mapi ‘blunt end of ax head’ (28a) pia shëta ‘arrow head’
 ax head arrow tooth
- (27b) *moco-n mapi (28b) *pia-n shëta

NN noun phrases, by contrast, can be used to code any part-whole relation. This suggests that genitive-marked possessive noun phrases are secondary means of marking part-whole relations. They are secondary in two ways: coding part-whole relations seems to be an extension of the ownership/interpersonal relation coding function of this phrase type, rather than its central function. And it seems that the principal means for coding part-whole relations is with NN noun phrases, since these can code all part-whole relations.

The meaning of the genitive-case-marked and the non-marked noun phrases appears to be semantically identical, as in (29), but when the possessed noun is not really considered a 'part,' as in (30) where pambid refers more to an edible substance than to a body part, there is a significant difference between the two types of noun phrases (30).

(29a) bēdi nami
jaguar muscle.tissue
'jaguar flesh.'/*'its kill'

(29b) bēdi-n nami
jaguar-Gen muscle.tissue
'jaguar's flesh.'/*'its kill'

(30a) bēdi pambid
jaguar meat
'jaguar meat (i.e., its flesh)'

(30b) bēdi-n pambid
jaguar-Gen meat
'jaguar's meat (i.e., its kill)'

It is clear that noun phrases like (29b) are possessive constructions by analogy to the other possessive noun phrases presented above (ownership and interpersonal relations). But what we must question here is whether we should consider noun phrases like (26a) and (30a) possessive constructions at all. The motivation for calling them possessive constructions is that they sometimes convey the same meaning as their genitive-marked counterparts, as do the pair of noun phrases in (29). However, it is possible to suggest that the language provides two ways to represent part-whole relationships: i) using possessive noun phrases, arguably with second noun (the "part") being construed as

owned by the first noun (the “whole”); and ii) using an unmarked adjacent noun to modify another noun (an N N noun phrase), arguably construing the first noun as *qualifying* the second noun, rather than possessing it (e.g., a jaguar head would be a type of head, rather than a head belonging to a jaguar). The fact that ownership is never represented by an N N noun phrase, and that N N noun phrases are used for modifying a head noun with another noun that is not in a part-whole relationship (see §10.3.5) encourages the analysis that these are not possessive constructions.

Regardless of what we call these non-case-marked part-whole noun phrases, there is still the complicated issue of predicting which of the two noun-phrase types will be used to represent a part-whole relationship involving a plant or animal (including humans). It seems that there are semantic as well as discourse factors governing which of the two syntactic possibilities the speaker will choose for representing a particular part-whole relation. In general, the pattern appears to be similar to that in English.

One relevant factor seems to be whether the part is attached to the whole. In order for the possessor to be allowed to remain unmarked, the possessed entity must either be presently attached or must have been attached in the past in some form. Thus, seedlings and animal young can be considered “parts,” and can be referred to with either noun phrase type (31 & 32).

(31a) titado-n bacuë
peach.palm-Gen offspring
'peach palm's fruit/flower/seedling'

(31b) titado bacuë
peach.palm offspring
'peach palm fruit/flower/seedling'

(32b) shēten-n bacuë
collared.peccary-Gen offspring
'collared peccary's young'

(32b) shēcten bacuë
collared.peccary offspring
'collared peccary young'

With this restriction in mind, it seems counterintuitive to find that detached body parts (23, 24, 33, & 34; but cf. 35) are more likely to occur in non-genitive-marked noun phrases than are attached body parts (20, 22, & 36, but cf. 25).

- (33) adembidi bēshuicquid podo chic-shun mene-quin
 likewise:Tr **saki.monkey arm** pull.off-after:S/A>A give-while:S/A>A
pe-quid matses-n
 eat-Hab Matses-Erg
 ‘Also, Matses pull off the saki monkey’s arms, and then eat giving out the arms.’
 A-I 055 bēshuicquid 17
- (34) ado-ac-sho matses-n nēishamē taë tan-shun
 do.thus-Infer-when:S/A/O>O Matses-Erg **tapir foot** track-after:S/A>A
bishuc-quid
 peel-Hab
 ‘After that, Matses track the tapir footprints (lit. feet) and then skin it.’
 A-XIII 023 nēishamē dectante 07
- (35) shubu podo sha-ue-tsēc-ec ush-quid
palm.species frond crown-lie-Dim-while:S/A>S sleep-Hab
 ‘They [rice rats] sleep laying among shubu palm fronds at the crown [where the palm fronds emerge from trunk].’
 A-IV 017 tacbid umu 13
- (36) nēishamē-n taë pada pada-pambo ic-quid
tapir-Gen foot (redup=Adjzr) flat-Aug be-Hab
 ‘The tapir’s foot is flat/smooth.’
 A-I 045 nēishamē 05

At least in elicitation, detachment is required for human body parts to be expressed without a genitive marker:

- | | | | |
|------|--|-------|--|
| (37) | <u>matses-n mapi</u>
person-Erg head
‘person’s head (detached or otherwise)’ | (37b) | <u>matses mapi</u>
person head
‘a detached human head/skull’ |
|------|--|-------|--|

But this semantic variable of attachment cannot perfectly predict which noun phrase type will be used, neither in texts nor in elicitation. The trend might better be explained in

terms of discourse parameters. The general pattern seems to be that if the possessor is the topic (and the speaker chooses to use a full noun instead of a pronoun), then the noun will be genitive-marked. Unfortunately, no single discourse factor consistently predicts which phrase type will be used. For example, both (38) and (39) are from descriptive texts about the natural history of the respective palm species (and directly preceded by sentences about the palm), while both (40) and (41) are from descriptive texts about the natural history of the respective animals (with these sentences representing the first mention of the palm in the texts).³

- (38) mio bacuë matses-n pe-quid 'Matses eat mio palm fruits.'
 palm.species fruit Matses-Erg eat-Hab
 A-I 016 mio 02
- (39) shubu quëdë-n bacuë capa-n pe-quid
 palm.species barb-Gen fruit squirrel-Erg eat-Hab
 'Squirrels eat shubu quëdë plam fruits.'
 1-p02-B shubu quëdë 06
- (40) pinchuc bacuë chedo pe-quid shëctenamë ne-e-c
 palm.species fruit etc eat-Agt.Nzr white.lipped.peccary be-Npast-Indic
 'The white-lipped peccary is an eater of pinchuc palm fruits and other palm fruits'
 A-I 044 shëctenamë 27
- (41) pinchuc-n bacuë pe-e-c
 palm.species-Gen fruit eat-Npast-Indic
 'They [squirrels] eat the pinchuc palm's fruits.'
 A-IV 008 capa 14

Perhaps a combination of factors determine which possessive phrase will be used. Or perhaps it just depends on how the speaker construes the part: as being possessed by the whole, or as being a type of something. Detachment may discourage the ownership construal, as might the non-topic status of the possessor. Section 10.3.5 discusses N N

³ "Proximity to whole" might be a factor as well here, since squirrels eat palm nuts sitting right on top of the fruit bunches, though I believe they detach the fruit before eating it. Meanwhile, humans and peccaries eat the palm fruits on the ground.

noun phrases where nouns modify other nouns, but it is important to first see how locatives, adjectives, and adverbs modify nouns in noun phrases.

10.3.2 Locative noun phrases

Noun phrases containing a noun modified by a locative postpositional phrase (42a) or a locative adverb (42b) are analogous to genitive noun phrases, with the locative adverb/postpositional phrase always preceding the head noun.

- | | | | |
|-------|---|-------|--|
| (42a) | <u>tied</u> <u>nantan antinte</u>
swidden on fish.poison.vine
'cultivated fish poison vine'
(lit. 'on-the-farm fish poison vine') | (42b) | <u>abuc checa</u>
high opossum
'Western woolly opossum'
(lit. 'high up [i.e., arboreal] opossum') |
|-------|---|-------|--|

As with possessive noun phrases, locative noun phrases can be used for *ad hoc* descriptions (42a) or as lexicalized terms (42b). The similarity between possessive and locative noun phrases is emphasized by the fact that the most general/neutral locative postposition is the enclitic -n 'Locative/Temporal' which is homophonous/polysemous with the genitive marker -n (described in the preceding section), giving rise to possible dual interpretations of terms like that in (43a) as representing either locative or genitive noun phrases.

- | | | | |
|-------|---|-------|-----------------------|
| (43a) | <u>acte-n</u> <u>chichun</u>
water/river-Loc/Gen scorpion
'freshwater shrimp' (lit. 'water/river scorpion' or perhaps 'river's scorpion') | (43b) | * <u>acte chichun</u> |
|-------|---|-------|-----------------------|

One could imagine a river or other body of water metaphorically or mythically owning or being the mother or father of shrimp, but speakers assert the locative interpretation is the correct one.

The two noun phrase types parallel each other rather closely: locative noun phrases consist of a head noun preceded by a noun (the postpositional object) marked by

the locative postposition -n (or another locative postposition) or preceded by a locative adverb (i.e., N-n N, N Post_{loc} N, or Adv_{loc} N); and genitive noun phrases consist of a head noun preceded by a noun (the possessor) marked by the genitive enclitic -n or by a genitive pronoun (i.e., N-n N or Pro_{gen} N). The similarity does not end here. We find that as with possessive noun phrases, there is alternation between N-n N noun phrases and N N noun phrases (i.e., where the locative noun is not marked with a locative postposition). With lexicalized terms, only one noun phrase type is generally allowed (43-45). With *ad hoc* terms, more than one possibility is usually allowed (46 & 47). (But note that a relative-clause-like phrase, like that in [47c], or a phrase with a more specific postposition, like that in [46b] are often preferred for *ad hoc* labels.)

- | | |
|--|--|
| (44a) <u>acte-n</u> _____ <u>matish</u>
water/river-Loc flea/louse
'water beetle/diving beetle' | (44b) * <u>acte</u> <u>matish</u> |
| (45a) <u>acte</u> _____ <u>chiun</u> 'clam'
water/river spoon | (45b) * <u>acte-n</u> <u>chiun</u> |
| (46a) <u>acte</u> _____ <u>cuesban</u>
water/river bat
'river bat' | (46b) <u>acte</u> _____ <u>nantan</u> <u>cuesban</u>
water/river on bat
'on-the-river bat' |
| (46c) * <u>acte-n</u> <u>cuesban</u> | |
| (47a) <u>bēdasid</u> <u>chido</u>
Brazil woman
'Brazilian woman' | (47b) <u>bēdasid-n</u> <u>chido</u>
Brazil-Loc woman
'Brazilian woman' |
| (47c) <u>bēdasid</u> <u>ic-ac-no</u> _____ <u>ic-quid</u> <u>chido</u> 'Woman who is in/from Brazil'
Brazil be-Act.Nzr-Loc be-Agt.Nzr woman | |

The location can even be a tree or plant, such as (48), which refers to a (butterfly?) larva that is habitually found on plantain plants, or (49), which refers to a hunting blind that Matses sometimes make up in a fig tree to shoot birds that come to eat the ripe fruits.

- (48) mani macu
plantain insect.larvae
'plantain worm'
- (49) shuish shubu
fig house/blind
'hunting blind built up in fig tree'

There are several roots in Matses that occur polysemously as locative adverbs and as nouns (§7.3.4). There are four such roots: nimëduc 'primary forest/in primary forest,' anshantuc 'swamp/in a swamp,' mananuc 'upland forest/in upland forest,' and tsimpiduc 'valley/in a valley.' Thus, it is a moot point whether noun phrases like those in (50) are locative Adv N noun phrases or locative N N noun phrases.

- (50a) nimëduc bëyun
primary.forest plant.species
'wild bëyun' plant (in contrast to
the cultivated variety)
- (50b) tsimpiduc sinnad
valley palm.genus
'valley sinnad palm species'
(i.e., species that grow in valleys)

10.3.3 Adjectives in noun phrases

The type of construction that I refer to with the label "noun adjective noun phrase (N Adj noun phrase)" is a phrase that contains one noun (the head) and one non-derived, non-relativized/nominalized adjective root, as in (51a) and (52a). These phrases can act as arguments in active clauses (51a) or as predicates in equative clauses (52a).

- (51a) shupud iuë dedo-o-mbi
bag heavy carry.on.back-Past-1A
'I carried the heavy bag.'
- (51b) *iuë shupud dedo-o-mbi
- (51c) *shupud dedo-o-mbi iuë
- (52a) debi dada ushu ne-e-c
Davy **man white** be-Npast-Indic
'Davy is a gringo [lit. white man].'
- (52b) *ushu dada deibi ne-e-c
- (52c) *debi dada ne-e-c ushu

The structure of N Adj noun phrases exhibits strict word order and inseparability: the noun must always directly precede the adjective (51 & 52). This contrasts with noun

phrases containing adjectives in nominalized/relativized verb phrases (§10.8), in that these do not have strict word order (53; nominalized verb phrases in **bold font**).

(53a) isan pachi pachi-mbo ic-quid daësh-nu
 palm.species (redup=Deintens) soft-Aug be-Agt.Nzr eat.gnawing-Intent:1
 ‘I’m going to eat isan palm fruits that are a bit soft.’

(53b) **pachi pachi-mbo ic-quid** isan daësh-nu
 (redup=Deintens) soft-Aug be-Agt.Nzr palm.species eat.gnawing-Intent:1
 ‘I’m going to eat isan palm fruits that are a bit soft.’

Adjectives in N Adj noun phrases must modify the noun with respect to an intrinsic and enduring property of the noun (54a). If the characteristic is not intrinsic, a relative clause, accomplished by nominalizing a copular clause, is used (53 & 54b). Thus, (54a) contrasts with (54b) in that in the first example ‘redness’ must be an intrinsic property of the (hypothetical) kingfisher, while in (54b) the bird could have been painted with annatto dye. Similarly, (51a) above must refer to a bag made of heavy material, rather than to one filled with heavy contents. As a result, some noun-adjective combinations do not occur naturally as noun phrases because their semantics precludes a permanent relationship. So, for example, while (55a) is natural, (55b) would have to refer to some imagined magical soup that never cools down.

(54a) chadac piu is-o-mbi ‘I saw a red kingfisher.’
 kingfisher red see-Past-1A [an invented species of bird with red plumage]

(54b) chadac piu-mbo ic-quid is-o-mbi ‘I saw a kingfisher that was red.’
 kingfisher red-Aug be-Agt.Nzr see-Past-1A

(55a) ënë chu-mbo ic-quid bë-e-c cho-Ø
 broth warm-Aug be-Agt.Nzr bring-Npast-Indic come-Imper
 ‘Give me some hot soup.’

(55b) ?ënë chu bë-e-c cho-Ø

Further complicating the use of these constructions is the fact that social convention dictates which noun-adjective associations are possible. For example, lexicalized terms that designate names for animals, plants, people, or other entities exploit this noun-adjective construction, and never involve relative clauses (56; §3.2.6). This distinction may superficially resemble the lexicalized/non-lexicalized distinction in English terms like *blackbird* vs. *black bird*, but note that usages like (54a) are not lexicalized terms. Novel usages of this construction, like (57a), are usually interpreted as an attempt to coin a new term, or, minimally, suggest that the speaker and the hearer are both very familiar with the referent and its (enduring) property (note that the Matses word aspe means shallow in reference to the shape of the lake basin, rather than to water level, which can be quite variable). To refer to a shallow lake that the listener may not be familiar with, or to shallow lakes in general (outside of any conventionalized categorization of lakes), a relative clause is preferred (57b).

- (56) bēdi piu chui-nu
 jaguar red tell-Intent:1
 'I'm going to tell about the puma.' [the name for puma is literally 'red jaguar,' but there is no ambiguity because there are no red jaguars in the wild or in myths]
 A-IV 037 bēdi piu 02

- | | |
|--|---|
| (57a) <u>chian aspe</u>
lake shallow
'the shallow lake/Shallow Lake' | (57b) <u>chian aspe-mbo</u> <u>ic-quad</u>
lake shallow-Aug be-Hab
'a shallow lake' |
|--|---|

So what we find in Matses is that some expressions, like those referring to bats in (58), are superficially ambiguous: they could refer to either lexicalized names, or to *ad hoc* descriptive phrases used to refer to categories or specific referents that are recognized by members of the speech community, but which do not have habitually-used linguistic labels to refer to them.

- (58) dadpen cuesban ic-e-c cuesban chëshë-mpi cuesban ushu
 many bat be-Npast-Indic bat **black-small** bat **white**
 ‘There are many bats: little black bats, white [actually, ‘light-colored’] bats.’
 E-XI 049 cuesban 18

In other words, N Adj noun phrases are restricted to four usages: i) as conventionalized labels for pre-existing categories recognized by the speech community (lexicalized terms); ii) as attempts to coin a new expression; iii) as *ad hoc* labels for pre-existing categories that are recognized by at least the interlocutors; or iv) for referring to an entity with respect to a very enduring property. *Ad hoc* labels for *ad hoc* categorizations (not involving an enduring property) do not exploit this construction, but rather use nouns modified by relative-clause-like nominalizations. The form of the noun phrases in (58) shows that these cannot be *ad hoc* categorizations, but at the same time, morpho-syntactic tests show that these terms are not lexicalized. Fleck *et al.* (2002) describes the how Matses use *ad hoc* terms to refer to recognized, but unnamed categories of bats.

Many adjectives can be prefixed with body-part prefixes (§6.5.1), and these prefixed adjectives can similarly occur in noun phrases modifying the noun (59).

- | | |
|---|---|
| <p>(59a) <u>sipi</u> <u>ëc-sed</u>
 tamarin lip-white
 ‘Mustached Tamarin’
 (lit. ‘white-lipped tamarin’)</p> | <p>(59b) <u>odosco</u> <u>ma-piu</u>
 woodpecker head-red
 ‘red-headed woodpecker’
 (several species of woodpecker)</p> |
|---|---|

Although the prefixes refer to body parts, which are notions usually coded by nouns, the adjectives do not cease to behave as adjectives when prefixed. Thus, noun phrases containing a noun followed by a prefixed adjective need not be considered a separate noun phrase type.

10.3.4 Noun phrases containing adverbs

Some, but not all adverbs can occur in noun phrases, modifying the head noun. Different noun-modifying adverbs modify nouns differently with respect to the adverb's position relative to the head noun and with respect to whether the adverb actually occurs as part of the noun phrase or in apposition to the noun. The morpho-syntactically defined subclasses of adverbs presented in section 7.10 are useful for this description: manner, deictic, and temporal adverbs cannot directly modify nouns or form parts of noun phrases; dimension adverbs occur after the head noun within the noun phrase; location adverbs occur before the head noun within the noun phrase; the noun-identifying adverb *utsi* 'other/another' can occur before or after the head noun, with slightly different semantic effects; and quantitative adverbs seem to occur in apposition to the noun they modify, occurring before, after, or separate from the noun, with no apparent semantic change associated with the different positions. Each relevant adverb class will be discussed in turn below.

Dimension adverbs are syntactically similar to adjectives in that they always come after the head noun in the noun phrase:

- (60a) *chido nua is-o-mbi*
 woman big see-Past-1A
 'I saw Fat Woman.'
- (60b) **nua chido is-o-mbi*
- (60c) *chido nuacquid isombi* 'I saw a big/fat woman.'
chido nua ic-quid is-o-mbi
 woman big be-Agt.Nzr see-Past-1A

As is the case for N Adj noun phrases (preceding section), there is the restriction that a simple noun phrase containing a bare dimension adverb must refer to a lexicalized entity or an entity that the both the speaker and the hearer know well. But this restriction is even stricter with dimension adverbs than with adjectives. Recall from the preceding

section that adjectives can occur in non-lexicalized noun phrases referring to an item with which the hearer is unfamiliar if the adjective refers to an enduring property of the noun, as in example (51a) repeated here as (61a). What we find is that dimension adverbs cannot be used as bare roots in noun phrases regardless of whether the property is an enduring one, but rather it must refer to a lexicalized phrase, or it will be understood as an attempt by the speaker to coin a new term (61b).

- (61a) shupud iuë dedo-o-mbi
 bag heavy carry.on.back-Past-1A
 'I carried the heavy bag.' [bag made of heavy material/*with heavy contents]
- (61b) ?shupud nua dedo-o-mbi
 bag large carry.on.back-Past-1A
 [would have to be a newly-coined term for 'suitcase' or something]

Location adverbs as parts of noun phrases were introduced above in the section on locative noun phrases (§10.3.2), and will be mentioned here briefly for the sake of comparison. Location adverbs (62 & 63), unlike adjectives (64) and dimension adverbs (65), precede the head noun in the noun phrase.

- | | |
|--|--|
| <p>(62) <u>abuc maca</u>
 high rat
 'Spiny Tree Rat'
 (lit. 'high up rat')</p> | <p>(63) <u>mapictsëc sipi</u>
 low tamarin
 'tamarin that lives in the subcanopy'
 (possible <i>ad hoc</i> term for Goeldi's Monkey)</p> |
| <p>(64) <u>maca tanun</u>
 rat gray
 'Water Rat' (lit. 'gray rat')</p> | <p>(65) <u>dada bushcu</u>
 man short
 'Shorty' (a person's nickname)</p> |

Noun phrases composed of a bare locative adverb plus a noun can represent a lexicalized term, as in (62), or it can be a *ad hoc* label, as in (63); i.e., locative adverbs do not have the restriction that dimension adverbs have, that the noun phrase must refer to a lexicalized term.

The one noun-identifying adverb, utsi ‘other, another,’ as described in detail in the adverb chapter (§7.3.8) occurs polysemously as a noun (or perhaps it is better described as a hybrid between noun and adverb), so it is hard to make claims as to its syntactic behavior because we cannot always know if it is a noun or an adverb in noun phrases. Nevertheless, we can tentatively talk about its distribution and semantic pattern assuming it is an adverb where it occurs as part of noun phrases. What we find is that utsi can occur before or after the head noun, with some minimal semantic differences associated with its position relative to the head noun (66 & 67).

- | | |
|---|--|
| <p>(66a) <u>chido utsi bed-e-mpi</u>
 woman another take-Npast-1A
 ‘I’m going to marry some other woman.’
 (i.e., a different woman)</p> | <p>(66b) <u>utsi chido bed-e-mpi</u>
 another woman take-Npast-1A
 ‘I’m going to marry another woman.’
 (a different woman, or one more woman)</p> |
| <p>(67a) <u>uicchun utsi is-o-mpi</u>
 bird another see-Past-1A
 ‘I saw another bird/species of bird.’
 (i.e., a different one)</p> | <p>(67b) <u>utsi uicchun is-o-mpi</u>
 another bird see-Past-1A
 ‘I saw another bird/species of bird.’
 (a different one, or an additional one)</p> |

Unlike utsi, the position of the quantifier adverbs relative to the noun being modified does not seem to have any important effect on the meaning of the clause (68).

- | | |
|---|---|
| <p>(68a) <u>matses dadpen cho-o-sh</u>
 people many come-Past-3
 ‘Many people came.’</p> | <p>(68b) <u>dadpen matses cho-o-sh</u>
 many people come-Past-3
 ‘Many people came.’</p> |
|---|---|

In fact, quantifiers can occur anywhere in a sentence and still modify a noun phrase, even from positions that are not adjacent to the modified noun (69-71).

- (69) abitedi cuëte bacuë che-quid senad ne-e-c
 all **dicot.tree fruit** eat.unchewed-Agt.Nzr deer be-Npast-Indic
 ‘Deer are eaters of all types of dicot tree fruits.’

- (70) abitedi-shun tsanca-mpi matses-n pe-e-c
 all-Ev.Init:Tr squirrel.monkey-small Matses-Erg eat-Npast-Indic
 ‘All Matses eat squirrel monkeys.’

A-IV 004 tsanca 09

- (71) dadpen-quio capu-quad cuesban nuntan-bi
 many-Aug locomote-Hab bat inside-Emph
 ‘Many bats fly around right inside the house.’

D-X 057 cuesban 06

To keep track of which noun is being modified by the quantifier, the enclitic -shun occurs on the quantifier when it refers to an ergative (70), genitive or instrument participant, and without -shun when it refers to an absolutive argument (69 & 71). Unlike dimension and locative adverbs, quantifier adverbs can modify a third-person core argument that occurs as zero pronoun (the third person anaphoric pronoun is \emptyset , for both ergative and absolutive arguments; §§4.4.1, 11.2.4). In the absence of the explicitly-mentioned third-person noun phrase, the quantifier alone may appear as though it itself is the core argument (72 & 73).

- (72) tsise-n abitedi pe-e-c ‘Coatis eat **everything**.’
 coati-Erg all eat-Npast-Indic

A-IV 028 tsise 09

- (73) ad-en se-ac-sho abitedi-shun nēishamē pe-quad
 do.thus-Advzr:Tr pierce-Infer-when:S/A/O>O all-Ev.Init:Tr tapir eat-Hab
 ‘After it is pierced like that, **everyone** eats the tapir.’

A-XIII 023 nēishamē dectante 12

The issue of whether quantifiers are adverbs, nouns, or something different has already been treated elsewhere (§7.3.7). But here I point out that like many other adverbs, quantifiers can modify nouns, but due to the lack of linear order, etc. in relation to the head noun, it is not possible to consider them as part of the noun phrase, i.e., as forming a constituent with the noun they modify. They are nevertheless linked to the noun phrase by apposition, and the ability to be displaced to a position non-adjacent to the noun is

accompanied by the transitivity agreement enclitic *-shun*, which helps link the adverb to the noun it modifies. We can talk about a continuum of how integrated adverbs are to the noun they modify. Table 10.1 illustrates this continuum.

Table 10.1. Comparison of different classes of adverbs in terms of level of integration into the noun phrase (adverbs exhibiting highest level of integration listed first).

	Properties associated with integration		
	Modifies noun	Adjacency required	Fixed linear order
Adjectives	yes	yes	yes
Dimension adverbs	yes	yes	yes
Locative adverbs	yes	yes	yes
<i>utsi</i>	yes	yes	no
Quantifier adverbs	yes	no	no
Other adverbs	no	no	no

10.3.5 Noun-Noun noun phrases

Nouns modifying head nouns in noun phrases (N N noun phrases) can exist in several configurational and semantic relationships. The positioning of the modifying noun seems to reflect the part of speech that it functions most similarly to. We can describe some of these N N noun phrases as having one of the previously described noun phrase types as models (Table 10.2).

Table 10.2. Different types of noun-noun relations in noun phrases (head noun in **bold**).

Semantic relationship	Relative order	Model noun phrase
Part-whole	N N	N- <u>n</u> N (possessive noun phrase)
Locative identifier	N N	N- <u>n</u> N (locative noun phrase)
Attributive modifier	N N	N Adj/N Adv _{dimens} (attributive noun phrase)
Composition material	N N	—
Target ('for')	N N	—
Hybrid	N N	—

Possessive and locative N N noun phrases as compared to N-n N noun phrases were discussed above (§§10.3.1, 10.3.2). Here, I present a few more examples for comparison.

N N noun phrase	N- <u>n</u> N noun phrase
(74a) <u>senad bacuë</u> deer offspring 'fawn' (baby deer)	(74b) <u>senad-n bacuë</u> deer-Gen offspring 'fawn' (deer's young)
(75a) <u>tied bëyun</u> swidden plant.species 'swidden <u>bëyun</u> (plant with a potato-like edible tuber)'	(75b) <u>tied-n bëyun</u> swidden-Loc plant.species 'in-the-swidden <u>bëyun</u> ' (i.e., the cultivated variety)

There are a few words that behave polysemously as locative adverbs and as nouns (see end of §10.3.2). It is impossible to determine if these words are being used as nouns or as adverbs in noun phrases like (76) and (77). This ambiguity is expected in light of the observation that location N N noun phrases seem to use Adv N noun phrases as their structural model.

(76) <u>nimëduc canchi</u> primary forest pineapple 'wild pineapple'	(77) <u>mananuc sinnad</u> upland forest palm.genus 'upland forest species of <u>sinnad</u> palm'
--	---

As described in the adjective chapter (§6.10.2) there are many attributive concepts in Matses that are nouns instead of adjectives, like bëdi 'variegation/spotted pattern' (rather than 'spotted') or sëdëc 'vertical stripe(s)' (rather than 'striped'), so it is not surprising to find many N N noun phrases that look a lot like N Adj noun phrases (78 & 79). However, N N noun phrases with semantically prototypical nouns as attributive modifiers are also common, and they follow the same syntactic pattern (80 & 81).

- | | | | |
|-------|--|-------|--|
| | N N noun phrase | | N Adj noun phrase |
| (78a) | <u>mani</u> <u>pada</u>
plantain flatness
'wild plantain/banana-like plant' | (78b) | <u>mani</u> <u>ushu</u>
plantain white
'one of several plantain cultivars' |
| (78a) | <u>iui</u> <u>chuda</u>
tree rift
'tree species with rifts
and channels on its trunk' | (79b) | <u>iui</u> <u>ise</u>
tree smooth
'tree species with smooth bark' |
| (80a) | <u>chido</u> <u>tsanca</u>
woman squirrel.monkey
'pretty woman' | (80b) | <u>chido</u> <u>chëshë</u>
woman black
'black woman' |
| (81a) | <u>dada</u> <u>piush</u> 'stupid man'
man tortoise | (81b) | <u>dada</u> <u>icsa</u> 'crazy man'
man bad |

Note that these attributive N N noun phrases, like N Adj noun phrases, cannot refer to *ad hoc* labels for *ad hoc* categories. But *ad hoc* labels can be expressed with N N noun phrase if the modifying noun carries the attributive enclitic *-pa* 'large (body part)' (82; §4.6.2).

- | | | | |
|-------|--|-------|---|
| (82a) | <u>dada</u> <u>pucu-pa</u>
man belly-large
'big-bellied man' | (82b) | <u>chido</u> <u>mapi-pa</u>
woman head-large
'big-headed woman' |
|-------|--|-------|---|

One N N noun phrase type that does not have a structural model is that where the modifying noun (always the first noun) refers to the material that the head noun is made of (83).

- | | | | |
|-------|---|-------|--|
| (83a) | <u>chështe</u> <u>chiun</u> 'metal spoon'
machete spoon | (83b) | <u>cuëte</u> <u>putu</u> 'saw dust'
dicot.tree dust |
| (83c) | <u>tanac</u> <u>shubu</u>
palm.species house
'house thatched with <u>tanac</u> palm leaves' | (83d) | <u>shoccodo</u> <u>shubu</u>
wild.banana house
'house thatched wild banana leaves' |

These “composition material N N noun phrases” can be regularly used terms (83a-c) or completely *ad hoc* descriptive phrases such as (83d), which would refer to a type of house that no one would think of making because wild banana leaves are not good for thatching, but one could imagine it as an emergency shelter or a fool’s handiwork.

Another N N noun phrase type that does not have a non-N N model is one where the modifying noun (the first noun) refers to what the head noun is good for or intended for. For example, (84a) can refer to aspirin and (84b) refers to a species of plant that cures a malady believed by the Matses to be caused by exposure to a jaguar spirit. The terms in (85) are subordinate category terms for the three species of Astrocaryum palms that the Matses know, two of which refer to the item that material from the palm is used to make (fire fans plaited from the leaflets of the unopened new leaf [85a]; and hammocks made from the twisted leaflet fibers of the new leaf [85b]); the third term is a locative noun phrase referring to the species’ waterside habitat (85c)

(84a) mapi dauë
head medicine
‘head(ache) medicine’

(84b) bëdi neste
jaguar medicine
‘jaguar illness medicine’

(85a) shuccate pinchuc
fan palm.species
‘fan pinchuc palm’

(85b) di pinchuc
hammock palm.species
‘hammock pinchuc palm’

(85c) acte pinchuc
river palm.species
‘river pinchuc palm’

The term in (84b) cannot be considered a possessive noun phrase because according to Matses speakers, the jaguar (spirit) does not “own” that plant, but rather the jaguar (spirit) only causes the illness and it is up to the medicine man to know which plant is the cure.

There is another rare noun phrase type that is hard to categorize. The modifying noun refers to an entity that has some property that the head noun also possesses. In a sense, the noun phrase refers to a “hybrid” entity, with the head noun possessing most of the attributes relevant for its classification. The only noun that I have found that

functions in this way as a modifier of this type is achu ‘red howler monkey’ (*Alouatta seniculus*) and the attribute that it modifies the head noun with is its characteristic rusty-orange pelage. The term in (86) refers to a species of wild dog (*Speothos venaticus*) whose coloration resembles that of the howler monkey, and (87a) refers to cultivar (i.e., a cultivated variety) of annatto (*Bixa orellana*), whose seed pulp produces a dye with coloration similar to that of the howler monkey. The other terms in (87) are contrasting subordinate terms referring to other cultivars of annatto kept by the Matses. This clause type is reminiscent of such English “hybrid” terms like ‘kangaroo rat,’ ‘alligator snapping turtle,’ and ‘tree fern.’

- | | | |
|-------|---|--|
| (86) | <u>achu</u> <u>camun</u>
howler.monkey dog/cat | ‘bush dog (lit. ‘howler monkey dog’’) |
| (87a) | <u>achu</u> <u>piute</u>
howler.monkey annatto | ‘howler monkey annatto’ (i.e., seed pulp is color of howler monkey, rusty orange) |
| (87b) | <u>piute</u> <u>mado</u>
annatto bald | ‘bald annatto’ (i.e., seed pods have few spinules) |
| (87c) | <u>piute</u> <u>bu</u>
annatto hair | ‘hairy annatto’ (i.e., seed pods thickly covered with spinules) |
| (87d) | <u>piute</u> <u>ushu</u>
annatto white/unripe | ‘white (green) annatto’ (i.e., seed pods ripen green, rather than red; synonym for <u>piute bu</u>) |

We can now make a general statement about which noun phrases can and which cannot refer to *ad hoc* descriptive phrases. Noun phrases where the modifying word, be it a noun, adjective, or adverb, *follows* the head noun must refer to a lexicalized term (or at least to an inherent property of the noun); these could all be called “attributive N N noun phrases.” By contrast, noun phrases where the modifying word *precedes* the head noun can be any kind of term, lexicalized or *ad hoc*. The exceptions are the noun phrases in (86) and (87a), which are lexicalized (and is also an anomaly formally). The

attributive N N noun phrases could be likened to English compounds in two ways: like English compounds, they represent lexicalized terms, and, like some English compounds (e.g., some N-V compounds like *bird-watching*), they represent distinctive word order (Payne 1997).

As a postscript to this section, I point out that with some N N noun phrases, it is not so obvious which noun is the head noun. Take for example the terms in (88c & 88d).

(88a) acte
'river/stream, water, beverage'

(88b) acte-dapa 'river'
river-large

(88c) acte _____ dada
water/stream body/trunk
'large stream'

(88d) acte _____ cuidi
water/stream branch
'small stream'

If we take trees to be metaphors for stream configuration, then we might suspect (88c) and (88d) to be composition material N N noun phrases (e.g., 'a branch of water' as in the English *body of water*). Or we could consider it to be a possessive relation (e.g., 'a stream's branch' or 'a branch of the stream'). Or, if we do not believe there to be a tree metaphor, we could consider (88c) and (88d) as attributive N N noun phrases, with dada and cuidi being general terms, not necessarily restricted to trees and tree metaphors. The second analysis (the metaphor-less analysis) seems to be the correct one in light of the fact that any stream can be referred to with just acte, while just dada or cuidi alone cannot be used to refer to a stream because their default reference is to trees (89); i.e., I expect that the head noun is the one that cannot be left out.

- (89a) adashbic acte-dapa cuëma-n adashbic acte dada cuëma-n
 then river-large edge-Loc then stream trunk edge-Loc
acte cuidi cuëma-n que-quin tambis nibën-e-c
 stream branch edge-Loc do-while:S/A>A paca search-Npast-Indic
 ‘After that, they [the bush dogs] search for pacas looking along rivers, then along
 large streams, and along small streams.’

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- (89b) acte cuëma-n tambis nibën-e-c
 river/stream edge-Loc paca search-Npast-Indic
 ‘They look for pacas along rivers/streams.’

- (89c) ?cuidi cuëma-n tambis nibën-e-c
 branch edge-Loc paca search-Npast-Indic
 ‘They look for pacas along (tree) branches.’

10.3.6 Noun phrase particles

Phrase-level particles that occur in noun phrases always occur following the head noun. One of these particles, chedo ‘et cetera/too,’ elaborates the meaning of the head noun by referencing it to a category (§9.3.1), and is used for conjoining phrases as lists (§§10.9). And choed ‘characterized by’ is hard to characterize syntactically (§9.3.2). The constituent negation morpheme -penquio/penquio is pronounced sometimes as a particle, sometimes a bound form (§9.3.3). As a particle it creates a negative noun phrase (90; NP in **bold**).

- (90) cun matses penquio ne-e-c is-acmaid matses utsi
 1Gen person Neg be-Npast-Indic see-Neg.Perf.O.Nzr people other
ne-e-c ca-onda-mbi que-onda-sh
 be-Npast-Indic say-Dist.Past-1A say-Dist.Past-3
 ‘“They are not my (tribe’s) people, they are other people whom I have not seen
 yet,” I told them,” she said.’

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The rest of the particles are semantically similar to adjectives, and have the same syntax as adjectives in N Adj noun phrases, yet they cannot be classed as adjectives, adverbs or

nouns because they cannot occur independently; i.e., they must always follow a head noun, unlike true adjectives that may occur as independent constituents in predicative constructions.

There are three particles with limited distribution: they only follow words referring to humans. The particle pado 'deceased' follows only terms referring to humans, principally kinship terms and people's names (91); and the particles amano 'adopted/non-blood relative' and icbo 'close' only follow kinship terms (92 & 93).

- (91) cun chido pado umbi bē-onda-c 'I brought my late wife.'
 1Gen woman **deceased** 1Erg bring-Dist.Past-Indic:1/2
 + K-XXII 015 chema 147
- (92) cun tita amano (93) aton buchi icbo
 1Gen mother **adopted** 3Gen older.brother/parallel.cousin **close**
 'my adopted/step mother' 'his older brother/older first parallel cousin'

These particles are described in the particle chapter (§9.3.4).

Most words of obvious onomatopoeic origin are nouns or verbs in Matses (§§2.8.3, 2.9), but a few occur as adjective-like particles with very restricted distribution in the language (§9.3.5). The distribution of these particles is so restricted, that each occurs only after one specific lexical item (94).

- (94a) chiqui uis (94b) chiqui tec tec
 hawk **screech** hawk **hawk.call**
 'hawk species characterized by its high-pitched call' 'hawk species characterized by its tec tec call.'

These onomatopoeic-particle-modified terms (e.g., 95a) generally fall into paradigmatic contrast with other categorically subordinate terms designated by other types of noun phrases, such as relative-clause-modified noun phrases (95b) or N Adj noun phrases (95c-d).

- (95a) bucu _____ shuish
 tree.genus **swarming.noise**
 ‘*Cecropia* species characterized by
 swarming ants that rattle the tree
 when they emerge to attack’
- (95b) bucu _____ canti tactse-te
 tree.genus **bow string.bow-Inst.Nzr**
 ‘*Cecropia* species with bark good for
 making bow strings.’
 lit. ‘bow stringer *Cecropia* tree’
- (95c) bucu _____ ushu
 tree.genus **white**
 ‘*Cecropia* species with white bark
 and leaves with white undersides.’
- (95d) bucu _____ piu
 tree.genus **red**
 ‘*Cecropia* species with reddish bark
 and reddish leaf petioles’

These noun phrase types always involve lexicalized terms, all plant or animal names. *Ad hoc* terms involving onomatopoeic noun modifiers generally involve nominalizations of the quotative verb que (96a). The noun phrase in (96b) does not work as an *ad hoc* term, but it would be a likely name in Matses if subcategories of bats had lexicalized designations.

- (96a) cuesban cosh _____ que-quid
 bat **bat.vocalization say-Agt.Nzr**
 ‘bat that vocalizes saying “cosh”’ [lit. ‘the “cosh” sayer bat’]
- (96b) *cuesban cosh

It is possible that terms like those in (94) and (95a) originated from terms like (96a), and then were shortened as the term became lexicalized—but unfortunately it is not possible at this point to investigate this possibility. Another possibility is that the noun phrase type in (94) and (95a) is one template that speakers use when attempting to coin a new term using an audible characteristic of the entity as the modifier. And the noun phrase type in (96a) is not exploited for coining new names, but rather is recognized as a way to refer to an entity or a category without intent to coin a new term.

10.4 Postpositional Phrases

The link between postpositions and their objects are as strong as any in the language. In fact, several postpositions are phonetically bound to their postpositional objects as enclitics (see chapter 8). Phonetically free postpositions and their objects exhibit rigid word order (97c), strict inseparability (97b), and are treated as a unit by the second-position enclitics *-da* 'Uncertainty' (97d-e) and *-en* 'Contrast' (97f-g).

- (97a) acte ëquëduc capu-quid
 river inside locomote-Hab
 'It [the giant river otter] swims underwater in rivers [lit. 'inside the river'].'
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- (97b) *acte chedo ëquëduc capu-quid (97c) *ëquëduc acte capu-quid
 river etc/too inside locomote-Hab
 ('It swims underwater in rivers, streams, etc.')
- (97d) acte ëquëduc-da capu-e-c (97e) *acte-da ëquëduc capu-e-c
 river inside-Uncert locomote-Npast-Indic
 'Does it swim underwater in rivers?'
- (97f) acte ëquëduc-en capu-quid (97g) *acte-en ëquëduc capu-quid
 river inside-Contr locomote-Npast-Indic
 'It swims underwater in rivers (not elsewhere, as you suggest).'

Several syntactic aspects of postpositional phrases are bit complex and worth delving into here; each topic will be treated separately in the following subsections. Morphological and semantic properties of postpositions were discussed in chapter 8.

10.4.1 Overt vs. covert postpositional objects

The most perplexing aspect of Matses postpositional phrases is that many locative postpositions can occur with (98) or without (99) an overtly-stated postpositional object.

- (98) shubu shēni an-diad-quad cuesban shubu nuntan
 house old under-hang-Hab bat house inside
 ‘Bats hang in old houses, inside the houses.’

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- (99) mani sin-aid is-ash dadpen cuesban cho-quad nuntan
 plantain ripen-Pat.Nzr see-after:S/A>S many bat come-Hab inside
 ‘After seeing ripe plantains, many bats come indoors.’

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There are two competing analyses for this pattern, whose differences can be boiled down to whether one asserts that in sentences like (99) there is or is not a **covert postpositional object**. The analysis taking the position that there are *no* covert postpositional objects would treat roots like nuntan as having the ability to occur with or without a preceding noun phrase (as a postpositional object), accounting for the behavior of roots like nuntan in at least two possible ways: i) as inter-class polysemy, with some postpositional roots occurring sometimes as simple adverbs; or ii) as intra-class polysemy, with the adverb class consisting of three subclasses: “intransitive adverbs” (those that never take an object), “transitive adverbs” (those that must take an object), and “ambitransitive adverbs” (those, like nuntan, that sometimes take an object), dispensing with the postposition lexical class altogether.

The competing analysis, the one that I favor, is that in sentences like (99), there is a covert third-person postpositional object whose identity is recoverable from the context. In other words, I am analyzing postpositional objects similarly to core arguments where the third person anaphoric pronoun is \emptyset (100) (see §11.2.4 for a description of covert core arguments).

- (100a) titado tayun ic-o-sh
peach.palm at.base.of be-Npast-3
 ‘It was at the base of the peach palm.’

- (100b) \emptyset tayun ic-o-sh
3 at.base.of be.Npast-3
 ‘It was at **its** base.’

This second alternative is encouraged by the following observations: i) only third-person postpositional objects can be omitted; ii) the identity of the missing postpositional object is generally obvious from the context; iii) many postpositions would be incomprehensible without an understood object; iv) those postpositions that do occur polysemously as adverbs have different meanings when they have an understood object and when they occur as simple adverbs; and v) there is no overt form in the language that could stand for a (locative) postpositional object as a simple third-person pronoun. The sentence in (101b) can be used to illustrate these points. The understood object of both the postpositions ëquëduc ‘inside’ and umanuc ‘outside’ in (101b) is the agouti burrow, a third-person entity that is introduced explicitly in the directly preceding sentence in the text (101a).

(101a) mëcueste shëcuë-n pudued-ac-sho a-bëd-bi
 agouti **hole**-Loc enter-Infer-when:S/A/O>O 3-Com:S-Emph
pudued-shun achu camun-n pe-quid
 enter-after:S/A>A howler.monkey dog/cat-Erg eat-Hab
 ‘After an agouti goes into its burrow, the bush dogs [lit. ‘howler monkey dogs’]
 go in following it and eat it.’

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(101b) ëquëduc usud-sho mëcueste bed-quid umanuc-shun
inside be.in.a.cavity-when:S/A/O>O agouti grab-Hab **outside**-Ev.Init:Tr
abitedi-shun pe-nun
 all-Ev.Init:Tr eat-Purp:S/A>A
 ‘They capture the agouti as it sits inside (its burrow), in order to all eat it outside
 (the agouti burrow).’

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We note further that without the understood object in mind, the listener could not possibly understand sentence (101b) in isolation. The listener would have to ask: “inside of what?” And umanuc could not possibly be analyzed as an adverb meaning ‘outdoors,’ its most common interpretation in the absence of a postpositional object, because the

whole episode takes place outdoors and it is obvious from looking at sentence (101b) that the purpose of ëquëduc in (101b) is to refer to ‘outside the burrow.’ In fact, it is expected that the anaphoric \emptyset will be used in (101b), rather than repeating the full noun/noun phrase.

Thus, according to this analysis, we can distinguish three classes of postpositions: i) those (few) roots like abuc (102) that actually do occur polysemously as adverbs; ii) those postpositional roots that do not occur as adverbs, but can occur with covert postpositional objects, like tayun (100) and dayun (103; iii) and those postpositions, including a few roots like tion (104) and all postpositional enclitics, that must occur with an overt postpositional object.

(102a) mechodo abuc ic-o-sh
termite.nest above be-Npast-3
‘It was above the termite nest.’

(102b) abuc ic-o-sh
high be.Npast-3
‘It was high/tall.’ (adverb)
‘It was above it.’ (postposition)

(103a) titado dayun ic-o-sh
peach.palm beside be-Npast-3
‘It was beside the peach palm.’

(103b) dayun ic-o-sh
beside be.Npast-3
‘It was beside it.’

(104a) titado tion ic-o-sh
peach.palm as.long.as be-Npast-3
‘It was as tall as a peach palm.’

(104b) *tion ic-o-sh

We can contrast the two subtypes of postpositions, locative and comparative, with respect to the following generalizations about their covert object taking properties: i) all locative postposition roots can occur with covert or overt postpositional objects; ii) comparative postpositions can never occur without an overt object; and iii) the few postpositions exhibiting inter-class polysemy as adverbs are locative postpositions. The only exception to this generalization is the temporal/locative postposition mëduc ‘in the middle of/during,’ which cannot occur without an overt postpositional object (105)

- (105a) ue mēduc cho-o-sh
 rain during come-Npast-3
 ‘He came during the rainy season.’
 ‘He came in the middle of the rain.’
- (105b) *mēduc cho-o-sh

10.4.2 Prefixes as locative postpositions

Body-part/locative orientation prefixes were introduced in section 4.5.1 and discussed further in sections 5.4.1, 6.5.1, and 11.5.4. Essentially, these prefixes can be attached to nouns, verbs, or adjectives to provide orientation information with respect to body parts of humans, animals, and inanimate entities. We find that when postpositional phrases occur with verbs that are prefixed with one of these body-part prefixes, the locative postpositions are no longer necessary in the locative phrase (106-108). And in some instances, the locative postposition cannot co-occur with the body part prefix (107c & 108c). It seems that in these cases, the prefix somehow acts as the locative postposition, taking the locative element as its object.

- (106) shubu shēni an-diad-quid cuesban shubu nuntan
 house old **under**-hang-Hab bat house inside
 ‘Bats hang in old houses, inside the houses.’

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- (107a) acte nē-tsad-Ø
 water **in**.water-sit-Imper
 ‘Sit in the water!’
- (107b) acte-n tsad-Ø
 water-**Loc** sit-Imper
 ‘Sit in the water!’ (less-preferred form)

- (107c) *acte-n nē-tsad-Ø.

- (108a) cuēte da-diad-quid cuesban ne-e-c
 tree **trunk**-hang-Agt.Nzr bat be-Npast-Indic
 ‘Bats are ones that hang (roost) on tree trunks.’

- (108b) cuēte-n diad-quid cuesban ne-e-c
 tree-**Loc** hang-Agt.Nzr bat be-Npast-Indic
 ‘Bats are ones that hang (roost) on/in trees.’

(108c) *cuëte-n da-diad-quid cuesban ne-e-c

(108d) *cuëte diad-quid cuesban ne-e-c

It is as if a locative postposition was pro-cliticized to the verb, rather than to its object. The effect is that the prefixation appears to add an argument to the clause (i.e., increasing the valence of the verb), which one could consider the object of the prefix. But it only appears so because this noun looks absolutive-marked. But prefixation does not make the clause transitive (i.e., with an ergative-marked participant, nor would it draw transitive agreement on suffixes and adverbials, etc.), and this “object” is not recognized as an O by inter-clausal reference of clause-chaining suffixes. Also, semantically, they are not patient-like or dative-like participants, but keep a locative semantic role, despite the lack of a postposition (reminiscent of *He went home*), etc.). The exact syntactic relations of this noun phrase are a bit enigmatic, but for now, especially due to the fact that when not followed by some other postposition, its position directly preceding the prefix is fixed, I will tentatively call the noun phrase an “object of a prefix that functions as a postposition.” See section 11.5.4 where I argue that this phenomenon is not an instance of noun incorporation, and discuss this matter further.

10.4.3 Genitive-marked animate postpositional objects

A subset of the locative postpositions may take animate objects. When locative postpositions take animate objects, the object must be genitive case-marked (109a; cf. 109c),⁴ or, for the first or second person, the object must be a genitive pronoun rather than an anaphoric one (110)

⁴ tsidion and tëdion, described in section 8.3.2.5, may be exceptions to this, in that they can apparently sometimes take animate, non-human objects with or without the genitive-marked object. When the object is genitive, the meaning is slightly different.

10.4.4 Doubling-up of postpositions

Most locative postposition roots can be combined with other locative postpositions in a single postpositional phrase (114-117).

- (114) podquedëquë cuëmatsiuc ic-o-sh 'It was on the other side of the path.'
 path other.side other.bank be-Past-3
- (115) cun shubu nuntan ëquë tsad-o-sh
 1Gen house indoors other.side sit-Past-3
 'They sat in my house on the other side (of the inside of my house).'
- (116) cun shubu ëquëduc nënantan tsad-o-sh
 1Gen house inside in.the.middle.of sit-Past-3
 'They sat in the middle of the inside of my house.'
- (117) sanuan udi dëbiatemi nëishamë-n podte-ac-o-sh
 San.Juan further.than upstream.of tapir-Erg cross-Infer-Past-3
 'A tapir crossed (the river) bit upstream of San Juan (a village).'

Sometimes a locative postposition root can follow a locative postposition enclitic, like the general locative/directional postpositional enclitic -n. In this type of postpositional combination, there is not usually a change in meaning with respect to the geometry of figures and grounds (118), but according to speakers it is used for rhetorical effect while talking about natural history (present habitual tense-aspect), and not adequate for describing a situation that is being observed (present-progressive aspect).

- (118a) shëcuë ëquëduc usud-e-c
 hole inside be.in.hole-Npast-Indic
 'It (e.g., an armadillo) lives inside holes.' / 'It is inside the hole.'
- (118b) shëcuë-n ëquëduc usud-e-c
 hole-Loc inside be.in.hole-Npast-Indic
 'It lives inside holes.' (lit. 'it lives in holes inside') /*'It is inside the hole.'

One possible analysis of these constructions is that the second postposition is somehow piggy-backing on the first postposition, with the first postpositional phrase serving as the postpositional object of the second postposition. Or, one might suppose that the single noun/noun phrase is directly the object of both postpositions at the same time. These analyses are discouraged by examples like (119).

(119) shëcuë-n-bi-en ëquëduc usud-quid
 hole-n-Emph-Contr inside be.in.hole-Hab
 ‘It lives inside holes (not elsewhere).’

(120a) shëcuë ëquëduc-en usud-quid (120b) *shëcuë-en ëquëduc usud-quid
 hole inside-Contr be.in.hole-Hab
 ‘It lives inside holes (not elsewhere).’

What example (119) tells us is that a sequence of two postpositions is not treated by second-position enclitics as components of a single constituent, as is the postpositional phrase in (120). This implies that sentences with doubled-up postpositions like that in (119) might be literally translated as ‘It lives in holes, inside (them)’; i.e., as two separate postpositional phrases, the first having an overt object, and the second a covert object that is an anaphoric \emptyset co-referent with the first postposition’s object.

Combinations of a postposition root with a postposition enclitic always involve the enclitic preceding the root, and never vice versa (121; cf. 118b).

(121) *shëcuë ëquëduc-n usud-e-c
 hole inside-Loc be.in.hole-Npast-Indic

This pattern is not unexpected considering that postpositional enclitics generally only follow nouns, and always have an *overt* postpositional object. The exception to postpositional enclitics taking objects that are not nouns are the few cases where a locative postposition enclitic is attached to an adverb, as in (122-124).

- (122) a-mi 'around there (by you)' (123) në-no 'around here'
 there-Loc here-Loc
- (124) cuëte tëdion ad-no chedo-bi cuesban ic-quid
 dicot.tree below like.that-Loc etc-Emph bat be-Hab
 'Under under [fallen] trees, bats are in places like that and similar places.'

E-XI 049 cuesban 20

The meaning of these forms is fully predictable from the central meanings of a 'there,' në 'here,' and mi 'Locative/Directional (general location/direction),' but it is quite unexpected for these postpositions to take an adverb as an object. Finally, I note that this phenomenon is restricted to locative postpositional phrases: comparative postpositions cannot be doubled-up or combined with locative postpositions in any way (recall that comparative postpositions never occur with a covert postpositional object).

10.4.5 Postpositional phrase particles

The basic postpositional phrase consists minimally of a noun root as the postpositional object, followed by a postposition (enclitic or root). The number of words in the postpositional phrase can increase when the object is a multi-word noun phrase. This was observed, for example, where the postpositional object was a genitive noun phrase, as in example (109) or an N Adj noun phrase, as in example (106). The number of words composing a postpositional phrase can also be increased when they incorporate the particle, chedo 'et cetera/too,' which can follow the postposition. Also, the negative form -penquio/penquio, usually occurs as a bound enclitic, but it is sometimes pronounced as an independent word, particularly following complex words. Other postpositional enclitics that follow the particles are then phonologically attached to chedo or penquio (125).

- (125) nuntan chedo-bi che-e-c nuntan-bi
 indoors too-Emph eat.unchewed-Npast-Indic indoors-Emph
puued puued-tsēc-ec-bi
 (redup=Distr) enter-Dim-while:S/A>S-Emph
 ‘They eat plantains indoors, too, continually coming inside the house.’

G-XV 063 cuesban 14

The scope of the negative particle/enclitic penquio/-penquio can be just the postposition or the whole postpositional phrase (§8.6.2). If it co-occurs with chedo, it follows chedo. Example (126), an admittedly elicited, but accepted sentence, illustrates one of the longer possible word series that can compose a single postpositional phrase (postpositional object in **bold**; postpositional phrase in brackets).

- (126) [cun shubu utsi nuntan chedo penquio] ic-o-sh
 1Gen house other indoors too Neg be-Past-3
 ‘It also was not inside my other house.’

10.5 Adverb Phrases

For the most part, there are no multi-word adverbial phrases. Multi-word adverbial phrases are rare. The one clear case is restricted to modification by the phrase-level particle, chedo ‘et cetera/too’ (127), which rarely occurs with adverbs. The other case is marginal in that it involves the form -penquio/penquio ‘Negative’ (128 & 129), which is more frequently pronounced as a phonologically bound enclitic.

- (127) tsimpiduc chedo cani-quid budēd ushu ne-e-c
 valley:Loc too/etc grow-Agt.Nzr palm.species white be-Npast-Indic
 ‘Budēd ushu palms are ones that **also** grow in valleys **and other such habitats**.’

1-p03-B budēd ushu 03

- (128) nua-mbo-shē penquio mencudu ic-e-c
 large-Aug-Aug Neg naked.tailed.armadillo be-Npast-Indic
 ‘Naked-tailed armadillos are not real big.’

1-p50-B mencudu 01

- (129) abuc-quio-penquio mapictséc-bi cani-quiv chonco ne-e-c
 high-Aug-Neg short-Emph grow-Agt.Nzr palm.genus be-Npast-Indic
 ‘Not very high, chonco palms are ones that grow somewhat low.’

A-I 037 chonco 10

10.6 Adjective Phrases

Multi-word adjective phrases are, as with adverbs, rare and marginal: They are, like adverb phrases, restricted to the particles chedo (which is very awkward with adjectives) and penquio (which is seldom pronounced as a separate word when following adjectives).

10.7 Verb phrases

There are no true verb phrase in Matses. Phonologically independent constituents are not linked to verbs in any manner that approximates constituency status. One might expect some type of phrase-level link between a verb and its absolutive argument, especially the O argument; however, we find that verbs and their arguments exhibit flexible relative word order and separability (see §11.12 on word order). The one marginal case involves sentential negation. Verbs negated with a non-finite negative suffix (e.g., -en ‘Negative,’ -a ‘Negative: Perfect’) appear to form a constituent with their auxiliary verb, but these constructions have only marginal phrasal status: they have strict linear ordering, but are separable and are treated as separate elements by phrasal enclitics. The intermediate status of these negative constructions as phrases/constituents was illustrated above in section 10.2, and this (complex) construction is described in detail in section 12.3.2.

10.8 Nominalizations in and as phrases

Nominalization was described in section 4.7 and complex constructions with nominalized clauses are described in section 12.2. Here, I will only point out a few

patterns observed in phrase formation combining nominalizations with other elements. Nominalizations can fill the noun slot in phrases involving nouns as one of the constituent parts; specifically, as head nouns in any noun phrase (130 & 131; nominalizations in **bold**; phrases in brackets), as modifying nouns in N N noun phrases (132 & 133), and as postpositional objects in postpositional phrases (133 & 134).

- (130) nad utsi ic-e-c [**podo cho-quid** utsi] cuesban ca-aid
 like.this other be-Npast-Indic **wing have-Agt.Nzr** other bat say-Pat.Nzr
 ‘There is another one like this: another winged one called “bat”.’
 A-XIII 008 quëuëte 03
- (131) [aton sicaid **buenac** **buenac-te** chuca] chësh-o-mbi
 3Gen **strained.beverage (redup=Distr)** **stir-Inst.Nzr** new carve-Past-1A
 ‘I carved her new beverage stirrer.’
- (132) [isitodo cue-mbo ic-quid]-n bud-ash abuc maca
 liana straight-Aug be-Agt.Nzr-Loc descend-after:S/A>S high rat
 ‘After climbing down a vine that is straight, the spiny tree rat...’
 A-IV 016 abuc maca 09
- (133) [[cuëte chimeshad-aid] tëdion] diad-tsëc-ec ush-quid
 dicot.tree **fall.over-Pat.Nzr** below hang-Dim-while:S/A>S sleep-Agt.Nzr
cuesban ne-e-c
 bat be-Npast-Indic
 ‘[Those] little bats are ones that sleep hanging on the underside of fallen trees.’
 A-I 051 cuesban 22
- (134) cuen-enda [min bënë utsi cuen-ac pad-ec]
 run.off-Neg.Imper 2Gen husband other.run.off-Act.Nzr same.as-Manr:Intr
ca-onda-mbi
 tell-Dist.Past-1A
 ‘“Don’t run off just like your brother in law [lit. ‘other husband’] did,” I told her.’
 + K-XXII 011 chema 107

It is even possible for both noun slots in N N noun phrases to be nominalizations (in which case it is disputable which of the two is the head nominal):

- (135) [[cuidi cho-quiv] [bēda-mbo ic-quiv]] is-shun quēuēte
 branch have-Agt.Nzr good-Aug be-Agt.Nzr see-after:S/A>A hook
te-e-c matses-n
 cut-Npast-Indic Matses-Erg
 ‘After finding a branched one [a sapling], one that is a good one, Matses cut it
 into a hook.’

G-XV 063 cuesban 01

- (136) [[nimēduc ic-quiv] [bata ic-quiv]] che-shun-bi
 primary.forest:Loc be-Agt.Nzr sweet be-Agt.Nzr eat-after:S/A>A-Emph
 ‘After eating the sweet ones [fruits] that are in primary forest...’

G-XV 063 cuesban 15

Three subtypes of N N noun phrases with nominalizations as modifiers can be distinguished: i) those where the nominalization is a lexicalized term; ii) those where the nominalization is a single word; iii) and those where the nominalization is a multi-word clause. Lexicalized terms behave syntactically like any regular noun in this slot, as in (137), where the (lexicalized) noun, shuccate, can be analyzed as the verb shucca ‘to fan’ and the nominalizing suffix -te ‘Instrument Nominalizer.’

- (137a) [shuccate pinchuc] is-o-mbi (137b) *pinchuc shuccate is-o-mbi
 fan palm.species see-Past-1A
 ‘I saw a shuccate pinchuc palm’ (137c) *shuccate is-o-mbi pinchuc

By contrast, non-lexicalized nominalizations can occur in any order relative to the head noun, can be separated from the head noun, and are often treated as separate elements by enclitics. They fail to form constituents in most respects, and the “head noun” is identifiable only semantically. This goes for single-word non-lexicalized nominalizations, such as that in (138), which function as participles; and for multi-word nominalized phrases, which function as relative clauses (see §12.2.1 for a full description of these relative-clause-like constructions).

- (138) [sin-aid] piu-mbo ic-quid tanac bacuë
 ripe-Pat.Nzr red-Aug be-Hab palm.species fruit
 ‘Ripened tanac palm fruits are red.’

2-p90-L tanac 07

10.9 Phrasal coordination

In Matses, coordination (conjunction and disjunction) at the phrasal level is accomplished through apposition. Unmarked conjunction in Matses approximates Payne’s (1985a) “zero strategy,” with the important difference that the apposed words/phrases do not form a morpho-syntactically identifiable constituent. Rather, the coordinated elements only form a unit semantically: they refer to two elements that perform the same role in a sentence. If it is nominal elements that are coordinated, then the two (or more) elements can fill the same syntactic position, e.g., that of an ergative argument (§10.9.1); if we did not consider them to be coordinated elements, the lexically specified argument slots of a verb would not match the number of actual nominal elements in the clause. If the coordinated elements are adjectives, they both/all modify an entity in the same manner and together fill the adjective syntactic slot (§10.9.2). Whether there exists coordination of adverbs is questionable, since clauses have multiple adverb slots, anyway (§10.9.3).

Matses has no particles specialized in intra- or inter-clausal coordination, such as the English *and*, *or*, and *but*. The particle chedo ‘too/et cetera’ is the closest thing to a conjunction particle, but as will be shown below, it actually only *accompanies* conjunction (§10.9.1). The coordination features, “adversative,” “separate,” and “emphatic” are coded by suffixing the enclitics -bi or -bi-c to chedo (§10.9.4). Phrasal disjunction, though somewhat rare in Matses discourse, is accomplished through apposition of the phrases (§10.9.5), just like conjunction. Younger Matses speakers have borrowed the disjunction particle *o* ‘or’ from Spanish, while no conjunction particle (e.g.,

Spanish *y* ‘and’) has yet been borrowed. I have not discovered other types of coordination at the phrasal level in Matses, such as “postsection,” “presection,” or “rejection” (see Payne 1985a for these terms). Inter-clausal coordination is accomplished by various means, including juxtaposition, and will be discussed in section 12.6.

10.9.1 Conjoined noun phrases

Noun phrases are the most frequently conjoined phrase type. The particle *chedo*, which can mean ‘too’ or ‘et cetera’ or both at once (§9.3.1) very often occurs as part of one (139 & 140), some (141 & 142), or all (143 & 144) of the conjoined noun phrases.

- (139) mēcueste-n [capa chedo]-n pe-quid mio bacuë
 agouti-Erg squirrel **too/etc**-Erg eat-Hab palm.species fruit
 ‘Agoutis and squirrels (and other rodents) eat mio palm fruits.’

A-I 016 mio 09

- (140) [pinchuc bacuë] [budëd bacuë] [catsuin bacuë chedo]
 palm.species fruit palm.species fruit palm.species fruit **too/etc**
pe-quid capa ne-e-c
 eat-Agt.Nzr squirrel be-Npast-Indic
 ‘Amazon red squirrels are ones that eat pinchuc palm fruits, budëd palm fruits, and catsuin palm fruits (and other types of palm fruits).’

A-IV 008 capa 06

- (141) abitedi budëd [shuinte mapi chedo] [itia chedo]
 all palm.species two.toed.sloth head **too** swamp.palm **too/etc**
pe-quid mēcueste ne-e-c
 eat-Agt.Nzr agouti be-Npast-Indic
 ‘Agoutis are ones that eat everything, budëd palm (fruits), shuinte mapi palm (fruits), and swamp palm (fruits), etc.’

A-IV 012 mēcueste 06

- (142) cho-quid [dada chedo] [chido chedo] bacuë-bo
 come-Hab man **too** woman **too** child-Pl
 ‘Men, women, and children come.’

C-III 001 shëcten 37

- (143) [cania-bo chedo-bi] [bacuë-mpi chedo-bi] tëshë mene-ban-quid
 young.man-Pl too-Emph child-small too-Emph piece give-Iter-Hab
tsësio-dapa-n
 old.man-large-Erg
 'The old man gives out pieces [of meat] to the young men and the little kids.'
 C-III 001 shëcten 43
- (144) [mëcueste chedo][tsatsin chedo][tambis chedo] pe-quid bëdimpi
 agouti too acouchi too paca too/etc eat-Agt.Nzr ocelot
ne-e-c
 be-Npast-Indic
 'Ocelots are ones that eat agoutis, acouchis, pacas, and animals like that.'
 A-IV 038 bëdimpi 06
- The conjoined noun phrases do not have to be adjacent (145 & 146). A noun phrase with chedo can even occur outside of a subordinate clause in which the other noun phrase it is conjoined with occurs (147 & 148).
- (145) mani-chedo che-e-c [cuëte bacuë] capishto
 plantain-too/etc eat.unchewed-Npast-Indic dicot.tree fruit cricket
 'They eat plantains and things like that, dicot tree fruits, crickets.'
 B-VII 035 cuesban 10
- (146) [cachina-n intac] chish-e-c [matses-n-a chedo-bi]
 chicken-Gen blood suck-Npast-Indic Matses-Gen-3Poss too-Emph
 'They suck chickens' blood, even people's.'
 C-V 016 cuesban 18
- (147) mëcueste pe-quid [achu camun] ne-e-c [tambis chedo]
 agouti eat-Agt.Nzr howler.monkey dog/cat be-Npast-Indic paca too
 'Bush dogs [lit. 'howler monkey dogs'] are ones that eat agoutis, pacas, too.'
 A-IV 035 achu camun 05
- (148) [senad chedo] pe-quid bëdi-dapa ne-e-c [shëcten chedo]
 deer etc eat-Agt.Nzr jaguar-large be-Npast-Indic collared.peccary too
 'Jaguars are ones that eat deer and animals like that, collared peccaries, too.'
 A-IV 036 bëdi dapa 09

Despite its frequent occurrence with conjoined elements, it is difficult to consider chedo a conjunction particle, as chedo can also occur on non-conjoined noun phrases in reference

to a preceding sentence (149), or, with the ‘et cetera’ meaning, without reference to any other previously mentioned information (150).

- (149a) aid bacuë capa-n pe-quid ‘Squirrels eat those fruits.’
 that.one fruit squirrel-Erg eat-Hab
 A-I 014 antin 12
- (149b) [mëcueste chedo]-n pe-e-c ‘Agoutis eat them, too.’
 agouti too-Erg eat-Npast-Indic
 A-I 014 antin 13
- (150) cana chedo-n pe-quid itia
 macaw etc-Erg eat-Hab swamp.palm
 ‘Macaws and similar animals eat swamp palm fruits.’
 A-I 029 itia 12

And noun phrase conjunction can be accomplished through apposition without chedo:

- (151) senta-n chëshëid-n daësh-quid
 uakari.monkey-Erg spider.monkey-Erg eat.gnawing-Hab
 ‘Uakari monkeys (and) spider monkeys eat [swamp palm fruits].’
 A-I 029 itia 13
- (152) tëdion-shun-bi adembidi nëishamë-n tambis-n
 below-Ev.Init.Tr-Emph likewise:Tr tapir-Erg paca-Erg
mëcueste-n tambisëmpi-n pe-e-c [itia tënamis bacuë]
 agouti-Erg spiny.rat-Erg eat-Npast-Indic swamp.palm crown.fiber fruit
 ‘Also, underneath it [on the ground], tapirs, pacas, agoutis, (and) spiny rats eat itia tënamis fruits.’
 A-I 040 itia tënamis 10
- (153) isan abitedi ic-e-c [tsatsi-mbo ic-quid]
 palm.species all be-Npast-Indic hard-Aug be-Agt.Nzr
 [pachi-mbo ic-quid]
 soft-Aug be-Agt.Nzr
 ‘There are all kinds of isan palm (fruits): hard ones (and) soft ones.’
 E-XI 001 isan 07

My analysis is as follows: apposition of noun phrases represents a type of conjunction that indicates that the noun phrases in question is to be taken as a list. The

use of chedo makes it more explicit that there is a listing going on, than when noun phrases are apposed without chedo. The use of chedo has two syntactic effects: i) it allows an apposed conjoined noun phrase to occur non-adjacently from the other apposed noun phrase or phrases; and ii) it makes it possible to convey the notion of a list without mentioning more than one member of the list in the sentence, with the ‘et cetera’ meaning indicating that there is an unmentioned list to be understood, and the ‘too’ meaning indicating that the noun phrase is adding to a listing commenced in a preceding sentence.

Another interesting pattern in noun phrase conjunction through apposition is that nominalizations are generally non-finite, requiring an inflected copular verb in constructions like (154b) (or some other inflected main verb in other construction types), but when there is a list of apposed nouns, as in (154a), apparently the main verb can be left out (but it can occur, as in 144 above).

- (154a) aton podo [yuca tane-te] [cuëte tane-te]
 3Gen frond manioc tie-Inst.Nzr firewood tie-Inst.Nzr
chodoua-te aton bacuë-bi sando-nun
 leaf.basket-Vzr:make-Inst.Nzr 3Gen fruit-Emph put.in:Pl-Purp:S/A>A
 ‘Its fronds (are) for tying up bundles of manioc, for tying up bundles of firewood,
 and for making makeshift carrying baskets for putting isan fruits in.’

E-XI 001 isan 11

- (154b) aton podo yuca tane-te ne-e-c (154c)*aton podo yuca tanete
 3Gen frond manioc tie-Inst.Nzr **be-Npast-Indic**
 ‘Its fronds are ones that are for tying up bundles of manioc.’

There is another construction in Matses for coding phrasal conjunction of noun phrases. Apposed noun phrases may be followed by que, which is a verb that can mean ‘say’ or ‘do,’ but here seems to be some sort of “conjunction verb” (155). When que occurs in the clause, it is possible for one of the apposed noun phrases to be dislocated (156) (but the presence of adembidi complicates this analysis). And I’m not completely

sure what to make of (157). See section 12.4.3.2 for the use of que with listing constructions in clause chains.

- (155) tambis mēcueste tsatsin tsaues que-quin pe-quiv
 paca agouti acouchi long.nosed.armadillo do-while:S/A>A eat-Agt.Nzr
bēdi chēshē ne-e-c
 jaguar black be-Npast-Indic
 ‘The jaguaroundi is one that eats pacas, agoutis, acouchis, and armadillos.’
 A-IV 039 bēdi chēshē 09
- (156) macho-n-bi-c adembidi que-quin nēnē
 old.woman-Erg-Emph-Separ likewise:Tr do-while:S/A>A tobacco
che-quiv tsēsio-bo-n
 eat.unchewed-Hab old.man-Pl-Erg
 ‘Even old women as well as old men dip tobacco.’
 + A-XIII 022 nēnē 18
- (157) utsi-bi-c piu piu-mbo utsi-bi-c
 other-Emph-Separ (redup=Deintens) red-Aug other-Emph-Separ
tanun tanun-quioque-tsēc-quiv checa ne-e-c
 (redup=Deintens) gray-Augdo-Dim-Agt.Nzr opossum be-Npast-Indic
 ‘Another kind is yellowish and another kind is grayish.’
 A-IV 043 checa dēuisac 08

Another way to express phrasal conjunction is with the adverb adembidi ‘likewise’ (158).

- (158) aid bacuē-bi cana-n pe-quiv capa-n-bi adembidi
 that.one fruit-Emph macaw-Erg eat-Hab squirrel-Erg-Emph likewise:Tr
 ‘Macaws eat those fruits, and so do squirrels.’
 A-I 019 catsuin 04

Another way to express conjunction is to use a comitative postposition (-bēd ‘Comitative: S,’ -bēta ‘Comitative: Object’ or -bētan ‘Comitative: A/Instrument’; §8.3.1) cliticized to one of the nominal elements. Comitative postpositions most frequently express a ‘together with’ meaning, but they can also be used to express an ‘and’ meaning (159 & 160).

- (159) debi aton buchi-böd nid-o-sh
 Davy 3Gen older.brother-Com:S go-Past-3
 ‘Davy left with his older brother.’ (left together, at the same time)
 ‘Davy and his older brother left.’ (could have left at separate times)
- (160) debi-n-a cun-a-böd ne-e-c
 Davy-Gen-3Poss 1Gen:3Poss-Com:S be-Npast-Indic
 ‘It is Davy’s and mine.’

While this can perform a conjunction function, syntactically the cliticized phrase is a peripheral postpositional phrase (= oblique), rather than a noun phrase that shares a syntactic slot with the other “conjoined” element(s).

10.9.2 Conjoined adjectives

As with conjoined noun phrases, conjoined adjective phrases show few symptoms of constituency (strict linear order, inseparability, etc.). The evidence for their conjunction is that in predicate adjective copular constructions (§11.7.2), there is evidently only one slot for adjectives. Further, it is evident that the relationship of both adjectives to the noun in sentences like (161) and (162) is the same.

- (161) aid chido icsa-mbo nua-mbo ic-e-c ‘That woman is fat and ugly.’
 that.one woman bad-Aug big-Aug be-Npast-Indic
- (162) dada-mpi pictsäc ic-tsēc-e-c pinchuc pinchuc-patsēc
 trunk-small small be-Dim-Npast-Indic (redup=Adjzr) thorn-Dim
 ‘The trunk is small and thorny.’

A-I 009 sinnad 04

The sentence in (163) similarly seems to exhibit conjunction, though the presence of sheta ‘tooth’ in the equation makes its analysis a bit more enigmatic.

- (163) bë-chëshë bë-chëshë-quio shëta uisu uisu-mbo uadë
 (redup=partly) face-black-Aug tooth (redup=Deintens) black-Aug titi.monkey
ic-quid
 be-Hab
 ‘Titi monkeys have a black brow and blackish teeth.’
 ‘lit. Titim mokeys are black-face and blackish-teethed.’

A-IV 002 uadë 09

10.9.3 Conjoined adverbs?

In the absence of constituency attributes, the properties that allowed us to recognize pairs or sets of noun phrases or adjective phrases as conjoined elements were the following: they both/all occurred in the same syntactic slot (e.g., as ergative arguments), and they both/all performed the same role/function in the clause. These same properties, however, are not useful for recognizing conjunction of adverbs, since there are multiple adverb slots in a clause (§11.2.1). Thus, while the English translation of (164) contains a conjoined adverb phrase, there is no language-independent motivation for suggesting that the two adverbs in (164) are conjoined in some manner other than the formal similarity to conjoined adverb and adjective phrases.

- (164) ado-shun moco-n da-tadëd-shun baded-quio
 thus-after:S/A>A ax-Inst trunk-scrape.off.bark-after:S/A>A **quickly-Aug**
matses-n uncate chësh-quid bëda-mbo-en
 Matses-Erg paddle carve-Hab **good-Aug-Advzr:Tr**
 ‘After that, after removing the bark with an ax, Matses carve the paddle **quickly and well.**’

A-XIII 028 uncate 05

10.9.4 Coding the features adversative, separate, and emphatic

The enclitic *-bi*, which can occur on nouns, adverbs, postpositions, particles, and some non-finite verb forms, has a range of meanings, including ‘Emphasis’ (165), ‘Co-reference’ (166), and ‘Concession’ (167) at the phrasal, clausal, or sentential levels.

- (165) madin-bi tēsh-ben tēsh-ben-quid bēchun
wasp-**Emph** (redup=Iter) pull.off-do.while.passing-Agt.Nzr capuchin.monkey
ne-e-c

be-Npast-Indic

‘Capuchins are ones that actually pull off wasp nests as they pass.’

A-IV 001 bēchun 06

- (166) aid ēshē-bi capa-n pe-quid
that.one seed-**Emph** squirrel-Erg eat-Hab

‘Squirrels eat the seed [the endosperm] of that same one [palm species].’

A-IV 046 bēchun ushu 38

- (167) dada-bi shubi-o-sh ‘Even though he is a man, he cried.’
man-**Emph** cry-Past-3

The enclitic -c can be added to -bi to express ‘Separateness,’ often with a sense of ‘Contrast’ at the phrasal or sentential level (168 & 169)

- (168) adembidi tsaues pe-quid utsi-n podo utsi-n podo
likewise:Tr long.nosed.armadillo eat-Hab other-Erg arm other-Erg arm
midte-bi-c utsi-n
leg-**Emph-Separ** other-Erg

‘That is also how they eat the long-nosed armadillo: one person a front leg, another a front leg, another the hind leg.’

A-I 047 tsaues 34

- (169a) bēchun ushu-bi cad cad
capuchin.monkey white-**Emph** capuchin.monkey.call capuchin.monkey.call
cad que-ec bēchun ushu cuēd-quid
capuchin.monkey.call say-while:S/A>S capuchin.monkey white call-Hab
‘The white-fronted capuchin calls out saying, “cad cad cad”.’

A-I 006 shuccate pinchuc 06

- (169b) bēchun chēshē-bi-c bētsiton
capuchin.monkey black-**Emph-Separ** capuchin.monkey.call
bētsiton que-mbo-ec cuēd-quid matses is-ash
capuchin.monkey.call say-Aug-Advzr:Intr call-Hab Matses see-after:S/A>S
‘Meanwhile/By contrast, the brown capuchin calls out saying, “bētsion bētsion,” when it sees people.’

A-IV 046 bēchun ushu 39

Payne (1985a) describes “adversative,” “separate,” and “emphatic” as features sometimes coded by coordinating particles. In Matses, there are no separate particles expressing these notions. Similar notions can be coded by attaching the enclitics *-bi* and *-bi-c* to one or both apposed coordinated noun phrases (168), especially ones containing the particle *chedo* (170 & 171). See sections 4.6.8 and 4.6.9 for more on *-bi* and *-c*.

concessive/emphatic:

- (170) [*cachina-n intac chish-e-c* _____ [*matses-n-a chedo-bi*]
 chicken-Gen blood suck-Npast-Indic Matses-Gen-3 too-Emph
 ‘They [vampire bats] suck chickens’ blood, **even** people’s.’

C-V 016 cuesban 18

separate/emphatic:

- (171) [*cania-bo chedo-bi*] [*bacuë-mpi chedo-bi*] *tëshë mene-ban-quid*
 young.man-Pl too-Emph child-small too-Emph piece give-Iter-Hab
tsësio-dapa-n
 old.man-large-Erg

‘The old man gives out pieces [of meat] to the young men and to the little kids.’

C-III 001 shëcten 43

10.9.5 Disjunction

In traditional Matses, disjunction, like conjunction, is expressed without any overt marker (172). Where the reference is to multiple entities, it is easy to see why conjunction and disjunction should be treated alike. In the English translation of (172), we could replace ‘fifty or sixty’ with ‘fifty *and* sixty’ without changing the meaning.

- (172) *sincuenta sesenta ic-quid shëctenamë ne-e-c*
 fifty sixty be-Agt.Nzr white.lipped.peccary be-Npast-Indic
 ‘White-lipped peccaries are (found in groups of) fifty or sixty.’

A-I 044 shëctenamë 08

But in sentences like (173a) and (174a), replacing ‘or’ with ‘and’ would result in a significant meaning change. Therefore, it is understandable that speakers would want to distinguish conjunction and disjunction formally. Perhaps this is the motivation for

recent borrowing by some speakers of the Spanish *o* ‘or’ disjunction particle (173b, 174b-176). The use of o is optional for these speakers, and does not affect the meaning, but does eliminate possible ambiguity stemming from interpretation as conjunction.

(173a) titado pachid pe-tsia-mbi ‘I would eat peach palm fruits or manioc.’
peach palm manioc eat-Npast.Cond-1A

(173b) titado o pachid pe-tsia-mbi ‘I would eat peach palm fruits or manioc.’
peach palm or manioc eat-Npast.Cond-1A

(174a) piu-mbo-da sin-e-c chëshë-mbo ‘Does it ripen red or black?’
red-Aug-Uncert ripen-Npast-Interr:3 black-Aug

(174b) piu-mbo-da sin-e-c o chëshë-mbo ‘Does it ripen red or black?’
red-Aug-Uncert ripen-Npast-Interr:3 or black-Aug

(175) mio cani-quid masi-n o nidaid chëshë-n
palm.species grow-Hab sand-Loc or ground black-Loc
‘Mio palms grow on sandy habitats or on black soil.’

2-p26-L mio 01

(176) sin-aid piu-mbo o ushu-mbo ic-quid titado
ripe-Pat.Nzr red-Aug or white-Aug be-Hab peach.palm
‘Ripened peach palm fruits are red [or orange] or yellow.’

2-p92-L titado 06

Another way to express disjunction of the type in (172), is to do it at the clausal level, rather than at the phrasal level (177; §12.4.3.2).

(177) daëd ic-ash tedes ic-ash que-tsëc-quid bosen
two be-after:S/A>S three be-after:S/A>S say-Dim-Agt.Nzr Neotropical.otter
ne-e-c
be-Npast-Indic
‘Neotropical otters are ones that are in groups of two or three.’’

A-IV 032 bosen 04

10.10 Definitions to take into the next chapters

In order to describe simple and complex clauses more efficiently in the next two chapters, the following definitions are presented here:

postpositional phrase: a postpositional object (which may consist of one or more words)

and a postposition, which may be a phonologically independent word or an enclitic.

nominal (element): a pronoun, noun, noun phrase, or nominalized clause that is not itself part of a larger noun phrase.

adverbial (element): an adverb, adverbial phrase, postpositional phrase, or adverbial clause that is not itself part of a larger adverbial phrase.

adjectival element: an adjective, adjective phrase, or adjectivalized clause that is itself not part of a larger adjective phrase.

CHAPTER 11

SYNTAX PART II: SIMPLEX SENTENCES

11.1 Introduction

The goal of this chapter is to describe the syntax of simplex (one-clause) sentences. If syntax differs in multi-clause sentences, this will be pointed out in the relevant sections in chapter 12, which deals with complex sentences. First, I explain the grammatical relations of simplex active declarative sentences, then I describe all the different simplex sentence types in the language.

SOV appears to be the least marked word order in active clauses (§11.12). Constituent order in simplex intransitive and transitive clauses is not predictable from syntactic information, and is completely free to respond to pragmatic motivations (i.e., both SV and VS are allowed for intransitive clauses, and all six logical constituent orders are attested for transitive clauses). A and O are disambiguated primarily by ergative case marking (§§11.2.2, 11.2.3), and secondarily by subject (= nominative = S/A) person agreement in verbal inflection (§11.2.5). Besides absolutive and ergative, Matses has a genitive and an instrumental case (§11.2.3). Interestingly, ergative, instrumental, and genitive cases are all marked identically on full nouns and noun phrases, with the enclitic *-n*, but they are distinct syntactically and their corresponding pronouns are formally distinct. There are no distinctive dative, benefactive, or other cases: Recipient, Beneficiary, Maleficiary, and Causee semantic roles are all grammatically indistinguishable from Patient absolutive participants. A prominent and potentially complicated feature of Matses grammatical relations is covert third-person pronominal arguments (§11.2.4).

All major clause types in Matses contain at least one verb, including all copular clauses. This verb may be a typical verb, or it may be one of several copular verbs, but no utterances lacking a verb are considered complete sentences.¹ The classification of sentence and clause types is discussed in section 11.3 (declarative vs. interrogative; active vs. passive, valence-increased/decreased clauses, etc). In addition to an antipassive construction (§11.6.2), expected in languages with ergative case marking, there is a passive construction, the reflexive passive (§11.6.1), a less usual component of languages with ergative case marking. Other points of interest are double-object clauses, where the two objects appear to be grammatically indistinguishable (§§11.4.2, 11.5.1), and “double-absolutive” clauses where both core arguments are absolutive-marked (§11.4.3).

11.2 Grammatical relations

The description of grammatical relations has as its background the distinction between events and entities and how these entities are related to the events that they participate in. The relationship between the events and the participants can be semantic (e.g., *hitter* vs. “*hitee*”) or pragmatic (topic, focus, given, etc). The semantic relationships of these entities to the events can be labeled as broad semantic (= thematic) roles, such as Agent, Patient, Instrument, etc (as in Fillmore 1968). It seems that in many languages, these semantic roles cannot always be mapped directly onto their grammatical expression. Matses is one of these languages. Take for example the noun matses in examples (1) - (5), where it occurs marked in the same way (zero-marked; i.e., as a bare noun phrase), yet refers to many different semantic roles.

¹ Only answers to question, exclamations, “abbreviated” questions, and some minor construction types do not contain verbs.

- (1) [aid matses]-Ø uënēs-bud uënēs-bud-ac
that.one Matses-Abs (redup=Distr) die-Dur-Narr.Past
Theme
'Those Matses have all died off.'
+ K-XXII 005 chema 050
- (2) ado-ash matses-Ø capu-quid cano-n
do.like.that-after:S/A>S Matses-Abs locomote-Hab canoe-Inst
Agent/Theme
'After that, Matses travel using the canoe.'
A-IX 014 cano 12
- (3) matses-Ø dadpen-quo ic-e-c 'There are many Matses-like Indian tribes.'
Matses-Abs many-Aug be-Npast-Indic
Theme
K-XXI 008 dēmushbo 13
- (4) adembidi matses-n cues-shun [aton matses]-Ø mene-ban-quid
likewise:Tr Matses-Erg kill-after:S/A>A 3Gen Matses-Abs give-Iter-Hab
Agent Recipient
'Also, Matses, after killing it, give it [sloth meat] out to their fellow Matses.'
A-IV 024 chompish 16
- (5) adashic matses-Ø is-ash bēdi-dapa-Ø
then Matses-Abs see-after:S/A>S jaguar-large-Abs
(unaffected) Patient
pudun-tan pudun-tan-quid matses-Ø pe-nuec
(redup=Distr) jump-go-Hab Matses-Abs eat-Purp:S/A>S
(affected) Patient
'Then, when it sees a Matses, the jaguar bounds towards him, to eat the Matses.'
A-IV 036 bēdi dapa 34

And it is not even possible to say that this range of different broad semantic roles are all represented by a single type of marking (zero-marking). For example, noun phrases representing Experiencer roles are marked with an -n in transitive clauses (6 & 7) and remain unmarked in intransitive clauses (8 & 9).

- (6) [bēchun ushu]-n matses-Ø is-shun
capuchin.monkey white-Erg Matses-Abs see-after:S/A>A
Experiencer
'When the white-fronted capuchin sees Matses...'
A-IV 046 bēchun ushu 35

- (7) [dada utsi]-n tantia-e-c 'Other men know [how to make fans].'
 man other]-Erg understand-Npast-Indic
Experiencer
 A-XIII 018 shuccate 07
- (8) debi-Ø ushcas-e-c Davy-Abs be.sleepy-Npast-Indic
Experiencer
 'Davy is sleepy.'
- (9) debi-Ø occasad-e-c Davy-Abs be.nauseous-Npast-Indic
Experiencer
 'Davy is nauseous.'

The Agent semantic role is another example: compare the markings on the noun matses in (10) and (11):

- (10) ado-shun matses-n pia-Ø dabi-quid
 do.thus-after:S/A>A Matses-Erg arrow-Abs fletch-Hab
Agent Patient
 'After doing that, Matses fletch the arrows.'
 A-XIII 034 pia 25
- (11) ashumbic matses-Ø aid-n nocoshque-quid
 then Matses-Abs that one-Inst paint.body-Hab
Agent Instrument
 'After doing that, Matses paint their bodies with that [genipap dye].'
 A-XIII 003 chëshète 11

Thus, it is evident that it is not possible to predict or describe nominal case marking patterns on noun phrases based solely on their semantic roles vis-à-vis the verb. Yet, speakers can nevertheless identify the semantic roles of the noun phrases in a sentence based on the case-marking pattern. For example, the sentences (10) and (11) both contain a zero-marked noun phrase and an -n-marked noun phrase, yet it is still possible to use the case marking to derive the semantic roles of the noun phrases. One might suggest that in (10) and (11) semantic roles can be derived from common sense or some animacy hierarchy, but it is evident from sentences like (12) that it is the case marking that allows us to know which entity gets his intestines pulled out.

- (12) aid-n-bi bëui-n matses-Ø uëdëshca-tsia-sh
 that.one-Erg-Emph tamandua-Erg Matses-Abs dig-Npast:Cond-3
 (apposed) Agent (apposed) Agent Patient
 ‘That same one, the tamandua [a dog-sized arboreal anteater], given the
 opportunity, would dig (its claws) into a Matses...’

A-IV 026 bëui 31

So it is clear that case-marking is functional and non-random but not directly connected to semantic roles (or pragmatic statuses, for that matter). Therefore, to describe case-marking patterns in Matses, it is convenient to refer to an intervening abstract level of grammatical structure where “the coding features indicate the grammatical structure of the sentence, and the grammatical structure determines the semiotic functions” (Andrews 1985:63). Grammatical relations/grammatical functions, the topic of this section, are relationships that exist between noun phrases and predicates in this grammatical structure. Actually, here I would like to adopt Andrews’ (1985:65-66) distinction between “grammatical function,” which refers to a relationship “definable over the sentence structure of a language under study, regardless of the extent to which it is important for the grammatical principles of that language,” and “grammatical relation,” defined as “a grammatical function that is generally significant for the workings of the grammatical principles of that language...”

The most important grammatical functions for describing grammatical structure in Matses are S, A, and O. Mithun and Chafe (1999) argue that it is possible to dispense with S, A, and O for describing the grammatical relations in a language, and that they can be disadvantageous for describing the grammars of some languages. However, the patterns in Matses suggest that this is one case where S, A, and O are useful tools for describing grammatical relations, if not apt primitives. S, A, and O can be described very

straightforwardly in terms of the grammatical patterns in Matses.² In Matses, S, A, and O are the only core grammatical functions, and no non-core functions are treated morpho-syntactically in the same way as S, A, or O. They can be defined as follows. In verbs that specify two or more core arguments (see next section for definition of “core argument”), the more Agent-like argument has the grammatical function A and the other specified core argument(s) has the grammatical function O; S is the grammatical function ascribed to the only core argument in one-argument verbs (regardless of semantic role). For Matses, there is no need to define A and O based on primary or prototypical transitive verbs, as I have yet to find a two-argument verb where coding features normally ascribed to the A occur on the less-agentive argument.³ And there are no split intransitive patterns in Matses (neither split-S/Agent-Patient nor fluid-S systems) since S arguments are coded consistently in all one-argument verbs (i.e., S arguments never carry ergative marking and always control subject person agreement).

I recognize five grammatical relations in Matses: ergative (A), absolutive (S+O), subject (= nominative; S+A), object (= accusative; O), and oblique. The first four are core grammatical relations; the fifth is non-core and has multiple subtypes (such as Instrumental, Locative, etc.). Matses has what might be referred to as “two superposed systems of grammatical relations” (Andrews 1985:138), with an ergative-accusative case-making system, and a nominative-accusative alignment controlling verbal subject person agreement as well as multiple syntactic processes (13-16).⁴

² The only exceptional cases are the two “double-absolutive” verbs in the language (§11.4.3).

³ By contrast, attempts to describe the ergative-absolutive case-marking patterns in Matses by reference to “immediacy of involvement” as suggested by Mithun and Chafe (1999), would only work for prototypical transitive verbs. For example, in applicative-of-transitive clauses (§11.5.3), the beneficiary (or maleficiary) is an absolutive-marked argument, yet it is clearly less immediately involved in the event than the ergative-marked argument.

⁴ Fleck (n.d.) brings together all the patterns of argument alignment described in this chapter, and offers the hypothesis that at least in some areas Matses is becoming more ergative over time.

- (13) cho-onda-sh dëmushbo-Ø 'The Dëmushbo people came.'
 come-Dist.Past-3 Dëmushbo.Indian-Abs
 + K-XXII 003 chema 021
- (14) ubi cania-mbo ic-onda-c ambo
 1Abs young.man-Aug be-Dist.Past-Indic:1/2 then
 'I was truly a young man back then...'
 K-XXI 009 dëmushbo 22
- (15) [cun papa pado-bo]-n istuid-onda-sh matses-Ø
 1Gen father deceased-Pl-Erg find-Dist.Past-3 Matses-Abs
 'My late father (and his group) found Matses-like Indians.'
 K-XXI 008 dëmushbo 10
- (16) [cun chido pado]-Ø umbi bë-onda-c
 1Gen woman deceased-Abs 1Erg bring-Dist.Past-Indic:1/2
 'I brought my late wife.'
 + K-XXII 015 chema 147

There is no case-marking tense or aspect split.⁵ Constituent order is free (responding to discourse and pragmatic factors), and of little use in distinguishing participants. Details of grammatical relations in Matses are explored further in the following subsections.

11.2.1 Core arguments vs. peripheral participants

An essential distinction to make in describing grammatical relations is that between core arguments and peripheral participants in the language. In my use, the term **participant** refers to any nominal (pronoun, noun, or noun phrase) that occurs in a clause, and is not itself a part of a larger noun phrase. For example, the one-clause sentence in (17) has three participants associated with the predicate: a noun in a

⁵ The pronoun nuqui '1+2' and the (archaic) second-person plural pronouns miqui and mitso do not vary for ergative vs. absolutive (but they do for genitive: nuquin, mitson). These are the only pronouns that do not vary, and all full nouns are subject to case marking. So if one wanted to posit a marking split, these plural pronouns would be it, but note that nuqui, miqui, and mitso simply exhibit an undifferentiated pattern, not a nominative-accusative one.

comitative postpositional phrase, an ergative noun, and an absolutive noun. Sentence (18) also has three participants associated with the verb: an absolutive noun phrase and two nouns in locative postpositional phrases. Sentence (19) also has three participants, two absolutive noun phrases, and an ergative noun phrase.

- (17) shupud-bëta matses-n buid-Ø codoca-quid
 rubber-Com:O Matses-Erg pitch-Abs boil-Hab
 ‘Matses boil pitch together with rubber tree sap.’

A-XIII 001 buid 08

- (18) utsi-Ø cuëte-n didique-tsëc-e-c [acte-dapa nantan]
 other-Abs dicot.tree-Loc hang-Dim-Npast-Indic river-large on
 ‘Another small one hangs on trees on big rivers.’

E-XI 049 cuesban 19

- (19) nuëcquid-uid-bi-Ø onina-n [aton bacuë]-Ø pe-me-e-c
 fish-only-Emph-Abs giant.otter-Erg 3Gen offspring-Abs eat-Caus-Npast-Indic
 ‘The giant otter feeds only fish to its young.’

1-p69-B onina 05

Sentence (20) has only two participants, an absolutive noun phrase and a noun in locative postpositional phrase. The adverb ënapen ‘long’ is not considered under my definition to be a participant since it is not a nominal element, nor does it contain one. Also, note in (20; brackets enclose phrases) that the word acte (both occurrences) itself is not a participant, but constitutes a *part* of a noun phrase which *is* a participant.

- (20) [acte pinchuc]-Ø [acte cuëma]-n cani-e-c ënapen
 river palm.species-Abs river edge-Loc grow-Npast-Indic long
 ‘Acte pinchuc palms grow tall on rivers margins.’

A-I 007 acte pinchuc 02

Core arguments (or “nuclear participants” or simply “arguments”) are participants (always nominal elements) that are *obligatorily* associated with the predicate; **peripheral participants** or **obliques** are participants (also nominal elements) that are *optionally*

associated with the predicate. As described by Dixon and Aikhenvald (2000:2): “The core arguments must be stated—or else be understood—for the clause to be acceptable and to have sense.” In example (17), matses and buid are core arguments and shupud is a peripheral participant; in (18) utsi is the only core argument and cuëte and acte-dapa are peripheral participants; in (19) all three participants are core arguments. The obligatoriness of core arguments is a feature of the privileged status of core arguments in Matses. Other syntactic properties that reflect the privileged status of core arguments (and help distinguish them from peripheral participants) are: i) only core arguments are involved in argument tracking between clauses in clause-chaining/adverbial clause constructions (§12.4); and ii) only core arguments can occur as disjunct noun phrases (§12.2.1). Furthermore, there are properties of core grammatical relations (= syntactically-recognized subsets of core arguments) that are not shared with any peripheral participants. For example, only subjects control verbal person agreement and absolutive participants are the only unmarked participants allowed.

A more essential distinction between core arguments and peripheral participants has to do with their representation of semantic roles. Core arguments can represent a range of different broad semantic roles, while peripheral participants are generally marked by case-markers or postpositions that code a single (or at most two) broad semantic roles. However, the essential identifying property of core arguments is that they are obligatory. Unfortunately, there are multiple situations where core arguments occur covertly, complicating our formal identification of core arguments (e.g., arguments that are third-person pronouns in any clause occur covertly, the second person argument is optional in imperative clauses, etc.). But with any verb, there are always situations (e.g., in declarative clauses with first- or second-person arguments, or where pronominalization is not adequate) where all its specified core arguments must be present and accounted for.

All Matses verbs very specifically specify the number and the types of core arguments that must be present in the clause; i.e., there are no “ambitransitive” or “labile” verbs in Matses. Tables 11.1 and 11.2 list the different Matses verb types, classed with respect to the number and types of core arguments they specify.

Table 11.1. Core functions specified by different transitivity classes of verbs in Matses.

Verb type	Core functions specified	Distribution ^a	Section
intransitive			
(simple) intransitive	S	48%	11.4.1
double-absolutive	S, S	<1%	11.4.3
transitive			
(mono)transitive	A, O	48%	11.4.1
ditransitive	A, O, O	3%	11.4.2

^a Distribution values are estimates.

Table 11.2. Grammatical relations associated with different transitivity classes of verbs.

Verb type	<u>Grammatical relations of specified arguments</u>	
	Case marking	Person agreement, etc.
intransitive		
(simple) intransitive	1 absolutive	1 subject
double-absolutive	2 absolutive	1 subject, 1 object
transitive		
(mono)transitive	1 ergative, 1 absolutive	1 subject, 1 object
ditransitive	1 ergative, 2 absolutive	1 subject, 2 objects

Clauses formed with these verb types are each discussed in section 11.4, after first sorting out several more details about grammatical relations in Matses. Obviously, the definition of core arguments depends on Matses grammar distinguishing between transitive and intransitive verbs. Section 11.4.1 describes all the ways in which Matses grammar regularly distinguishes between intransitive and transitive verbs, in addition to the issue of the semantic nature of the specified core arguments.

11.2.2 Practical identification of core arguments

Let us start with identification of core arguments based on the marking of noun phrases. (Overt) absolutive arguments are the easiest to identify formally: they are the only nouns or noun phrases (that are not a non-final part of a larger phrase) that can occur without an overt marker. By contrast, all non-absolutive nominal constituents are marked overtly in some way as not being absolutive. Non-absolutive nominals are marked in one of three ways: i) by a case-marking or postpositional enclitic (21); ii) by a phonologically independent, directly following postposition word (22); or iii) by occurring as a distinct pronominal form, generally containing a nasal (23).⁶

- (21) isan-Ø mannan-n cani-e-c ‘Isan palms grow on hills.’
 palm.species-Abs hill-Loc grow-Npast-Indic
 A-I 023 isan 02
- (22) aid-Ø [tied nantan] cani-quid
 that.one-Abs swidden on grow-Hab
 ‘That one [the peach palm] grows in swiddens.’
 A-I 008 titado 08
- (23) [cun chido pado]-Ø umbi bē-onda-c
 1Gen woman deceased-Abs 1Erg bring-Dist.Past-Indic:1/2
 ‘I brought my late wife.’
 + K-XXII 015 chema 147

Thus, it is possible to assign a specific meaning to the zero (-Ø) that distinguishes arguments (i.e., “absolutive”), as it clearly contrasts with the case markers and the postpositions (see §4.6 for position classes of nominal enclitics). In this grammar, I will mark absolutive participants as cliticized with “-Ø” (as in 21-23) in examples where the absolutive status of the participant is relevant to the discussion, otherwise the reader may assume that unmarked nominal elements not followed a postposition are absolutive

⁶ See section 11.5.4 for how body-part prefixes can function as postpositions.

arguments. Note that a potentially confusing situation is where bare nouns occur non-finally within a noun phrase (e.g., in a N N noun phrase or a N Adj noun phrase; §10.3), whether the noun phrase itself is zero-marked as absolutive or not (24 & 25; noun phrases in brackets):

- (24) tabote-Ø tane-quid [isan _____ podo]-n
 copal-Abs tie-Hab **palm.species** frond-Inst
 ‘They tie up the copal resin into a bundle with isan palm fronds.’
 A-XIII 004 tabote 07

- (25) [titado bacuë]-Ø matses-n pe-quid ‘Matses eat peach palm fruits.’
 peach.palm fruit-Abs Matses-Erg eat-Hab
 A-I 008 titado 02

Nouns like isan in (24) and titado in (25) do not take case-marking independently of the larger noun phrases they occur in, so isan in (24) cannot be considered to be in the absolutive case, and titado in (25) cannot be considered an additional absolutive argument (e.g., a conjoined apposed noun). There is no understood -Ø following isan or titado in these sentences. This is the same situation as with acte in example (20) described above.

Ergative arguments are a bit more difficult to identify formally than absolutive arguments because ergative nouns and noun phrases are case-marked with the enclitic -n (26), which is formally identical to the instrumental (27) and genitive (28) case markers, and to the locative/temporal postpositional enclitic (21).

- (26) matses-n adembidi bacun-Ø che-e-c
 Matses-Erg likewise.Tr honey-Abs eat.unchewed-Npast-Indic
 ‘Matses, likewise, eat the honey.’
 A-I 007 acte pinchuc 07

- (27) adec _____ chëshëid-Ø capu-e-c _____ incuente-n
 like.that:Manr:Intr spider.monkey-Abs locomote-Npast-Indic tail-Inst
 ‘Spider monkeys get around like that using their tails.’
 + A-I 053 chëshëid 28

- (28) shaë-n _____ pabiate pictsëc ic-e-c 'The giant anteater's ears are small.'
giant. anteater-Gen ear small be-Npast-Indic

A-IV 027 shaë 26

However, the semantics usually disambiguate these meanings, as in (29) and (30).

- (29) matses-n pia-n _____ se-shun _____ pe-quid poshto-Ø
Matses-Erg arrow-Inst pierce-after:S/A>A eat-Hab woolly.monkey-Abs
'Matses kill them with arrows and then eat the woolly monkeys.'

A-I 052 poshto 26

- (30) bëdimpi-n cachina-Ø _____ pe-quid inchësh-n 'The ocelot eats chickens at night.'
ocelot-Erg chicken-Abs eat-Hab dark-Loc

A-IV 038 bëdimpi 22

And pronoun forms are distinctive, in form and/or distribution. For example: mimbi '2 Ergative' vs. min '2 Genitive,' and umbi '1 Ergative' vs. cun '1 Genitive' (Table 11.3).

Table 11.3. Comparison of some different pronoun forms.

	Absolutive	Ergative	Instrumental	Genitive	Locative
Anaphoric					
1	<u>ubi</u>	<u>umbi</u>	<u>umbi</u> ^a	<u>cun</u>	—
2	<u>mibi</u>	<u>mimbi</u>	<u>umbi</u> ^a	<u>min</u>	—
1+2	<u>nuqui</u>	<u>nuqui</u>	—	<u>nuquin</u>	—
3	<u>Ø</u>	<u>Ø</u>	—	<u>aton</u>	—
4	<u>abi</u>	<u>ambi</u>	<u>ambi</u>	—	—
Interrogative					
human	<u>tsuda</u>	<u>tsundan</u>	—	<u>tsundan</u>	—
non-human	<u>atoda</u>	<u>atondan</u>	<u>atondan</u>	<u>atondan</u>	<u>mida</u> ^b
Deictic					
Proximal to 1	—	—	—	—	<u>në</u> ^b
Proximal to 2	—	—	—	—	<u>a</u> ^b
Distal to 1&2	—	—	—	—	<u>u</u> ^b

^a This form is apparently only found in passive clauses (§11.6.1.1).

^b These are all syntactically adverbs, mida 'where' is an interrogative adverb, and në 'here (by me),' a 'there (by you),' and u 'there (not by me or you)' are deictic adverbs.

The markedly different semantics and different pronominal forms associated with the four -n enclitics suggests that these are four independent markers, rather than a single morpheme with a wide range of functions.⁷ Interestingly, despite having the same form (on full nouns and noun phrases), these enclitics represent significantly different categories of morphemes (Table 11.4).

Table 11.4. Comparison of morphemes represented by -n.

Meaning	Morpheme type	Participant type marked	Case governing element
Ergative	case marker	core argument	transitive or ditransitive verb
Genitive	case marker	peripheral participant	possessed noun
Instrumental	case marker	peripheral participant	passive or causative verb
Locative	postposition	peripheral participant	none

Let us begin to distinguish the syntactic differences among nominal elements marked with -n. The locative noun phrases are the most different: while ergative, genitive, and instrumental noun phrases can be replaced by pronouns, locative noun phrases can be replaced only by deictic adverbs (Table 11.3). The other major difference between the locative and the other -n markers is that ‘Ergative,’ ‘Genitive,’ and ‘Instrumental’ are *cases*, while all locative markers including -n are *postpositions*. In the next section, I define case markers as opposed to postpositions, and then I point out the syntactic differences among the three -n-marked cases.

If one is able to identify the ergative vs. absolutive arguments, then identification of the subject can be done by default in almost all cases: if there is an ergative argument, it is the subject, if there is only one argument (in which case it will be absolutive), it will

⁷ These are likely from the same historical source, with the possible exception of the location (as this same homophony/polysemy patten occur in other Panoan language. The functions of these forms are distinguished easily enough in most sentence types. But passive constructions (§11.6.1.1) and subordinate clauses (§12.2) reveal semantic and syntactic links relating these distinct synchronic functions of -n.

be the subject; any remaining core arguments are objects. The only time this method cannot be used is in “double absolutive clauses,” which have two absolutive and no ergative arguments (§11.4.3). In these situations, as in those few situations where it is difficult to identify the ergative argument, case marking or first-person pronominal enclitics can help to identify the subject. For example, in the complex construction in (31), the inflectional suffix, *-c* ‘Indicative: 1/2 person subject agreement’ on the main verb *is* reveals that *nuqui* (the only pronoun that does not have an ergative form distinct from the absolutive) is the main clause subject, rather than the object of the non-finite verb *bed* in the preceding subordinate clause.

- (31) bed-shun-bi-en nuqui is-tsia-c
 grab-after:S/A>A-Emph-Contr 1+2(Erg) see-Npast:Cond-Indic:1/2
nain-quin cuesban-Ø
 finish-while:S/A>A bat-Abs
 ‘After catching them all, we would see every last bat.’
 *‘After catching us, they would see every last bat.’

C-V 016 cuesban 32

See section 11.2.5 below for more properties of subjects.

11.2.3 Case markers vs. postpositions

In my analysis, Matses has four different cases: absolutive, ergative, genitive, and instrumental. The following rule of thumb, proposed by Payne (1997:100), helps with the identification of these as cases:

Case marking is the morphosyntactic categorization of noun phrases that is imposed by the structure within which the noun phrase occurs. Adpositions are free of such configurational constraints.

It should be kept in mind, however, that it is possible to describe all the noun phrase markings as occurring in a sort of continuum, with the absolutive case at one end and

phonologically free postpositions at the other end. For example, the locative postpositional enclitic *-n* is the most core-argument-marker-like postposition: in addition to being phonologically identical to the ergative case marker, it can code two different broad semantic roles: locative (including target but not direction) and temporal.

Similarly, as will be seen below, the genitive and instrumental cases share properties with both core arguments and with postpositional phrases.

Cases that are regularly imposed by predicates (ergative and absolutive) are the most clearly identified as cases, since they are lexically specified by verbs, and cannot occur optionally (i.e., they are core arguments, as defined above). In other words, with any particular verb, there is no option as to how many or what type of core argument will occur in the clause, and there are no case-marking options for the arguments. The two core arguments, ergative and absolutive, are the prototypical cases in Matses.

The genitive case is not governed by predicates, but by the structure of possessive noun phrases. As described in section 10.3.1, most possessive noun phrase types require that the possessor be marked as genitive (28 & 32). Similarly, some postpositions require their objects to be in the genitive case if human (33; §10.4.3).

- (32) [cachina-n intac]-Ø chish-e-c matses-n-a chedo-bi
 chicken-Gen blood-Abs suck-Npast-Indic people-Gen-3Poss too/etc-Emph
 ‘They [vampire bats] suck chickens’ blood, people’s, too.

C-V 016 cuesban 18

- (33) [[cun shanu]-n dayun] tsad-nu
 1Gen female.cross.cousin-Gen beside sit-Intent:1
 ‘I’m going to sit beside my cousin.’ or ‘I’m going to sit by my cousin’s side.’

Only in a subset of possessive noun phrases (specifically, part-whole noun phrases; §§10.3.1, 10.3.5) is there an option as to whether the possessor is marked as genitive or left unmarked, but, even in these situations, there is no other option besides the genitive

case for marking the possessor. And genitive participants cannot just be tacked on optionally to a clause like adverbs, postpositional phrases, etc. can. In addition to coding ownership, interpersonal relation, or a part-whole relation, the genitive marker has the syntactic function of marking the genitive noun as subordinate to a head noun.

The instrumental case is the least prototypical case. As with the ergative, only one instrumental participant is allowed per clause, but unlike the ergative, in most instances it occurs optionally. But “remote causative constructions” require inanimate “Causees” to appear in the instrumental case (34; §11.5.2). And, if there is to be an overt Agent participant in a passive clause, it must be in the instrumental case (35; §11.6.1.1).

- (34) matses-n tētinten-n tambisēmpi-Ø cues-me-quid
 Matses-Erg deadfall.trap-Inst spiny.rat-Abs kill-Caus-Hab
 ‘Matses make spiny rats get killed by/with deadfall traps.’

- (35) nisi-n debi-Ø pe-ad-o-sh ‘Davy got himself bit by a snake.’
 snake-Inst Davy-Abs bite-Pass-Past-3

Despite being more deviant from the ergative marker than the genitive marker in terms of strictness of case governing, the instrumental shares one important grammatical property with core arguments that the genitive does not. A, S, O, and Instrumental participants can be associated with a (peripheral) comitative participant via one of three postpositional enclitics: -bēd ‘Comitative: S,’ -bēta ‘Comitative: O,’ and -bētan ‘Comitative: A’ / ‘Comitative: Instrumental’ (36; §8.3.1).

- (36) aden nacnen-quin nain-shun
 like that:Tr make-while:S/A>A finish-after:S/A>A
 [pupu ēshē]-n [acte chiun]-bētan danoshca-quid bēda-mbo-en
 owl.species eye-Inst river clam-Com:Inst smoothen-Hab good-Aug-Advzr:Tr
 ‘After finishing making it like that, they smooth it well with pupu ēshē tree seeds
 and with clam shells.’

There are in fact no formal distinctions between Instruments and Ergative participants. They differ significantly in their status as core vs. peripheral participant, but they are also distinguished semantically: there seems to be a restriction against inanimate Ergative participants, and animate entities, especially humans, do not occur as Instruments (except marginally in passive clauses). An (active) sentence like (37) is judged as wrong and can only be understood as nonsensical.

- (37) *Debi-n cues-o-mbi (would mean: 'I hit him using Davy as a weapon.')
- debi-Inst hit-Past-1A

This precludes first- and second-person instrumental participants. It should be emphasized, however, that I am not just calling animate A's ergative and inanimate A's instrumental, because other grammar that identifies A participants never identifies instrumental participants. For example, instrumental participants are not involved in the inter-clausal reference, they do not become S of antipassive clauses, they are not coded as plural by the suffix -beded 'Collective A,' etc., and an instrumental participant can occur in addition to an ergative participant, while two ergative or two instrumental participants are not allowed.

In addition to the obvious observation that the comitative postpositions are identical for the A argument and the instrumental argument, and that there is no corresponding comitative marker for genitive case or the locative postposition, the fact that there exists a construction for comitative instrumental participants emphasizes another important difference between instrumental participants and postpositional phrases. While verbs do not specify the presence of an instrumental participant (remote causative and passive constructions being the exceptions), it seems that in any clause

there is but a single slot for an instrumental participant. This seems to be the case as well for ergative and absolutive participants: for multiple ergative participants or more than the specified number of absolutive participant to occur in a clause, they must be apposed or conjoined in some manner, so that they fill a single argument slot, as in (38).

- (38) [cania-bo chedo-bi]-Ø [bacuë-mpi chedo-bi]-Ø tëshë-Ø
 young.man-Pl too-Emph-Abs child-small too-Emph-Abs piece-Abs
 (conjoined) Recipient (conjoined) Recipient Patient
mene-ban-quid tsësio-dapa-n
 give-Distr-Hab old.man-large-Erg
 Agent

‘The old man gives out pieces [of meat] to the young men and the little kids.’

C-III 001 shëcten 43

Comitative peripheral participants are a strategy for increasing the number of nouns that share a semantic role in the event. Similarly, in any simple possessive phrase, there is but one slot for a genitive participant; the number of genitive participants in a noun phrase can only be increased by nesting. By contrast, there seems to be no fixed number of slots for locative phrases: i.e., multiple locative phrases can occur in a clause without being coordinated or nested (39-41; see also 18), even involving the same postposition (39).

- (39) shubu tanun [acte-dapa cuëma]-n [nidaid chëshë]-n-quio dadpen-quio
 palm.species gray river-large edge-Loc ground black-Loc-Aug many-Aug
 ic-e-c
 be-Npast-Indic

‘There are many shubu tanun palms along large rivers on black soil.’

I-p14-B shubu tanun 01

- (40) [mannan dada]-n-quio budëd ushu cani-e-c
 hill hilltop-Loc-Aug palm.species white grow-Npast-Indic
tanac nantan
 palm.species among

‘Budëd ushu palms grow on hill tops, in tanac palm stands.’

A-I 017 budëd ushu 04

- (41) u u nid-quid bēdi-dapa u [acte utsi]-n
 far far go-Hab jaguar-large far river other-Loc
 'Far, far, jaguars travel far, to another river.'

A-IV 036 bēdi dapa 27

The main distinction between the cases marked by -n and the locative phrases marked by -n is that locative phrases are never required by any verb, nor is there any construction that specifies a locative participant. Even predicate locative copular clauses (42) are readily analyzed as existential clauses with an optional refinement of location (§§11.7.3.2, 11.7.4).

- | | |
|---|--|
| (42a) <u>mayan ic-e-c</u>
ghost be-Npast-Indic
'Ghosts exist.'
'A ghost is present.' | (42b) <u>mayan ic-e-c</u> <u>[nēid shubu]-n</u>
ghost be-Npast-Indic this.one house-Loc
'Ghosts exist in this house.'
'A ghost is present in this house.' |
|---|--|

The locative postposition -n, along with the other locative postpositional enclitics (-no 'Locative/Directional: precise,' -mi 'Locative/Directional: general,' and -uc 'on the side where X is') differ from the phonologically independent locative postpositional words only in that they are phonologically attached to the postpositional object. And when a locative postpositional phrase is included in a sentence, there is no syntactic element that governs which postposition is to be used—the locative postposition used varies in response to semantics, not grammar. Thus, absolutive, ergative, genitive, and instrumental constituents are nominal elements, while locative-marked nouns/noun phrases are syntactically adverbial elements, just as are all postpositional phrases (§8.2). For example, like all locative adverbs and postpositional phrases, locative postpositional phrases with -n can exhibit event initiation transitivity agreement (43; §7.6.1.2), while ergative, genitive, and instrumental nouns/noun phrases cannot.

- (43) onina-n bacuë-Ø [acte cuitsipan]-n-shun
 giant.otter-Erg offspring-Abs river undercut.bank-Loc-Ev.Init:Tr
tish-e-c
 give.birth.to-Npast -Indic
 ‘Giant otters give birth to their young in a cavity in an undercut riverbank.’
 A-IV 031 onina 13

One-word responses to questions are marked as ergative if they represent the A of a transitive verb (44).

- (44a) tsundan cun cano buan-o-sh (44b) tsusio-n
 who:Erg 1Gen canoe take-Past-3 old.man-Erg
 ‘Who took my canoe?’ ‘The old man [took your canoe].’

By contrast, questions about a location (45a) can generally be answered by a number of different adequate postpositions (45b-45d).

- (45a) mida-mbo cun cano ic-o-sh (45b) chian-n
 where-Aug 1Gen canoe be-Past-3 lake-Loc
 ‘Where was my canoe?’ ‘At the lake.’
- (45c) acte equêduc (45d) acte dêbiate-mi
 river inside river upriver-Loc
 ‘Underwater (submerged in the river)’ ‘Upriver.’

11.2.4 Covert arguments: zero-third-person pronouns

The third-person anaphoric pronoun in Matses is Ø, for both the ergative and the absolutive case (46-48; see also Table 11.3).

- (46) Ø [pinchuc-n bacuë]-Ø pe-e-c
 3Erg palm.species-Gen fruit-Abs eat-Npast-Indic
 ‘They [Amazon red squirrels] eat the pinchuc palm’s fruits.’

- (47) ado-shun matses-n Ø bed-quid
do.thus-after:S/A>A Matses-Erg 3Abs grab-Hab
‘After that, Matses grab it [the armadillo].’

A-I 047 tsaues 30

- (48) Ø cho-onda-sh ‘They [the Dëmusbo people] came!’
3Abs come-Dist.Past-3

K-XXI 010 dëmushbo 34

As with other anaphoric pronouns in Matses, there is no plural/singular, masculine/feminine/neuter, animate/inanimate, human/non-human, or honorific/non-honorific distinctions. This presents a difficulty in the analysis of Matses core arguments and transitivity, but the phenomenon is not uncommon, as pointed out by Foley and Van Valin (1985:288): “...while all languages have overt morphemes for first and second persons, many have a zero morpheme for the third.”

The practical detection and identification of covert third-person pronouns in simplex sentences requires one to know the number and type of core arguments that are lexically specified by a verb, as listed in Tables 11.1 and 11.2, and the effect of any valence adjusting morphology on the verb. For example, speakers know that the verb cho specifies one absolutive argument, and therefore they would know that in (48) there is a covert third-person absolutive pronoun. Similarly, in (46), one would not only know that there is a covert third-person pronoun, but that it is an ergative argument because the verb pe specifies two arguments, one absolutive and one ergative, and in (46) it is the ergative one that is missing. The way one knows that the missing argument(s) is third person rather than first or second is that in almost all constructions, first- and second-person arguments must occur overtly; therefore, by default, if an argument is missing, it must be third person. Exceptional cases, such as imperatives and questions directed at the interlocutor, where second person arguments optionally occur covertly, are described in sections 11.9.1 and 11.10.

This analysis might be considered a bit controversial. One might wish to argue instead that Matses transitive verbs are “labile” (Payne 1997), like English *eat* or *break*, which can occur as either transitive or intransitive verbs. But it is quite obvious that transitivity of all Matses verbs cannot be altered without overt affixations, and that simple exclusion of an overt argument in the clause is not accompanied by a decrease of valence. The following are six morpho-syntactic lines of evidence that show that the verbs remain transitive (i.e., bivalent) when one (or more) argument is “missing” (see §11.4.1 for a description of all the morpho-syntactic properties associated with transitive vs. intransitive verbs):

i) ergative marking (49);

- | | | | |
|-------|--|-------|------------------------------|
| (49a) | <u>debi-n</u> <u>pambid-Ø</u> <u>pe-o-sh</u> | (49b) | <u>debi-n</u> <u>pe-o-sh</u> |
| | Davy-Erg meat-Abs eat-Past-3 | | Davy-Erg eat-Past-3 |
| | ‘Davy ate meat.’ | | ‘Davy ate it.’/‘Davy ate.’ |

- | | | |
|-------|------------------------------|----------------|
| (49a) | <u>debi-Ø</u> <u>pe-o-sh</u> | ‘It ate Davy.’ |
| | Davy-Abs eat-Past-3 | |

ii) pronominal first-person enclitics (50);

- | | | | | | |
|-------|---------------------------------|-------|-------------------------------|-------|------------------|
| (50a) | <u>pambid-Ø</u> <u>pe-o-mbi</u> | (50b) | <u>pe-o-mbi</u> | (50c) | * <u>pe-o-bi</u> |
| | meat-Abs eat-Past-1A | | eat-Past-1A | | eat-Past-1S |
| | ‘I ate meat.’ | | ‘I (already) ate.’/‘I ate it’ | | |

iii) person subject cross-reference agrees with third person covert subjects (51);

- | | | | |
|------|---------------------------|-------|--|
| (51) | <u>ubi</u> <u>is-o-sh</u> | (51b) | <u>cho-o-sh</u> |
| | 1Abs see-Past-3 | | come-Past-3 |
| | ‘He/she/it/they saw me.’ | | ‘He/she/it/they came.’/*‘I/we/you came.’ |

iv) adverbial transitivity agreement (52 & 53);

- (52a) padpide-en pe-o-sh
again-Manr:Tr eat-Past-3
'He ate again.'/'He ate it again.'
- (52b) *padpide-ec pe-o-sh
again-Manr:Intr eat-Past-3
- (53a) umanuc-shun pe-o-sh
outside-Ev.Init:Tr eat-Past-3
'He ate outside.'/'He ate it outside.'
- (53b) *umanuc-uësh pe-o-sh
outside-Ev.Init:Intr eat-Past-3

v) participant tracking on adverbial clause/clause-chaining suffixes (54, 55, & 47);

- (54a) capu-quin pe-o-sh
walk-while:S/A>A eat-Past-3
'He ate as he walked.'/'He ate it as he walked.'
- (54b) *capu-ec pe-o-sh
walk-while:S/A>S eat-Past-3
- (55) cain-ac cho-sho mëcueste-Ø pia-n se-quid
wait-when:O>S/A come-when:S/A/O>O agouti-Abs arrow-Inst pierce-Hab
matses-n
Matses-Erg
'After they wait for it_i, as it_i comes, Matses kill the agouti_i with an arrow.'
- A-IV 012 mëcueste 11

and vi) verbal derivational suffixes that vary for transitivity (56):

- (56a) pe-ban-o-mbi
eat-while.going:Tr-Past-1A
'I ate as I went.'
- (56b) *pe-nid-o-mbi
eat-while.going:Intr-Past-1A

Additionally, many sentences simply would not make sense if the covert core argument was interpreted as nonexistent. For example, (46) would not convey the intended message and (47) would be incomprehensible without the understood covert argument, and how would we interpret sentences like (48) and (57) if they were completely "argumentless" (i.e., with zero valence)?

- (57) mënchic-onda-sh
take.away-Dist.Past-3
'They [the Matses] took it [the ax] away from him [the Dëmusbo Indian].'

The essential fact to keep in mind for interpreting clauses with covert arguments is that covert third-person pronouns can represent either given/recoverable entities, or they can represent indistinct/impersonal referents. In English, impersonal objects are often expressed by leaving the object of a transitive verb out of a simple sentence. Often those verbs that allow this deletion are treated as “ambitransitive” or “labile” verbs that can occur as transitive or intransitive verbs (e.g., Payne 1997). For example, if the food that a person eats is not important or known, the overt object may simply be left out of the clause, as in *He already ate*. Or if the object is too obvious, it may be left out, as in *They won (the game)*. Other English verbs do not allow objects to be covert under any circumstances: **He hit* or **They beat*. In Matses, there are words like anseme ‘fish with hook and line,’ which most naturally occur with a covert impersonal object (58), and words like cues ‘hit,’ which most naturally occur with an identifiable object (59). The word pe ‘eat/bite’ occurs naturally with a covert third-person pronoun representing either an identifiable object or an impersonal object when meaning ‘eat’ (60a), but it occurs naturally only with a referential object when meaning ‘bite’ (60b).

- | | |
|---|--|
| (58) <u>debi-n anseme-e-c</u>
Davy-Erg hook.fish-Npast-Indic
‘Davy is going to fish (?them).’ | (59) <u>debi-n cues-o-sh</u>
Davy-Erg hit-Past-3
‘Davy hit him/her/it/them.’/?‘Davy hit.’ |
| (60a) <u>opa-n pe-o-sh</u>
dog-Erg eat-Past-3
‘The dog ate it.’/‘The dog ate.’ | (60b) <u>opa-n pe-o-sh</u>
dog-Erg bite-Past-3
‘The dog bit it/him’/?‘The dog bit.’ |
| (60c) <u>opa-Ø pe-an-o-sh</u>
dog-Abs bite-Antpass-Past-3
‘The dog used to bite.’
?’The dog ate/used to bite.’ | (60d) <u>opa-Ø pe-an-e-c</u>
dog-Abs bite-Antpass-Npast-Indic
‘The dog bites.’
?’The dog eats.’ |

But unlike English, these tendencies are not reflected in any strict grammatical properties of the verbs. One general tendency is that those verbs that do not naturally take an impersonal object (such as *pe* ‘bite’ or *cues* ‘hit’) utilize antipassivization to express an impersonal third-person object; verbs that naturally take impersonal third-person objects (such as *pe* ‘eat’ or *an seme* ‘hook fish’) do not easily form antipassives (60c-d; §11.6.2). As such, the impersonal readings of (58) and (60a) can be considered functional equivalents of antipassives.

In English, impersonal objects can be left or for many verbs (e.g. *He stole something.* = *He stole.*), but subjects of simple declarative clauses cannot just be left out (e.g., *Someone stole my wallet.* ≠ **Stole my wallet.*). Meanwhile, in Matses, both impersonal objects and impersonal subjects can be expressed as covert third-person pronouns. In Matses, impersonal subjects, especially transitive subjects, are common with inferential evidentiality inflection, as one might expect, considering that the occurrence of the event is inferred from the observable evidence resulting from an unobserved event (61).

- | | | |
|------|--------------------------------------|----------------|
| (61) | [<i>cun moco</i>]-Ø <i>ampe-ac</i> | |
| | 1Gen ax-Abs steal-Infer | |
| | ‘Someone evidently stole my ax.’ | impersonal A |
| | ‘He evidently stole my ax.’ | identifiable A |

Otherwise, impersonal subjects are generally less common than impersonal objects, considering that subjects are frequently topics in Matses, and therefore usually identifiable. The passive construction is not available for expressing impersonal subjects, since the only true passive construction in Matses carries with it reflexive semantics (§11.6.1.1). Sentences like (61), however, can be considered the functional equivalent of semantically neutral (i.e., non-reflexive) passives: the impersonal subject reading of (61)

could easily be translated as ‘My ax has evidently been stolen.’ Table 11.5 compares the representation of third-person arguments in Matses, Spanish and English.

Table 11.5. Representation of **third-person** arguments at different levels of recoverability/identifiability in Matses, Spanish, and English.

	New		Recoverable		Impersonal	
	Subj	Obj	Subj	Obj	Subj	Obj
Matses:	noun	noun	zero	zero	zero	zero/antipassive
Spanish:	noun	noun	zero	pn	indef. pn/passive ^a	zero/indef. pn
English:	noun	noun	pn	pn	indef. pn/passive/ <i>they</i>	zero/indef. pn

pn = personal pronoun; indef. pn = indefinite pronoun (e.g., ‘someone’)

^aThird-person plural agreement can also be used here.

Before moving on, let us consider the fourth-person pronouns: abi ‘4th Person Absolutive’ and ambi ‘3rd Person Ergative/Instrumental,’ introduced in section 4.4.1. These forms may at one time have been the third person absolutive and ergative anaphoric pronouns, but now they occur only as third person pronouns in some special situations. Their fourth-person function is to express co-reference between arguments in a subordinate clause and its matrix clause, as in the nominalizations in (62) and (63).

- (62) [ambi pe]-ac-no onina-n sebad-ua-quad
 4Erg eat-Act.Nzr-Loc **giant.otter**-Erg clearing-Vzr:make-Hab
besca-ac-bi-mbo-en
 sweep-Act.Nzr-like-Aug-Manr:Tr
 ‘Where they_i eat, giant otters_i make a little clearing, as if they had swept it.’
 A-IV 031 onina 04
- (63) [ambi da-pe]-aid-quo da-pe-quad cacsi
 4Erg trunk-eat-Pat.Nzr-Aug trunk-eat-Agt.Nzr **pygmy.squirrel**
ne-e-c
 be-Npast-Indic
 ‘Pygmy squirrels_i are ones that gnaw the bark of trees that they_i previously gnawed.’
 A-IV 007 cacsi 10

So, for example, without ambi in (63), we could not be certain whether the trees where the squirrels eat bark are the ones where they themselves have eaten before, or if these trees are ones where other pygmy squirrels have eaten, or trees where other animals also eat bark. The purpose of the sentence is to reveal the fact about pygmy squirrels that they (they travel in groups) have a set number of trees in their territory where they always return to feed. There is some overlap with reflexive pronouns in English: (63) could be translated as: ‘...that they **themselves** previously gnawed.’

In clause-chaining/adverbial subordinate clauses, abi is sometimes called for with the suffix, -sho, which indicates only that one of the core arguments in the subordinate clause is or becomes the object of the transitive verb in the matrix clause (see §12.4 for details on adverbial clauses and clause chaining). The use of abi in (64) reduces ambiguity in two ways: i) it lets the hearer know that the O of the subordinate clause the entity that occurs in the matrix clause; and ii) the fact that the co-referential pronoun is in the absolutive case lets the hearer know that it is the O (the dog), rather than the A (the tayra) of the subordinate clause that is being tracked across to the matrix clause. Note that it is also part of the Matses belief that even if it is the dog that bites the tayra, the tayra similarly makes the dog sick, therefore if ambi was substituted for abi, it would be the dog that bit the tayra, but still the dog that gets sick.

- (64) abi mos-sho batachued-n opa cuid-quid pe-quin
 4Abs bite-when:S/A/O>O tayra-Erg dog make.sick-Hab bite-while:S/A>A
 ‘When it bites it, the tayra makes the dog_i sick by biting it.’

A-IV 033 batachued 20

The pronouns abi and ambi can show up in simplex clauses as third-person pronouns instead of \emptyset when the speaker wishes to include one of the noun phrase

enclitics described in section 4.6. Because enclitics must be phonologically attached to a root, they cannot occur with \emptyset , and so this seems to explain why abi or ambi is required in these cases (65); i.e., as place-holders for the nominal enclitics.

- (65) ad-quin-bi ambi-bi pe-e-c
 do.like.that-while:S/A>A-Emph 3Erg-Emph eat-Npast-Indic
quen-en-shun a-n-ben-tsēc-bi
 get.used.to-after:S/A>A 3-Erg-along-Dim-Emph
 ‘Doing like that, it [a young puma] itself hunts, after getting used to being alone.’
 A-IV 037 bēdi piu 17

I refer the reader to section 4.4.4, where I describe the demonstrative pronouns, nēid ‘this one (by me),’ aid ‘that one (by you),’ and uid ‘that one (not by you or me),’ which can be used as pronouns in a deictic nature; i.e., while pointing to the entity in question. But aid can be used as a sort of anaphoric pronoun to refer to any entity (visible or not) referred to in the preceding discourse, as in (66), in a “back reference” function.

- (66) aid tied nantan cani-quid ‘That one grows in swiddens.’
 that.one swidden on grow-Hab
 A-I 008 titado 08

But note that aid (unless used as a noun modifier) can only occur sentence initially, and it is more of a sentence linker than a part of the clause (66 might better be translated ‘That one, it grows in swiddens’). Sentences like (67) and (68) encourage the analysis that aid is not a pronoun but an apposed or clause-external element, especially, (67), where the case-marking shows it is not a determiner (which it could imaginably be in 68).⁸

⁸ This is one case where intonation helps identify clauses. When aid is used as an apposed pronoun (e.g., *that one, the peach palm, grows in swiddens*), one can usually hear a fairly significant pause before the rest of the sentence, while as a noun modifier (e.g., *that [type of] peach palm grows in swiddens*) there is usually no pause. However, in elicitation, one cannot force a meaning by placing long pauses or omitting them.

- (67) aid-Ø [cuëbu-n isan]-Ø dadpen cani-quid
 that.one-Abs Spix's.guan-Gen palm.species-Abs many grow-Agt.Nzr
 ne-e-c
 be-Npast-Indic
 'That one, the cuëbun isan palm is one that grows in clusters.'

A-I 025 cuëbun isan 03

- (68) aid-n [cuda shëta]-n matses-n bëdi-Ø se-quid
 that.one-Inst bamboo spearhead-Inst Matses-Erg jaguar-Abs pierce-Hab
 'With that bamboo-head spear, Matses kill jaguars.'

A-XIII 032 cuda shëta 05

11.2.5 *Subjects and verbal subject agreement*

The category “subject” is a grammatically defined category in Matses. Using Andrews’ (1985) distinction (see §11.2), “subject” is not just a “grammatical function” definable as a category composed of S and A, but a (morpho-syntactically relevant) “grammatical relation.” The most important grammatical process that works in response to the subject category is person agreement (= cross-referencing) on verbal inflection. Other minor patterns in the language that identify the subject category are: equi-deletion in infinitives, participant selection by some nominalizers, some patterns in the distribution of first-person pronominal enclitics, and some patterns in argument co-reference (same subject vs. different subject) in adverbial/clause-chaining clauses. In this section, I will outline how verbal subject agreement works in Matses, but the rather complex details of the different verbal inflectional suffixes are described in section 5.6. I will also briefly exemplify the other processes that respond to the subject category, referring the reader to the sections where these processes are described in detail.

Most verbal inflections contain subject person reference, either as an invariant component of a portmanteau suffix (69), or as a segmentable portion of the suffix that varies for first/second person vs. third person (= speech act participants vs. non-speech act participants) subjects (70).

- (69a) [titado bacuë]-Ø matses-n pe-ash
 peach.palm fruit-Abs **Matses-Erg** eat-**Conjec(:3)**
 ‘I presume Matses ate the peach palm fruits.’
- (69b) [titado bacuë]-Ø (mimbi) pe-ta (You) eat peach palm fruits!
 peach.palm fruit-Abs **2Erg** eat-**Imper(:2)**
- (70a) [titado bacuë]-Ø matses-n pe-o-sh
 peach.palm fruit-Abs **Matses-Erg** eat-**Past-3**
 ‘The Matses ate peach palm fruits.’
- (70b) [titado bacuë]-Ø mimbi pe-o-c You ate peach palm fruits.
 peach.palm fruit-Abs **2Erg** eat-**Past-1/2**

But for some tenses, the inflection does not vary for person (71), except in the interrogative mode (72).

- (71a) [titado bacuë]-Ø matses-n pe-e-c
 peach.palm fruit-Abs **Matses-Erg** eat-**Npast-Indic**
 ‘Matses eat peach palm fruits.’
- (71b) [titado bacuë]-Ø mimbi pe-e-c
 peach.palm fruit-Abs **2Erg** eat-**Npast-Indic**
 ‘You eat peach palm fruits.’
- (72a) ada [titado bacuë]-Ø matses-n pe-e-c
 Uncert peach.palm fruit-Abs **Matses-Erg** eat-**Npast-Interr:3**
 ‘Do Matses eat peach palm fruits?’
- (72b) ada [titado bacuë]-Ø (mimbi) pe-e-Ø
 Uncert peach.palm fruit-Abs **2Erg** eat-**Npast-Interr:1/2**
 ‘Do you eat peach palm fruits.’

Person agreement serves two potential functions: to disambiguate roles in transitive sentences, and to help identify the subject when the subject does not occur overtly as a pronoun or noun/noun phrase. Generally speaking, however, person agreement in Matses is redundant and does not perform these functions, as first and second person arguments,

which are case-marked, must occur overtly in most situations. So, in most cases, if an argument is missing, it is assumed to be a covert third-person pronoun. Therefore, inflectional suffixes are actually informative in a few situations: i) Second person participants can be excluded in questions that are about the second person, i.e., where the subject is the addressed interlocutor (73 & 72b). ii) The inclusive first-person pronoun does not vary for absolutive vs. ergative case, so in transitive clauses, subject marking can reveal its grammatical function (74). iii) Portmanteau inflectional suffixes that are specific to the first person require that the first person not be mentioned (75). iv) And imperative clauses occur with an overt second-person pronoun only for emphasis (76 & 69b).

(73a) ada cho-e-Ø
Uncert come-Npast-Interr:1/2
'Are you going to come?'

(73b) ada cho-e-c
Uncert come-Npast-Interr:3
'Is he/she/it/they going to come?'

(74a) nuqui cues-tsia-c
1+2 hit-Npast.Cond-1/2
'We would hit him/her/it/them.'

(74b) nuqui cues-tsia-sh
1+2 hit-Npast.Cond-3
'He/she/it/they would hit us.'

(75) nid-nu
go-Intent:1
'I'm going.'/*'You/he/she/they are/is going.'

(76) nid-enda
go-Neg.Imper(:2)
'Don't go!'

The next section shows how first-person pronominal suffixes interact with the subject person agreement system.

In addition to verbal person subject agreement, there are other patterns that form part of the evidence that Matses has subject and object grammatical relations. These grammatical processes identify S and A as a category, i.e., they neither work in terms of all the core arguments, nor in terms of just S or just A. These are: i) Equi-deletion in infinitives, which occur only as object complements of the verb bun 'want' (§12.2.6).

The subject of the complement, which is an S in (77; Davy) and an A in (78; bats) does not occur overtly and it must be the same as the subject of bun, the main verb; i.e., the notional subject of the complement clause must be co-referential with the main clause subject and is obligatorily “equi-deleted.”⁹ There is no subject-object equi-deletion.

(77) debi cho-te bun-e-c ‘Davy wants to come.’
Davy come-Infin want-Npast-Indic

(78) cuesban [matses pe-te] bun-quad ‘Bats want to bite Matses.’
bat Matses bite-Infin want-Hab

E-XI 049 cuesban 07

ii) Participant selection by some participant nominalizers select either the S or A arguments of the verb. Particularly, the suffix -esa can be attached to verb stems to create a noun that refers to the S (79; the “grower”) or the A (80; the eater) argument of the verb, referring to an action that never occurs or a state that never holds true (§4.7.3).

(79) [nimëduc cani]-esa titado ne-e-c
primary.forest.Loc grow]-Neg.Nom.Nzr peach.palm be-Npast-Indic
‘The peach palm is one that does not grow in primary forest.’

A-I 008 titado 10

(80) [nëishamë pe]-esa bëdimpi ne-e-c
tapir eat-Neg.Nom.Nzr ocelot be-Npast-Indic
‘The ocelot is one that does not eat tapirs.’

A-IV 038 bëdimpi 14

Additionally, the nominalizer -quid ‘Agent Nominalizer’ refers to the S or A argument of the verb, but only in the present and future tenses; in the past it refers only to A arguments (§4.7.1.1).

⁹ I use the term “equi-deletion” because it is in common use and readily understood, but understand that I use it here for describing the syntactic *pattern*, not to suggest an actual process of deletion somehow occurs, as the term seems to imply.

iii) Some patterns in the distribution of first-person pronominal enclitics (next section) are unique to S and A. While S, A, and O can all occur as first-person pronominal enclitics, only -bi '1S' and -mbi '1A' can replace person agreement inflections, while -i '1O' must occur in addition to a third-person subject agreement marker.¹⁰

(81a) cho-o-bi
come-Past-1S
'I came.'

(81b) cues-o-mbi
hit-Past-1A
'I hit him.'

(81c) cues-o-sh-i
hit-Past-3-1O
'He hit me.'

Also, only -bi '1S' and -mbi '1A' can follow the uncertainty particle/enclitic ada/-da (82 & 83) and interrogative words (84).

(82) min bacuë utsi-da-bi ne-e-Ø que-onda-sh
2Gen child other-Uncert-1S be-Npast-Interr:1/2 say-Dist.Past-3
'"Do you think I'm your age-mate?" she said.'

+ K-XXII 015 chema 151

(83a) ada-mbi cues-pa-e-Ø
Uncert-1A hit-Comment-Npast-Interr:1/2
'Shall I hit him?'

(83b) *ada-i

(84a) atoda-mbi na-pa-e-Ø
what-1A do-Comment-Npast-Interr:1/2
'What should I do?'

(84b) *atoda-i

iv) Some patterns in participant co-reference in adverbial/clause-chaining clauses (§12.4.2) treat S and A together as a single argument-tracking unit. This occurs both with suffixes that mark 'same subject' (85 & 86) and some marking 'different subject' (-ac in 86). Similarly, some of these suffixes treat O as a category separate from A and S (-ac in 86 & 87; -sho in 87)

¹⁰ See section 5.6.5; this pattern only holds for some verbal inflections.

- (85) shuinte chui-e-c ca-nuc istuid-shun
 two.toed.sloth tell-Npast-Indic say-while:Diff.Ref find-after:S/A>A
matses-n shuinte cues-e-c pe-nun
 Matses-Erg two.toed.sloth kill-Npast-Indic eat-Purp:S/A>A
 ‘As it [the bird] calls out informing (about the presence) of a two-toed sloth,
 Matses find the sloth and kill it in order to eat it.’
 A-IV 022 shuinte 22
- (86) tsiban-ac shēctenamē bidiad-ash
 pursue-when:O>S/A white.lipped.peccary turn.around-after:S/A>S
tedesque-quid shēctenamē
 clack.teeth-Hab white.lipped.peccary
 ‘While they are being chased, the white-lipped peccaries turn around, and the
 white-lipped peccaries clack their teeth.’
 A-I 044 shēctenamē 23
- (87) ado-ac maca tanun-n inchēsh-n pe-sho
 do.like.that-when:O>S/A rat gray-Erg dark-Loc eat-when:S/A/O>O
tētinte-n tē-cues-quid maca tanun
 trap-Inst neck-kill-Hab rat gray
 ‘When they do that to it [setting a trap for it], while the water rat [lit. ‘gray rat’] is
 eating [the manioc bait] at night, the water rat is killed by being hit on the neck
 with the trap.’
 A-IV 015 maca tanun 09

11.2.6 First-person pronominal enclitics

There is a set of first person pronominal enclitics (§§4.4.1, 5.6.5) which have an interesting interplay with the verbal person subject agreement system described in the preceding section. Upon first inspection, it may even appear that first-person enclitics are part of the subject agreement system:

- (88a) cho-o-bi ‘I/we came.’ (88b) cho-o-sh ‘He/she/it/they came.’
 come-Past-1S come-Past-3

However, the first-person enclitics are different in many ways from subject agreement suffixes. Table 11.6 lists the different pronominal enclitics and examples (89) - (92) exemplify them.

Table 11.6. First-person pronominal enclitics that occur on verbs.

Enclitic	Meaning	Corresponding full pronoun
- <u>mbi</u>	1 A	<u>umbi</u> '1 Ergative'
- <u>bi</u>	1 S	<u>ubi</u> '1 Absolutive'
- <u>bi</u> ^a	1 O:2/3A	<u>ubi</u> '1 Absolutive'
- <u>i</u> ^b	1 O (3 A)	<u>ubi</u> '1 Absolutive'

^a with some inflections, -bi represents the O when A is second or third person

^b -i occurs only following the third-person subject agreement marker -sh and -pahun 'Desiderative'

- (89) is-onda-mbi [shubu tanun]-Ø
see-Dist.Past-1A palm.species gray]-Abs
'I saw shubu tanun palms (a long time ago).'

A-I 022 shubu tanun 08

- (90) adashic nid-o-bi que-onda-sh tsësio mëdin-bo
then go-Past-1S say-Dist.Past-3 old.man deceased.relative-Pl
"After that, we moved on," said the now-deceased old men.'

+ K-XXII 014 chema 133

- (91) mimbi bed-e-bi que-onda-sh "Now you're capturing me," she said.'
2Erg grab-Npast-1O say-Dist.Past-3

+ K-XXII 011 chema 110

- (92) cuen-enda ca-o-sh-i que-onda-sh [cun chido pado]-Ø
run.off-Neg.Imper say-Past-3-1O say-Dist.Past-3 1Gen woman deceased-Abs
"Don't run off! he told me," my late wife said.'

+ K-XXII 003 chema 027

Let us now list the significant differences between pronominal enclitics and subject agreement suffixes. The first important difference is evident from looking at Table 11.6: first person pronominal enclitics represent objects (O's) as well as subjects, while subject agreement suffixes only cross-reference the subject. Additionally, while subject agreement suffixes do not vary for reference to a transitive subject vs. and

intransitive subject (93), there are two different first-person enclitics for referring to these two types of subjects: -mbi '1A' vs. -bi '1S' (94).

- | | | | |
|--|---|--|---|
| (93a) <u>cho-o-sh</u>
come-Past-3
'He came.' | (93b) <u>pe-o-sh</u>
eat-Past-3
'He ate.' | (94a) <u>cho-o-bi</u>
come-Past-1S
'I came.' | (94b) <u>pe-o-mbi</u>
come-Past-1A
'I ate.' |
|--|---|--|---|

Unlike subject agreement suffixes, two of the enclitics, -bi and -mbi can follow other elements besides finite verbs, such as the uncertainty particle/enclitic ada/-da (95-97) and interrogative words (98). (This ability to occur on other lexical classes besides verbs makes these enclitics, rather than suffixes; §3.2.3.)

- (95) se-quin-da-mbi _____ ic-e-Ø
pierce-while:S/A>A-Uncert-1A be-Npast-Interr:1/2
"Should I shoot them?" [one old man said]

K-XXI 010 dëmushbo 29

- (96) min bacuë utsi-da-bi _____ ne-e-Ø _____ que-onda-sh
2Gen child other-Uncert-1S be-Npast-Interr:1/2 say-Dist.Past-3
"Do you think I'm your age-mate?" she said.'

+ K-XXII 015 chema 151

- (97) ada-mbi cues-pa-e-Ø _____ 'Shall I hit him?'
Uncert-1A hit-Comment-Npast-Interr:1/2

- (98) atoda-mbi na-pa-e-Ø _____ 'What should I do?'
what-1A do-Comment-Npast-Interr:1/2

The most important difference between person subject agreement suffixes and pronominal enclitics is also the least clearly identifiable one. This difference is that while subject agreement suffixes cannot substitute for pronouns, noun, or noun phrases, first person pronominal enclitics can. In other words, while subject agreement suffixes generally must occur together with a subject noun phrase (see preceding sections for exceptions), first-person pronominal enclitics generally occur *instead* of a full

first-person pronoun. To address this complex situation, let us first review the distribution of first-person pronouns in the language.

First, there are a few situations where neither full first-person pronouns or first-person enclitics occur overtly in the clause. These cases involve three specialized TAM inflections, -nu ‘Intent: 1st Person Subject,’ and -mane ‘Future: perhaps: 1st Person Subject,’ and -pashun ‘Nonpast: Desiderative: 2/3’ (§§5.6.3, 5.6.2.5), which cannot occur with an overt first person subject (99 & 100).

- (99) cun nënë musuc-tsēc-bo-no
 1Gen tobacco measure.out-Dim-Prior-Intent:1
 ‘...I’m going to put some of my tobacco snuff in my hand...’
 + A-XIII 022 nënë 24
- (100) dache-an-mane que-quin tantia-e-c
 curse.to.die-Antpass-Fut:Poten:1 say-while:S/A>A think-Npast-Indic
 ‘The one coming thinks saying, ‘I might curse someone to die’
 C-III 001 shēcten 39

Otherwise, if one of the core arguments is the first person, a first-person pronoun must occur overtly in the clause. A pronominal enclitic can replace a first-person pronoun, which occurs in the place of the person agreement/modal inflectional suffix (101b); in fact this is the less marked construction. By contrast, the person subject agreement suffix cannot replace a first-person pronoun (101c).¹¹

- | | | |
|---|---|---|
| (101a) <u>umbi is-o-c</u>
1Erg see-Past-Indic:1/2
‘I saw it.’ | (101b) <u>is-o-mbi</u>
see-Past-1A
‘I saw it’ | (101c) <u>*is-o-c</u>
see-Past-Indic:1/2 |
|---|---|---|

¹¹ There is a construction using the same inflection as in (101c), described at the end of section 5.6.1.1, where the first-person pronoun *must* be deleted. It expresses surprised realization that the speaker has accidentally or unknowingly done something. Thus, as an instance of this construction, (101c) could be seen as meaning ‘Wow, I saw it!’ (thought it is hard to imagine on one would say this particular utterance).’

While pronominal enclitics can replace full first-person pronouns, there is not a co-occurrence restriction. The presence of the full pronoun represents an emphatic mention of the first person (101a & 102b) or has a switch topic or contrastive function (103). The presence of the full pronoun together with the enclitic indicates a further level of emphasis or contrast (102c & 103).

- (102a) nid-o-bi go-Past-1S English: 'I went.'
Spanish: 'Fui.'
- (102b) ubi nid-o-c 1Abs go-Past-Indic:1/2 'I went.'
'Yo fui.'
- (102c) ubi nid-o-bi 1Abs go-Past-1S 'I am the one who went.'
'Yo soy el que fue.'

- (103) ubi cania-mbo 1Abs young.man-Aug
ic-onda-c be-Dist.Past-Indic:1/2
ambo cania-mbo then young.man-Aug
'I was a young man back then, a really young man.'

K-XXI 009 demushbo 22

- (104) ubi-bi-c 1Abs-Emph-Separ
cania-mbo young.man-Aug
cania-mbo young.man-Aug
ic-onda-bi be-Dist.Past-1S
'But I [as opposed to the old men he was with] was truly a young man...'

+ K-XXII 001 chema 009

The alternation between full pronoun and enclitic pronoun similarly exists for references to first person objects (105 & 106), but I have not seen cases where both object first person pronominal forms occur together in the same clause.

- (105) ashic mimbi-tsen ubi bed-o-c then 2Erg-next 1Abs grab-Past-Indic1/2
que-onda-sh say-Dist.Past-3
"...and then you've captured me next," she said.'

+ K-XXII 011 chema 108

- (106) adembidi mimbi-tsen bed-pa-o-bi likewise:Tr 2Erg-next grab-Comment-Past-10
que-onda-sh say-Dist.Past-3
"...now you similarly have captured me," she said.'

+ K-XXII 011 chema 109

It is not clear to me at this point whether the full pronouns in sentences like (102c) and (104) are clause-external, or not, but it is clear that they are highly marked constructions.

Recall from section 5.6, that only a subset of the tense inflections (“Type 1 inflections”) occur with person agreement/modal suffixes. Those that do not occur with person agreement/modal suffixes (“Type 2 inflections), like -enda “Negative Imperative” (107) cannot occur with pronominal enclitics, and so this option for expressing emphasis is not available.

(107a) ubi ac-enda cun chuca uaqui ne-e-bi
 1Abs kill-Neg.Imper 1Gen younger.namesake man’s.name be-Npast-1S
 ‘“Don’t kill me, younger namesake, I am (named) Uaqui...’
 + K-XXII 004 chema 034

(107b) *ac-enda-bi

In conclusion, first-person pronominal enclitics share some properties with both full pronouns and with person subject agreement suffixes, but it seems to me that they are more like full pronouns in that they can *replace* full pronouns, while agreement suffixes simply *cross-reference* the participants they refer to. It would not be surprising, however, if these pronominal enclitics became incorporated into the verbal person subject agreement system in the future.

11.2.7 Summary of properties of grammatical relations

Here, I list the different grammatical properties that define the five grammatical relations that I recognize in the language: ergative, absolutive, subject, object, and oblique. The distinguishing properties of subjects were all introduced above, but a complete list of all the distinguishing properties of the other grammatical relations is still needed. The following are lists of properties that are unique to all the members of the grammatical relation in question; i.e., they are exclusive and shared by all members of the category.

Ergative (A):

- i) only core argument marked with -n (§§11.2.1-11.2.3)
- ii) unique first- and second-person pronominal forms, umbi '1 Ergative,' -mbi '1 A,' mimbi '2 Ergative' (§4.4.1)
- iii) plural verbal suffix: -beded 'Collective A' (§5.5.5)
- iv) specified by some patterns in argument co-reference in adverbial/clause-chaining constructions, e.g., -shun 'after: S/A>A (§§11.2.5, 12.4.2)
- v) becomes S of antipassive clauses (§11.6.2.1)

Absolutive (S+O):

- i) only type of participant with zero-marking (§§11.2.1, 11.2.2)
- ii) full pronouns: ubi '1 Absolutive,' mibi '2 Absolutive,' and abi '4 Absolutive' (§4.4.1)
- iii) patterns in intransitive-transitive verb pairs, e.g., nique 'run off: Plural S' and nica 'make run off: Plural O' (§5.3.2)
- iv) body-part prefixes on verbs refer to some location oriented on the S or the O participant (§§5.4.1, 11.5.4)

Subject (S+A):

- i) person subject agreement (§11.2.5)
- ii) equi-deletion on infinitive complements (§12.2.6)
- iii) participant selection by nominalizer -esa 'Negative S/A Nominalizer' (§4.7.3)
- iv) reflected in some patterns in distribution of first-person pronominal enclitics (§11.2.6)
- v) specified by some patterns in argument co-reference in adverbial/clause-chaining constructions, e.g., -shun 'after: S/A>A (§§11.2.5, 12.4.2)

Object (O):

- i) first-person pronominal enclitic -i '1 O' (§§5.6.5, 11.2.6)
- ii) specified by some patterns in argument co-reference in adverbial/clause-chaining constructions (§§11.2.5, 12.4.2)
- iii) becomes S of passive clauses (§11.6.1.1)

Obliques:

- i) not obligatory
- ii) cannot occur covertly
- iii) cannot occur as pronominal enclitics
- iv) not involved in argument tracking in adverbial/clause-chaining constructions

It is possible to make the following generalization about Matses clauses with respect to subjects:

Every verb/predicate specifies one and only one subject.

To date I have found no exceptions. This contrasts with ergative and absolutive grammatical relations, for which we can make the less strict rule:

Every verb/predicate specifies at least one (either one or two) absolutive argument and at most one (either one or none) ergative argument.

Finally, I point out the following correlation:

Ergative arguments are always subjects.

The ensuing discussions of “double absolutive,” ditransitive, causative, passive, and other clause types will put these generalizations to the test.

11.3 Classification of sentence and clause types

Sentences and clauses can be classified using several different attributes. One property, on which I have focused as the organizing principle for the syntactic descriptions in this chapter and the next, has to do with the number of clauses in a sentence: simplex sentences contain only one clause, while complex sentences contain at least two clauses (related by subordination or coordination). At the same time, we can talk about different sentence types with respect to the different sentence forms associated with different communicative tasks (as in Sadock and Zwicky 1985). For example, the three main Matses sentence types that can be identified in this way, declarative (108a & 108b), interrogative (108c), and imperative (108d), differ in form in terms of intonation, verbal inflectional morphology, whether overt mention of second-person subjects is obligatory or optional, etc.

(108a) mibi nid-o-c
2Abs go-Past-Indic:1/2
'You went.'

(108b) *nid-o-c

(108c) ada (mibi) nid-o-Ø
Uncert 2Abs go-Past-Interr:1/2
'Did you go?'

(108d) (mibi) nid-Ø
2Abs go-Imper
'(You) go!'

However, in Matses, any of these can occur as complex as well as simplex sentences, and so a single non-repetitive classification cannot be created. Similarly, one can distinguish sentences/clauses based on whether they are active vs. passive, positive vs. negative, valence-adjusted vs. non-valence adjusted, equative/copular vs. based on a "normal" verb, etc. In the rest of this chapter, I will consider all of these sentence types, without trying to combine these overlapping classifications into a single taxonomy. But only with respect to the simplex sentences; these sentence/clause type distinctions as they occur in complex constructions will be treated in the next chapter.

11.4 Basic active clauses

Active clause types are those where the lexically specified arguments of the verbs occur with the expected coding properties. In my definition, **basic active clauses** are those where the valence of the verb has not been altered. There are two basic types of active clauses: intransitive clauses (including simple intransitive clauses and double-absolutive clauses) and transitive clauses (including monotransitive clauses and ditransitive clauses). These are contrasted in the subsections of the present section.

Non-basic active clause types are those where the lexically-specified arguments are increased or decreased without inverting or eliminating the expected semantic role of any of the lexically-specified arguments. By this definition, clauses containing valence-adjusted causative (§11.5.1), applicative (§11.5.3), reciprocal (§11.6), reflexive (§11.6), and anticausative (\approx middle; §11.6) verb stems are (non-basic) active clauses, while passive (§11.6.1) and antipassive (§11.6.2) clauses are *not*. Similarly, equative/copular clauses are not considered active clauses and are discussed separately (§11.7).

11.4.1 *Intransitive vs. transitive clauses*

In Matses, verbs are strictly transitive or strictly intransitive; i.e., there are no “ambitransitive” or “labile” verbs. In Matses, the essential distinction between transitive and intransitive clauses is that transitive clauses have an A core function, which is expressed grammatically as an ergative case-marked subject; intransitive clauses have no A function, and have an absolutive-marked subject. There is one category of intransitive clause, the “double-absolutive” clause, which does not allow us to define intransitive clauses solely in terms of the number of core participants specified by the verb (i.e., not all intransitive verbs are syntactically univalent). As will be seen in section 11.4.3,

double-absolutive verbs are treated in almost every way as intransitive verbs. Just as there are two categories of intransitive verbs, there are two categories of transitive verbs: monotransitive verbs, with one A and one O core function, and ditransitive verbs with one A and two O core functions. See Tables 11.1 and 11.2 in section 11.2.1 for this classification. While the theoretical distinction between transitive and intransitive clauses is based on the types of core functions that they specify, the practical identification of transitive vs. intransitive status of a verb/clause is accomplished through superficial grammatical features such as case-marking, subject agreement, adverbial transitivity agreement, etc. The clustering of these properties supports the claim that transitive and intransitive are significant, discrete categories recognized by Matses grammar. In the following paragraphs, I describe the grammatical properties that distinguish transitive and intransitive verbs. These grammatical properties are consistent for both categories of transitive verbs (monotransitive and ditransitive) and for both categories of intransitive verbs (simple intransitive and double absolutive), but in this section, I will focus on monotransitive and simple intransitive verbs, and discuss ditransitive verbs (§11.4.2) and double absolutive verbs (§11.4.3) separately.

i) Case marking on subjects. One way to distinguish transitive from intransitive clauses is by the case marking on the subject. Transitive clauses have an ergative subject, and if the subject is an overt noun or noun phrase, it will be marked with -n (109). In fact, the very presence of an ergative-marked argument reveals that the clause is transitive. Intransitive clauses, by contrast, have absolutive subjects, which will be zero-marked if overt (110).

- (109) matses-n dacuēden-e-c tsipud-Ø
 Matses-Erg fear-Npast-Indic pygmy.anteater-Abs
 'Matses are scared of pygmy anteaters.'

- (110) adecbidi cuête tayun ush-e-c shaë-Ø
 likewise:Intr dicot.tree at.the.base.of sleep-Npast-Indic giant.anteater-Abs
 ‘Also, the giant anteater sleeps at the base [among buttress roots] of dicot trees.’
 A-IV 027 shaë 23

ii) Pronominal first-person enclitics. The pronominal enclitics, discussed in section 11.2.6, have different forms for transitive (111) and intransitive (112) subjects.

- (111) ompo-ad-shun is-onda-**mbi** ‘I saw them after having hidden.’
 hide-Rflx-after:S/A>A see-Dist.Past-1A
 K-XXI 010 dëmushbo 33

- (112) uimabud-quoio-o-**bi-que** ‘I’m tired, so...’
 get.tired-Intens-Past-1S-so
 + A-XIII 022 nënë 24

Any verb cliticized with -mbi, must be transitive. Also the first-person pronominal enclitic representing the object of a transitive sentence, -i, only occurs on transitive verb stems (113).

- (113) cuen-enda ca-o-sh-**i**
 run.off-Neg.Imper say-Past-3-1Ø
 ‘‘He [her ex-husband] told me, ‘don’t run off!’’’...’
 + K-XXII 003 chema 027

iii) Adverbial transitivity agreement. Even when all the arguments occur covertly, providing no case-marking clues as to the transitivity of the verb, adverbial transitivity agreement will reveal the transitivity of the verb (114 & 115).

- (114) ad-shun padpide-en an-shonca-**quid**
 do.that-after:S/A>A again-Manr:Tr inside-bother poking-Hab
 ‘After doing that, they bother it again poking inside the hole.’
 A-I 047 tsaucs 06

- (115) ad-shun ambo tabad-quin pe-anec
do.that-after:S/A>A there sit:Pl-while:S/A>A eat-after:S/A>S
nid-an nid-an-quid padpide-ec
(redup=Distr) go-Incep-Hab again-Manr:Intr
‘After doing that, after sitting there eating, they all leave again.’

A-IV 031 onina 08

There are actually several types of adverbial agreement. Some manner adverbs like padpide, exemplified above, take one of two different agreement suffixes depending on the transitivity of the verb (§7.6.1.1). Similarly, adverbialization of adjectives into manner adverbs is accomplished by suffixes formally identical to the pair of manner adverbial agreement suffixes (§7.8):

- (116) bēda-mbo-en chēsh-quid shē-pada-ua-quin
good-Aug-Advzr:Tr carve-Hab tooth-flat-Vzr:make-while:S/A>A
‘They carve it well, making the tooth [= spearhead] flat.’

A-XIII 033 tēdi 03

- (117) bēda-mbo-ec tabad-quin ‘While sitting there happily...’
good-Aug-Advzr:Intr sit:Pl-while:S/A>A

C-III 001 shēcten 42

The other kind of adverbial transitivity agreement occurs on locative adverbs and postpositions that refer to the location where the event was initiated (§§7.6.1.2, 8.7.1.2):

- (118) cuitsipan-n-shun bosen-n tish-quid
undercut.bank-Loc-Ev.Init:Tr Neotropical.otter-Erg give.birth.to-Hab
‘Otters give birth from inside [holes in] undercut banks [of a stream or river].’

A-IV 032 bosen 14

- (119) nuntan-uēsh cho-ec tdu tdu
indoors-Ev.Init:Intr come-while:S/A>S chasing.away.yell chasing.away.yell
‘He came out from inside [the hut] yelling, “tdu tdu...”...’

K-XXI 011 dēmushbo 46

iv) Participant tracking across clauses. Adverbial/clause-chaining suffixes (§12.4) that specify ‘same subject’ make a distinction as to whether the subject of the matrix clause is a transitive subject or an intransitive subject (120).

- (120) ad-shun-bi poshto shëta ud-tanquin matses-n
do.that-after:S/A>A-Emph woolly.monkey tooth dig.in-after:S/A>A Matses-Erg
di bidica-shun ancun-ash matses-Ø të-diad-quid
palm.fiber twist-after:S/A>A string-after:S/A>S Matses-Abs neck-hang-Hab
‘After doing that, after making holes in the woolly monkey teeth, after twisting palm fiber twine, and after stringing (the teeth into a necklace), Matses wear it on their neck.’

A-XIII 012 poshto shëta 04

Additionally, the transitivity of the subordinate or matrix verb is revealed when a ‘different subject’ argument tracking suffix makes reference to an O argument in the matrix clause (121)¹² or an O argument in the subordinate clause (122).

- (121) ad-sho më-te-shun-onda-mbi
do.that:Intr-when:A/S/O>O branch-cut-Appl-Dist.Past-1A
‘When she said that, I cut down some branches [with fruits] for her.’
+ K-XXII 011 chema 105

- (122) bed-Ø ca-ac bed-o-mbi ca-onda-mbi
grab-Imper say-when:O>S/A grab-Past-1A say-Dist.Past-1A
‘“They told me, ‘Take her!’ so I took her,” I told him.’
+ K-XXII 010 chema 097

v) Verbal derivational suffixes. There are some verbal derivational suffixes that come in pairs, with one of the pair attaching to transitive stems and the other to intransitive ones:

¹² Note that the co-reference in this case is between the S of ad (the subordinate verb) and the applied object (=Beneficiary) of the (derived ditransitive) matrix/main verb.

- (123) titado pe-quid cho-sho
 peach.palm eat-Agt.Nzr come-when:A/S/O>O
cuesunne-shun-bidan-e-c
 kill-Appl-go.stop.go:Tr-Npast-Indic
 “‘As the ones eating peach palm fruits are coming, we kill them and then keep on going’.” [historical present]
 + K-XXII 014 chema 137
- (124) isun-cuidan-o-sh ‘He stopped on his way to urinate.’
 urine-go.stop.go:Intr-Past-3

More suffixes like these are described in the verb morphology chapter (§§5.5.3, 5.5.2.1). One pair of verbal suffixes has a slightly more complex pattern: -cueded ‘Collective S/A’ specifies that the S or A argument is plural (as opposed to ambiguously singular or plural), while the suffix -beded ‘Collective A’ specifies that the A argument is plural (§5.5.5). While -cueded is not helpful, the presence of -beded on a verb reveals unequivocally that it must be transitive (125).

- (125) nēbi-en cania-bo-n pe-beded-e-c
 now-Contr young.man-Pl-Erg eat-Coll.A-Npast-Indic
 ‘But nowadays, young men do eat [howler monkey].’
 A-I 054 achu 27

vi) Ability to take valence-adjusting suffixes. There are some restrictions as to which stems can take which valence-adjusting morphemes (§§11.5, 11.6). The first restriction is completely unsurprising: intransitive verbs cannot take valence-reducing suffixes (-nan ‘Reciprocal,’ -an ‘Antipassive,’ and -ad ‘Reflexive, Anticausative/Middle, Passive’). The motivation driving this restriction seems to be to avoid reducing the valence of a verb stem to zero, in light of the fact that Matses has no verb roots with zero valence or any constructions to handle such a situation. In light of this, it is evident why the only apparent exception to this pattern is a “double-absolutive” intransitive verb root:

- (126) min champi baded-quo bëshun-ad-esa _____ ne-e-c
 2Gen daughter quickly-Aug forget-Pass-Neg.A/S.Nzr be-Npast-Indic
 'Your daughter is one that cannot be quickly forgotten'

However, there is one restriction that is not based on this type of logical motivation: the applicative -shun can only be productively suffixed to transitive verbs (§11.5.3); therefore, any verb stem with the applicative -shun must be ditransitive (see 121).

While all Matses verbs, whether roots or derived stems, strictly and specifically specify the number and type of core arguments, the semantic roles associated with the specified arguments may vary considerably. The following are a few examples:

- (127a) debi-Ø chui-o-sh
 Davy-Abs tell-Past-3
 'He told Davy.'
 'He told about Davy.'

- (127b) debi-Ø muaua-o-sh
 Davy-Abs lie:Tr-Past-3
 'He lied to Davy.'
 'He lied about Davy.'

This variation in the semantic role specified is mainly a phenomenon restricted to a few transitive objects. One might even wish to analyze these as sets of two polysemous verbs. It should be noted, however, that both possible semantic roles cannot surface in the same sentence as arguments of the same clause. Sentence (128a) was corrected with (128b).

- (128a) *mimbi debi-Ø ubi muaua-o-c
 2Erg Davy-Abs 1Abs lie:Tr-Past-Indic:1/2
 ('You lied to Davy about me.'/'You lied about Davy to me.')

- (128b) mimbi debi-Ø muaua-o-c ubi chui-quin
 2Erg Davy-Abs lie:Tr-Past-Indic:1/2 1Abs tell-while:S/A>A
 'You lied to Davy, telling him about me.'

11.4.2 Ditransitive verbs and double-object constructions

There are two formally distinguishable ditransitive verb types: lexical (i.e., unsegmentable) ditransitive roots and valence-increased transitive stems (causative and applicative verb stems). The later type will be discussed separately with other valence-increased clauses in sections 11.5. Lexical ditransitive verb roots in Matses can be further subdivided into two semantic types. The first type is typical. It includes, to my knowledge, only the verbs mene ‘give to’ and mënchic ‘take away from’ which specify one ergative-marked Agent (the subject; animate, usually human) and two absolutive-marked participants: a Patient (human, animate, or inanimate) and a Recipient/Possessor (animate, usually human):

(129) uednando-n debi-Ø chështe-Ø mënchic-o-sh
 Fernando-Erg Davy-Abs machete-Abs take away-Past-3
 ‘Fernando took the machete away from Davy.’

(130) adembidi [aton mëntado]-Ø [aton shanu]-n
 likewise:Tr 3Gen male.cross.cousin-Abs 3Gen female.cross.cousin-Erg
mene-quid uitsun-Ø
 give-Hab bracelet-Abs
 ‘Similarly, female cross cousins give bracelets to their male cross cousins...’

A-XIII 043 uitsun 12

The other semantic ditransitive root type is somewhat unusual, at least in comparison to European languages I’m familiar with. These roots all describe a process whereby a raw material is shaped into an artifact of some type. There are two subtypes. The first type, “artifact construction verbs,” specify the following core arguments: one ergative-marked Agent (the subject; usually human) and two absolutive-marked participants: the raw material (usually inanimate, never human) and the end product (always inanimate). The two absolutive-marked participants could be described as the

“Raw Patient” and the “Transformed Patient.” This verb type includes verbs like *daēdca* ‘weave/plait’ (131) and *chēsh* ‘scrape/carve’ (132).¹³

- (131) [aid shapesh-bi]-Ø pisid-Ø daēdca-quid chido-n
 that.one unopened.fronD-Emph-Abs woven.mat-Abs plait-Hab woman-Erg
Raw Patient **Transf Patient** **Agent**
shubu an-quēnē-ua-nun
 house inside-enclosure-Vzr:make-Purp:S/A>A
 ‘Women weave that one’s unopened fronds into mats in order to make rooms for the house.’

A-I 012 budēd 10

- (132) adembidi [cuēbu-n isan]-Ø canti-Ø chēsh-quid matses-n
 likewise:Tr Spix’s.guan-Gen palm.species-Abs bow-Abs carve-Hab Matses-Erg
Raw Patient **Transf Pat** **Agent**
 ‘Similarly, Matses carve bows from *cuēbun isan* palm (wood).’

A-XIII 035 canti 09

The other subtype involves verbalizations accomplished by attaching the transitive verbalizing suffix *-ua* ‘Verbalizer: make’ to a noun. The original noun root is semantically a “Part” of the Transformed Patient, and the specified core arguments of the verb are one ergative-marked Agent and two absolutive-marked participants, a Raw Patient and the “whole” of the Transformed Patient (133).

- (133) [aton podo-bi]-Ø tētinte-Ø [da-quēnē-ua]-quid
 3Gen frond-Emph-Abs trap-Abs around-enclosure-Vzr:make-Hab
Raw Patient **Transf Pat** **Part**

‘With its fronds [petiole and rachis] they make the enclosure of the deadfall trap.’

2-p04-L shuccate pinchuc 03

While three-place verbs like *mene* and ditransitive valence-increased stems obligatorily specify two absolutive participants, in these artifact construction verbs, it is not yet so clear whether both zero-marked participants are core arguments or optional peripheral participants. On account of this, I will describe artifact construction clauses in separate

¹³ As three-place verbs, these might better be glossed as ‘weave into’ and ‘carve into.’

sections (§§11.4.2.2, 11.4.2.3), after first laying out in detail the evidence supporting my finding that other three-place verbs have two morpho-syntactically identical absolutive arguments using examples with the verb mene ‘give.’ Causative and applicative clauses similarly have two identical absolutive arguments, and are described in sections 11.5.1-11.5.3.

11.4.2.1 mene ‘give’

Gary and Keenan (1977:117) observe about Kinyarwanda, “We have argued that unmarked Patient and Recipient-Benefactive NPs in Kinyarwanda share an overwhelming number of syntactic properties and hence should not be considered to bear distinct grammatical relations to the verb, but rather should be viewed as subtypes of the same grammatical relation.” However, having two “(direct) object” noun phrases in a clause is not consistent with Relational Grammar, Lexical Functional Grammar and other formal theories. So Gary and Keenan’s (1977) analysis has been frequently rejected (Dryer 1983, Perlmutter and Postal 1983, De Guzman 1987, Polinsky and Kozinsky 1992, Bresnan and Moshi 1993), principally based on the few syntactic processes that distinguish the two “objects” in Kinyarwanda ditransitive constructions. In Matses, however, I have not been able to find any independent morpho-syntactic basis at all for grammatically distinguishing indirect object from direct object (the constituent in ditransitive clauses that is more similar to the O in transitive clauses; Hudson 1992). Using Polinsky and Kozinsky’s (1992) terminology, Matses ditransitive clauses exhibit “syntactic doubling” of grammatical relations, not just a “coding conflict.”

In Matses ditransitive clauses, there can be two absolutive-marked (“zero-marked”) noun phrases, and these can occur in the same set of syntactic positions. This applies to ditransitive roots, as well as to valence-increased transitive verbs, causatives and applicatives. The verb mene ‘give’ is a good verb for illustrating this

phenomenon, as in Matses the practice of giving away one's daughter to a man (in marriage) is common, and so it is possible to have two human absolutive arguments, allowing us to subject clauses with mene to a large number of syntactic tests without the usual semantic interference. It should be kept in mind that clauses with mene are not likely to really be ambiguous in real situations, since inanimate objects are never Recipients, and if there are two human objects, the female (the bride) is expected to be the Patient (= Theme). There is real, non-nonsense ambiguity, however, in ditransitive causative (§11.4.1) and applicative (§11.4.3) clauses, and one can always come up with a hypothetical situation where culturally-expected roles are reversed. In (134), the noun phrases, cun champi and mibi can interchange positions without changing the meaning of the clause, and in either order the clause could also have the unlikely but grammatical meaning, 'I'm going to give you *to* my daughter (e.g., as a joke to a young man, or talking to a captured baby monkey).'

- (134) [cun champi]-Ø mibi mene-nu
 1Gen daughter-Abs 2Abs give-Intent:1
Patient **Recipient**
 "I'm going to give you my daughter." ...'

+ K-XXII 006 chema 062

While the ordering of the Recipient and Patient in (135) is consistent with Kozinsky and Polinsky's (1993:225) "canonical [word] order," (134) does not conform to it, and so word order cannot be used to distinguish the two objects (see also 130).

- (135) [cania-bo chedo-bi]-Ø [bacuë-mpi chedo-bi]-Ø tëshë-Ø
 young.man-Pl too-Emph-Abs child-small too-Emph-Abs piece-Abs
 (conjoined) **Recipient** (conjoined) **Recipient** **Patient**
mene-ban-quid tsësio-dapa-n
 give-Distr-Hab old.man-large-Erg
Agent

'The old man gives out pieces [of meat] to the young men and the little kids.'

C-III 001 shëcten 43

As mentioned above, third-person noun phrases can be left out of sentences (i.e., they are covert arguments or “zero pronouns”) when they are one of the core arguments (S, A, or O) or the objects of some locative postpositions, but not when they are peripheral participants (§11.2.4). In ditransitive clauses, either the Recipient (137 & 138) or the Patient (139 & 140) can be zero-pronominalized (zero-pronominalized participants in bracket in the translation line).

- (137) ado-tanquin nain-tanquin [aton bënë]-Ø mene-quid
do.thus-after:S/A>A finish-after:S/A>A 3Gen husband-Abs give-Hab
Recipient
‘After doing that, after finishing it, she gives [the cotton thread] to her husband.’
A-XIII 044 sedquid 09
- (138) ad-shun utsi-Ø chësh-shun [aton matses-ado]-Ø
do.that-after:S/A>A other-Abs carve-after:S/A>A 3Gen Matses-Pl:Cat.Ex-Abs
Recipient
mene-quid
give-Hab
‘After carving another one, he gives it [the bow] to his fellow Matses.’
A-XIII 035 canti 13
- (139) në canti utsi ic-e-c que-quin mene-quid canti-Ø
here bow other be-Npast-Indic say-while:S/A>A give-Hab bow-Abs
Patient
‘Saying, “Here is an extra bow,” he gives [his male relative] the bow.’
A-XIII 035 canti 14
- (140) ado-shun utsi-Ø mene-quid
do.that-after:S/A>A other-Abs give-Hab
Patient
‘After that, she gives away another one [to a female relative].’
A-XIII 042 tote 13

Note that three arguments are always lexically specified by mene, so when an argument is missing from the clause, it must be interpreted as a third-person zero-pronoun (either identifiable or impersonal/general), not a grammatically absent argument. Because of the

semantics of giving, the Recipient is more likely to be general than is the Patient.

Compare (138) and (139) above. Example (138) is the sentence that directly precedes (139) in this text, and they both have Recipients with the same (general) referent, but in (138) the Recipient is overt, and in (139) it is covert.

Either object can be represented by the first person pronominal enclitic *-i*, which refers to the O of transitive verbs (§11.2.6):

- (141) mibi mene-o-sh-i 'He gave me to you.'/'He gave you to me.'
2Abs give-Past-3-1O

When a passive is formed from a trivalent clause like (142a), either the Patient or the Recipient can become the subject of the passive clause (142b; §11.6.1.1).¹⁵

- (142a) tsësio-n [aton champi]-Ø [aton piac]-Ø mene-o-sh
old.man-Erg 3Gen daughter-Abs 3Gen cross.nephew-Abs give-Past-3
'The old man gave his daughter to his nephew.'
?'The old man gave his nephew to his daughter' (nonsense, but grammatical)

- (142b) [aton champi]-Ø [aton piac]-Ø (abi-bi) mene-ad-o-sh
3Gen daughter-Abs 3Gen nephew-Abs 3Abs-Emph give-Pass-Past-3
'His daughter allowed herself to be given to his nephew.' (Patient subject)
'His nephew allowed himself to be given his daughter.' (Recipient subject)
?'His daughter allowed herself to be given his nephew.' (nonsense)
?'His nephew allowed himself to be given to his daughter.' (nonsense)

Another valence-decreasing process, antipassivization, gives us another opportunity to distinguish the two absolutive participants grammatically, since one of the O's must be eliminated. The question is: which absolutive participant can be eliminated, either or just the Patient or just the Recipient? The section on antipassives (§11.6.2)

¹⁵ I have no text examples of passives of ditransitive verbs, and speakers consider sentences like (140b) somewhat unusual (it is a bit better with abi-bi 'by his/her own will'). So syntactic tests involving passives (and some antipassives) of ditransitive verbs are an exercise in learning how speakers would say or interpret these sentences when confronted with the task, rather than an analysis of natural speech.

described two semantic effects of the morphological antipassive suffix -an: i) the first person O is peripheralized; and ii) the peripheralized O is general/impersonal. This first types is quite natural with ditransitive verbs, and either O of the original ditransitive verb may be peripheralized (i.e., either the Patient or the Recipient may be interpreted as the peripheralized first-person argument) (143-145):

- (143) cun papa-Ø cun mēntado-Ø mene-an-e-c
 1Gen father-Abs 1Gen female's.male.cross.cousin-Ø give-Antpass-Npast-Indic
 'My father is going to give (me) to my male cross-cousin (as his bride).'
 'My father is going to give my male cross cousin to me.' (nonsense)
- (144) mene-an-e-c 'He is going to give me away (to him).'
 give-Antpass-Npast-Indic 'He is going to give it/her to me.'
- (145) opa-Ø mēnchic-an-o-sh
 dog-Abs take.away-Antpass-Past-3
 'They took my dog away from me.'/'My dog took it (e.g., meat) away from me.'

Thus, antipassivization like passivization, fails to distinguish the two objects of mene. The second, more typologically typical type of antipassive (with a peripheralized impersonal O) is not really compatible with mene or other ditransitive verbs. Speakers always interpret these as first-person peripheralizations (as in 143-145), and say it cannot be used in this way (they prefer to simply use a zero third-person pronoun as the equivalent of an English impersonal pronouns, without changing valence or case-marking on the arguments; §11.2.4).

Either object controls inter-clausal co-reference with adverbial/clause-chaining suffixes (§12.4.2) that refer to an O participant in one of the clauses. For example, in (146), the co-reference is between the S of the subordinate clause and the Recipient O of the main clause, but in sentences like (147) the co-reference of the subordinate clause S

could be with either the Patient or the Recipient. In (148), co-reference could be between the S of the main clause and the Recipient or Patient of the subordinate clause.

- (146) cun-a daëdca-ta que-sho [tote utsi]-Ø mene-guid
 1Gen-3 plait-Imper say-when:S/A/O>Ø woven.strap other-Abs give-Hab
 ‘When [a woman]_i says, “Weave mine [i.e., weave one for me],” they give another carrying strap to her_i.’

A-XIII 042 tote 14

- (147) cani-ac-sho mene-e-c
 grow-Infer-when:S/A/O>Ø give-Npast-Indic
 ‘Once she_i has grown up, he will give her_i to him.’
 ‘Once he_i has grown up, he will give her to him_i.’

- (148) mene-ac cuishonque-o-sh ‘When he gave her to him_i, he_i rejoiced.’
 give-when:Ø>S/A rejoice-Past-3 ‘When he gave her_i to him, she_i rejoiced.’

In Matses, nominalized clauses modifying head nouns in N N noun phrases are the functional equivalent of relative clauses (§12.2.1). With the verb mene, either the Patient or the Recipient can be the referent of the restricting clause (149 & 150; restricting clause in **bold**; relative clause in brackets).

- (149) [**moco mimbi ubi mene-boed**]-Ø ampe-n ampe-ac-o-sh
 ax 2Erg 1Abs give-Past.Nzr-Abs thief-Erg steal-Infer-Past-3
 ‘A thief stole the ax that you had given me.’

- (150) [**dada mimbi moco**-Ø mene-boed]-Ø cho-e-c
 man 2Erg ax-Abs give-Past.Nzr-Abs come-Npast-3
 ‘The man that you gave an ax to is coming.’

Either object can be topicalized, by fronting (first position is focus position) and/or by marking with a contrast enclitic:

- (151a) canti-Ø debi-Ø mene-ash ‘I suppose he gave Davy a bow.’
 bow-Abs Davy-Abs give-Conjec

(151b) canti-en-Ø debi-Ø mene-chit-ash
 bow-Contr-Abs Davy-Abs give-Uncert-Conjec
 ‘Perhaps it was a bow that he gave Davy.’

(151c) debi-en-Ø canti-Ø mene-chit-ash
 Davy-Contr-Abs bow-Abs give-Uncert-Conjec
 ‘Perhaps it was Davy he gave a bow to.’

Nominalizers such as -temaid ‘Negative O/Instrument: Nominalizer: Habitual’ (§4.7.3) select the O of the verb as the referent of the nominalization (152), and so give us another means to see if the language distinguishes the two absolutive participants of ditransitive verbs. What we find is that the Patient is readily selected as the referent of the nominalization, but the Recipient is not readily selected (153). This would then be the only morpho-syntactic test that even marginally distinguishes the two absolutive arguments of three-place verbs. However, referent selection is not completely governed by syntactic factors, but semantic one as well, since this nominalizer also selects instruments as referents. Thus, this test of questionable validity.

(152) pe-temaid ne-e-c tambisbiecquid
 eat-Neg.O/Inst.Nzr be-Npast-Indic pacarana
 ‘Pacaranas are ones that are never eaten [by Matses; i.e., are inedible].’
 IV-011 joaquin tambisbiecquid 5

(153) mene-temaid
 give-Neg.O/Inst.Nzr
 ‘thing/person that cannot/should not be given (away/to X)’
 ?‘person that cannot/should not be given (things/X) to’

There is no dative case in Matses, nor is there a postposition or other way to mark Recipient role (like English *to*, for example). Thus, there is no way to rephrase clauses with mene putting one of the objects into a postpositional phrase or otherwise marking it as a peripheral participant. Patient and Recipient roles are simply coded in the same way:

as absolutive arguments. The same goes for Causees and Beneficiaries/Maleficiaries, as will be illustrated in sections 11.5.1 and 11.5.3.

In summary, all of the tests that I have tried (except marginally O/Instrument nominalizers) have failed to distinguish the two objects of mene. Table 11.7 summarizes these tests. Other morpho-syntactic tests that have proved useful for identifying indirect objects in other studies (Hudson 1992, Taylor 1998, Wilawan 2000) are not applicable to Matses. I will continue to look for more tests, but it seems evident at this point that speakers treat both of the objects as identical. But even if some difference is detected in the future, it will be sure to be a minor difference, hardly justifying positing an additional grammatical relation.

Table 11.7. Properties of the two objects of mene 'give,' which fail to distinguish them.

1)	free word order
2)	either object can be pronominalized
3)	either object can become subject of passive
4)	either object can be peripheralized by antipassivization
5)	either object controls inter-clausal co-reference
6)	either object can be topicalized
7)	either object can be relativized on
8)	neither object can be put into a postpositional phrase
9)	either object is selected by participant nominalizers that select the O (but the Recipient only marginally so)

It is worth noting that Valenzuela (2001, 2002) has a similar analysis for Shipibo-Konibo, with no forthcoming covert resolution of syntactic doubling in biaccusative ditransitive clauses, including causative-of-transitive clauses, so this may be common in the Panoan language family, rather than being unique to Matses. And Yagua, a genetically unrelated, but geographically proximate language, has also been analyzed as

having two indistinguishable objects in both causative-of-transitive constructions and in simple ditransitive clauses (Payne and Payne 1990).

11.4.2.2 Artifact construction verbs

It is interesting to compare Matses artifact construction verbs with their English counterparts. The English verb *carve*, specifies only two core arguments at a time, but the O argument can be either the “Raw Patient” or the “Transformed Patient,” and the other Patient can only be included as a peripheral participant (154). Meanwhile, Matses can lexically specify both the Raw Patient and the Transformed Patient in the same clause (155a). Matses does not have postpositions coding ‘out of’ or ‘into’ other than for literal spatial displacement.

(154a) *He carved the palmwood (into a bow).*

(154b) *He carved a bow (out of palmwood).*

(154c) **He carved a bow palmwood.* (cf. *He carved a palmwood bow*)

(155a) titado-Ø canti-Ø chësh-o-mbi
 peach.palm-Abs bow-Abs carve-Past-1A
Raw Patient **Tranf Pat** **Agent**
 ‘I carved peach palm (wood) into a bow’
 ‘I carved a bow out of peach palm (wood)’

(156b) titado-Ø chësh-o-mbi
 peach.palm-Abs carve-Past-1A
Raw Patient **Agent**
 ‘I carved the peach palm (wood).’

(156c) canti-Ø chësh-o-mbi
 bow-Abs carve-Past-1A
Tranf Pat **Agent**
 ‘I carved a bow.’

The unresolved issue with artifact construction clauses is whether clauses like (156b) and (156c) contain a covert core argument, or whether these verbs occur optionally with either one or two zero-marked participants. One possibility is that the Raw Patient (or, less likely, the Transformed Patient) is analogous to Matses instrumental participants, which are marked identically to ergative arguments, but are optional and have no core

argument properties (can't occur covertly, don't participate in argument tracking in clause chaining, etc.). Unfortunately, I have not had the opportunity to apply the same tests to these verbs as I have with the verb mene 'give' and with clauses containing instruments, so at this point we can only speculate based on patterns found in the texts.

The much more common word order is for the Transformed Patient to precede the verb directly and for the Raw Patient to precede the Transformed Patient (an iconic word order), as in (157) and (158),¹⁶ but this order is not strict (159).

- (157) [iuanin ca-aid]-Ø macueste-Ø uëdëshca-quid
 tree.species say-Pat.Nzr-Abs corn.grinding.tub-Abs dig-Hab
Raw Patient Tranf Patient
piacbo macues-nun
 corn grind.corn-Purp:S/A>A
 'They carve out a tub from the tree called iuanin in order to grind corn.'
 A-XIII 030 macueste 02

- (158) adembidi titado-Ø canti-Ø chësh-quid
 likewise.Tr peach.palm-Abs bow-Abs carve-Hab
Raw Patient Tranf Pat
 'Similarly, they carve bows from peach palm wood.'
 A-XIII 035 canti 10

- (159) canti-mpi chedo-Ø titado-Ø chësh-quid
 bow-small too-Abs peach.palm-Abs carve-Hab
Tranf Patient Raw Patient
 'They carve peach palm wood into kid's bows, too.'
 A-I 008 titado 06

Therefore, word order cannot distinguish the two arguments. What would suggest at this point that these are true three-place verbs like mene would be evidence for covert arguments in clauses that lack one of the two Patients. This could be resolved easily in elicitation, but for now I must make do with the text data, which unfortunately provides

¹⁶ Note that (158) could be ambiguous in an interesting way: titado canti could be interpreted as an N N noun phrase, and the clause could be translated as "...they carve palmwood bows." which would actually have the same truth value, but it would not make sense in the context of the text where it occurs.

- (163) [iui chuda nua uibën ic-quid]-Ø istuid-shun matses-n
 tree rift large buttress.root be-Agt.Nzr-Abs find-after:S/A>A Matses-Erg
uncate-Ø chësh-quid moco-n cuësh-tanquin
 paddle-Abs carve-Hab ax-Inst cut.with.grain-after:S/A>A
Transf Pat
 ‘When they find an iui chuda tree that has a large buttress root, Matses carve a
 paddle (from it), after going and cutting it out from the tree with an ax.’

A-XIII 028 uncate 04

Sentence (164) shows that both the Raw Patient and the Transformed Patient can be missing from the clause, and the semantics suggests that they both occur as covert core arguments.

- (164) cashuc-shun chido-n daëdca-quid
 remove.a.piece-after:S/A>A woman-Erg plait-Hab
 ‘After removing strips of the stem (of the mando danësh plant), women weave (it
 into a manioc strainer).’

A-XIII 025 secte 05

There are two possible outcomes. If it turns out that all three arguments are obligatory and can occur covertly, then these verbs are three-place verbs, just like mene ‘give’ and causative-of-transitive and applicative ditransitive verbs. If the “Raw Patient” turns out to be optional, cannot occur covertly, etc. and morphological valence decrease results in univalent verbs, then we must posit an additional case, on the same level as the instrumental case, which happens to take the same marking as absolutive arguments. For now, this will have to remain an unresolved issue, which I hope to investigate further during my next trip to the Matses.

11.4.2.3 Three-place verbs formed with the verbalizing suffix -ua

The suffix -ua ‘Verbalizer: make’ forms verbs that are similar grammatically to the artifact construction verbs described above, but verbs formed with -ua could be described as having four participants (three arguments plus the original noun root). We

can recognize an Agent, a Raw Patient, a Part (of the Transformed Patient), and a (whole of the) Transformed Patient.

- (165) pia-mpi-Ø aid-bi-Ø matses-n shēta-ua-quiv
 arrow-small-Abs that.one-Emph-Abs Matses-Erg arrow.head-Vzr:make-Hab
Transf Pat **Raw Patient** **Agent** **Part**
 ‘Matses make that one [sinnad palm wood] into arrowheads for little arrows.’
 A-I 009 sinnad 09

This participant representing the whole of the Transformed Patient is always inanimate and in a part-whole relationship with the verbalized noun (the Part), and is transformed in the sense that the part is attached or otherwise incorporated into it. In (165) above, the whole of the Transformed Patient is the little arrow that the arrowhead will attach to. In (166) it is the hunting purse to which the carrying strap will attach, and in (167) and (168), it is the house that the wall will be a part of.

- (166) ad-shun dete-ua-quiv shictoade-Ø
 do.that-after:S/A>A carrying.strap-Vzr:make-Agt.Nzr hunting.purse-Abs
Part **Transf Pat**
 ‘After that, they make a carrying strap for the hunting purse.’
 A-XIII 038 shictoade 10

- (167) ashumbic [aton shubu]-Ø an-quēnē-ua-quiv pisid-Ø
 then **3Gen** house-Abs inside-enclosure-Vzr:make-Hab woven.mat-Abs
Transf Pat **Part** **Raw Patient**
 ‘After that, they make a room for their house with the woven mats.’
 A-XIII 015 pisid 04

- (168) ashumbic pisid-Ø an-quēnē-ua-quiv [aton shubu]-Ø
 then woven.mat-Abs inside-enclosure-Vzr:make-Hab **3Gen** house-Abs
Raw Patient **Part** **Transf Pat**
 ‘After that, they make a room for their house with the woven mats.’
 A-XIII 015 pisid 06

Compare (167) with (168), and (169) with (165). We note that the (whole of) the Transformed Patient occurs commonly at the beginning or at the end of the clause (in response to being, topic, new, etc.), but change in position has no effect on the meaning.

- (169) ad-shun tiante-Ø shëta-ua-quid pia
do.that-after:S/A>A bamboo-Abs arrowhead-Vzr:make-Hab arrow
Raw Patient **Part** **Transf Pat**
'After that they make the bamboo arrowhead of the arrow.'

A-XIII 034 pia 12

It is just as common for the Transformed Patient to be missing from the clause, and there are frequently no grammatical or semantic signs that it occurs covertly (163 & 164).

- (170) [aid tëshodco-bi]-Ø matses-n cuëte-ua-quid
that.one peduncular.bract-Emph-Abs Matses-Erg fire-Vzr:make-Hab
Raw Patient **Agent** **Tranf Patient**
'Matses make fire out of that same one's peduncular bract [a part of a palm].'

A-I 012 budëd 15

- (171) aid-bi-Ø matses-n shubu-ua-quid
that.one-Emph-Abs Matses-Erg house-Vzr:make-Hab
Raw Patient **Agent** **Tranf Patient**
'Matses make houses out of those same ones [antin palm fronds].'

A-I 014 antin 07

In (170) and (171), it is hard to imagine what the whole of the Transformed Patient could possibly be (in either a definite or unimportant/impersonal sense), suggesting that the third argument it is not just a zero-pronoun in these cases, and that the class-changed noun can represent the (whole) Transformed Patient when a part-whole relationship is not specified.

As with the other artifact construction verbs, there are two possible analyses, which require more investigation to resolve: i) the whole of the Transformed Patient participant could be a core argument, making these double-object constructions like

mene; or ii) the whole of the Transformed Patient could be an optional participant that happens to take the same marking as an absolutive argument. Finally, it is interesting to note the following correlation. In artifact construction clauses, the two absolutive-marked arguments, the raw material and the end product, are in reality a single entity. Similarly, in clauses with verbalizations, the Raw Patient is modified to become a Part that is a part of the whole Transformed Patient; i.e., they are all really the same entity. And both of these relationship types also bind nouns in noun phrases, namely, in part-whole N N noun phrase and in composition-material N N noun phrases (§10.3.5). The whole of the Transformed Patient in -ua verb clauses is analogous to the Recipient of mene ‘give’ in that it can be construed as receiving something, and is thus the endpoint of the action, just like the Transformed Patient is the endpoint of an artifact construction verb.

11.4.3 Double absolutive clauses

I’ve found only two verb roots that specify two absolutive participants, but no ergative participant. These verbs are bun ‘want’ (172) and bëshun ‘forget’ (173).

(172) debi-Ø chompian-Ø bun-e-c ‘Davy wants a shotgun.’
 Davy-Abs shotgun-Abs want-Npast-Indic

(173) debi-Ø chompian-Ø bëshun-o-sh ‘Davy forgot the shotgun.’
 Davy-Abs shotgun-Abs forget-Past-3

Both absolutive-marked participants share the following core argument properties: i) both are obligatory; and ii) either can occur as a covert argument (174-176).

(174) natia mani-Ø bun-quid ‘They [bats] strongly desire plantains.’
 strongly plantain-Abs want-Hab

- (175) debi-Ø bun-e-c (176) bëshun-ac
 Davy-Abs want-Npast-Indic forget-Infer
 ‘Davy wants it.’/‘She wants Davy.’ ‘He forgot it/her.’

They both share the following properties with absolutive arguments: i) both take zero-marking; and ii) both can be represented by full absolutive anaphoric pronouns (177).

- (177) mibi ubi bun-e-c ‘I want/like you.’/ ‘You want/like me.’
 2Abs 1Abs want-Npast-Indic

As illustrated in (177), due to this sharing of coding features, there is often ambiguity in double absolutive clauses.¹⁷ But the two arguments actually do not have identical syntactic properties. Only the Experiencer can be the subject. This is shown by the fact that only the “wanter” or the “forgetter” can be represented by a first person pronominal suffix (178 & 179). Similarly, verbal subject agreement agrees with the Experiencers, not with the wanted or forgotten entities (180).

- (178) cun shanu-Ø bun-e-bi ‘I want/like my cousin.’/
 1Gen female.cross.cousin want-Npast-1S *‘My cousin wants/likes me.’

- (179) cun shanu-Ø bëshun-o-bi ‘I forgot my cousin.’/
 1Gen female.cross.cousin forget-Past-1S *‘My cousin forgot me.’

- (180a) debi-Ø mibi bun-o-sh (180b) debi-Ø mibi bun-o-c
 Davy-Abs 1Abs want-Past-3 Davy-Abs 1Abs want-Past-1/2
 ‘Davy wanted/liked you.’ ‘You wanted/liked Davy.’

The fact that the first-person pronominal suffix used is -bi ‘1S’ rather than -mbi ‘1A’ suggests that Matses grammar treats these double-absolutive verbs as intransitive.

¹⁷ In order to clarify or avoid confusion due to this potential ambiguity, when both arguments are human, speakers may optionally mark the “wanter” with the ergative marker, -n. This is a highly marked construction, but generally accepted as grammatically acceptable.

This is corroborated by adverbial transitivity agreement (181), by participant tracking on adverbial/clause-chaining suffixes (182), and by transitivity-sensitive verbal suffixes (183).

- (181a) padpide-ec bëshun-ac (181b) *padpide-en bëshun-ac
 again-Manr:Intr forget-Infer again-Manr:Tr forget-Infer
 ‘He forgot again.’
- (182) mibi is-ash bun-cuen-o-bi
 2Abs see-after:S/A>S want-Incho-Past-1S
 ‘After seeing you, I got to wanting (liking) you.’
- (183a) piucquid bun-cueded-e-c (183b) *piucquid bun-beded-e-c
 money want-Coll:S/A-Npast-Indic money want-Coll:A-Npast-Indic
 ‘They all want money.’

And the arguments may reverse positions without a change in meaning (184). More so than with other verbs, with bun there is a strong preference for both arguments to appear pre-verbally (184c).

- (184a) [mani sin-aid]-Ø bun-quid cuesban-Ø ‘Bats want ripened plantains.’
 plantain ripe-Pat.Nzr-Abs want-Hab bat-Abs
E-XI 049 cuesban 13
- (184b) cuesban-Ø [mani sin-aid]-Ø bun-quid ‘Bats want ripened plantains.’
- (184c) ?bun-quid cuesban-Ø [mani sin-aid]-Ø ‘Bats want ripened plantains.’

In summary, the following are the properties of double absolutive clauses: the verb has two core arguments, both of which are absolutive arguments; the verb is treated as intransitive; and the subject (the Experiencer) has all the properties of the subject of an intransitive verb. This is one of the bases for my claim (made above in §11.2.7) that while different verbs take different numbers and assortments of core arguments, all verbs have one and only one subject. The pair of absolutive arguments in double-absolutive

clauses cannot be completely identical because one argument must be the subject. This differs from the pair of absolutive arguments in ditransitive clauses (preceding section) which can be identical because the ergative argument is always the subject, and so neither absolutive argument needs to be the subject.

Although (to my knowledge) there are only two double absolutive verb roots in the language, double intransitive clauses are not limited to these two roots: antipassivized ditransitive verbs form clauses where the Agent becomes absolutive, one of the original absolutive arguments is peripheralized, and other of the two remains unchanged (185). Passivized ditransitive verbs form clauses where the Agent is eliminated from the clause, leaving two absolutive participants (186). And reciprocal valence-decreased verbs equate the A and one of the absolutive-marked arguments, and codes them as an absolutive-marked noun phrase (187).

(185) debi-Ø piucquid-Ø mene-an-e-c 'Davy gives me money.'
 Davy-Abs money-Abs give-Antpass-Npast-Indic

(186) chēshte-Ø debi-Ø mēnchic-ad-o-sh
 machete-Abs Davy-Abs take.away-Pass-Past-3
 'Davy allowed the the machete to be taken from him.'

(187) bacuë-bo-Ø dashcute-Ø mēnchic-nan-e-c
 child-Pl-Abs clothing-Abs take.away-Recip-Npast-Indic
 'The children are snatching clothing away from each other.'

See section 11.6 for more on valence-decreased clauses.

The status of the non-subject participant in double absolutive clauses remains a bit of an enigma. I am inclined to call it a “non-subject S,” but more syntactic testing is required to elucidate all its attributes, such as its role in clause-chaining.

Experiencer participants tend to do odd things cross-linguistically, so these patterns are not too surprising, but note also that the verb bun is a complement-taking

verb (188; §12.2.6), which may have something to do with its unusual argument inventory.

(188) cuesban [matses pe-te] bun-quid 'Bats always want to bite Matses.'
 bat Matses bite-Infin want-Hab

E-XI 049 cuesban 07

11.5 Valence-increased clauses

The valence of verbs can be increased or decreased using derivational verbal morphology (§5.5.1). There are two ways to increase the valence of a verb: with the causative suffix *-me*, which can be attached to intransitive or transitive (including ditransitive) verbs (§11.5.1), and with the applicative suffix *-shun*, which can be attached only to transitive verbs (§11.5.3). The causative suffix *-me* does not cause a valence increase in remote causative events (e.g., trapping), but rather increases the semantic prominence of the Instrument (§11.5.2). Prefixation appears superficially to be a case of noun incorporation, a process that can reduce the valence of a clause. Prefixation clearly does not decrease the valence of the clause, but surprisingly appears to *increase* the valence (§11.5.4). Valence decreasing operations are discussed in section 11.6.

11.5.1 Causation

One of the definitions of causation that is most frequently referred to in the linguistics literature on causation is Shibatani's (1976:1) characterization of causative constructions, where he defines causative constructions as those that express a **causative situation**, defined as follows:

Two events can be said to constitute a causative situation if the following two conditions hold:

- a. The relation between the two events is such that the speaker believes that the occurrence of one event, the "caused event," has been realized at t_2 , which is after t_1 , the time of the "causing event."

- b. The relation between the causing and the caused event is such that the speaker believes that the occurrence of the caused event is wholly dependent on the occurrence of the causing event; the dependency of the two events here must be to the extent that it allows the speaker to entertain a counterfactual inference that the caused event would not have taken place at that particular time if the causing event had not taken place, provided that all else remained the same.

This is the definition that I will use in this grammar when I refer to “causation” and “causative situations.” Another definition concerning causation that I refer to is the definition of “prototypical causation.” For talking about prototypical causation, I will refer to Lakoff’s (1987:54-55) characterization:

Prototypical causation appears to be direct manipulation, which is characterized most typically by the following cluster of interactional properties:

1. There is an agent that does something.
2. There is a patient that undergoes a change to a new state.
3. Properties 1 and 2 constitute a single event; they overlap in time and space; the agent comes in contact with the patient.
4. Part of what the agent does (either the motion or the exercise of will) precedes the change in the patient.
5. The agent is the energy source; the patient is the energy goal; there is a transfer of energy from the agent to the patient.
6. There is a single definite agent and a single definite patient.
7. The agent is human.
8.
 - a. The agent wills his action.
 - b. The agent is in control of his action.
 - c. The agent bears primary responsibility for both his action and the change.
9. The agent uses his hands, body, or some instrument.
10. The agent is looking at the patient, the change in the patient is perceptible, and the agent perceives the change.

The only productive grammatical means of coding causation in active clauses is with the verbal derivational suffix -me. Thus, as might be expected from a language ecology viewpoint, -me covers a wide range of causative meanings, and can be used with almost every verb root or stem in Matses.

Constructions with the general causativizer, -me, refer to causative situations covering a wide range of semantic notions of causation, including prototypical causative events and more marginal instances of causation, including all the subtypes described in Talmy (2000). As shown in (189) and (190; chiuid is intransitive), the suffix -me codes a wide range of notions ranging from direct to indirect causation, as defined in Shibatani and Pardeshi (2002).

- | | |
|---|--|
| <p>(189) <u>aton mado-mpi-Ø pe-me-o-sh</u> (190) <u>sicaid-Ø chiuid-me-o-sh</u>
 3Gen son-small-Abs eat-Caus-Past-3 strained.drink-Abs spill-Caus-Past-3
 ‘He fed his little son.’
 - by holding his mouth open
 - by feeding him with a spoon
 - by telling him to eat
 - by handing him a plate of food</p> | <p>‘He spilled the drink.’
 ‘He caused the drink to spill.’
 ‘He let the drink spill.’</p> |
|---|--|

The elicited sentences above and the text excerpts and overheard sentence below (191-196) illustrate the range of usages of -me, which span causative meanings including contactive and distant causation (Masica 1976), directive and manipulative causation (Shibatani 1976), sociative and non-sociative causation (Shibatani and Pardeshi 2002), deliberate and incidental causation (Givón 1975), and Author (unintentional) and Agent (intentional) causation (Talmy 2000).

- (191) chish-me-quid poshto-n matses-n
 suck-Caus-Hab woolly.monkey-Erg Matses-Erg
chish-me-ac-bimbo-en
 suck-Caus-Act.Nzr-like-Advzr:Tr
 ‘Woolly monkeys suckle [their young] in the same way that Matses suckle [their young].’

A-I 052 poshto 21

- (192) nibën-quin matses-n puduen-me-e-c
 search-while:S/A>A Matses-Erg exit-Caus-Npast-Indic
 ‘While searching, the Matses cause [pacas] to exit [their burrows].’

1-p95-B tambis 9

- (193) bacuë-bo-Ø cuedën-me-nu 'I'm going to lead the children in song.'
child-Pl-Abs sing-Caus-Intent:1
- (194) adoashic matses-n cuen-me-quid acqui-mbo-en
then Matses-Erg run.off-Caus-Hab strong-Aug-Manr:Tr
cuëd-quin matses-n cuen-me-quid bëdi-dapa-Ø
call-while:S/A>A Matses-Erg run.off-Caus-Hab jaguar-large-Abs
'Then, Matses make them run off by yelling loudly; Matses make jaguars run off.'
A-IV 036 bëdi dapa 35
- (195) dadpen-Ø tësh-shun aton chido-Ø sica-me-e-c
many-Abs pull.off-after:S/A>A 3Gen woman-Abs strain-Caus-Npast-Indic
matses-n
Matses-Erg
'After pulling off many [peach palm fruits], Matses have their wives strain them.'
1-p20 titado 10
- (196) mayan-n shubu-Ø se-e-c ca-me-nuen shubu-Ø
demon-Erg house-Abs hit-Npast-Indic say-Caus-Purp:S/A>A house-Abs
ca-ne-e-c cuesban-n
roof-throw-Npast-Indic bat-Erg
'The bats throw fruits at the house in order to make [people] think (lit. 'say'): "A demon is hitting the house."
E-XI 049 cuesban 24

From a force-dynamic point of view (Talmy 1985), -me does not just code "causation," in the sense of applying a force, but it also codes "letting" and "enablement" in the sense of removing an impending force (197 & 198).

- (197) ado-ac-bi chud-me-an-en-quo
do.like.that-when:O>S/A-Emph copulate.with-Caus-Antpass-Neg-Aug
'But then she wouldn't permit me to have sex with her.'
+ K-XXII 010 chema 091
- (198) bed-Ø cain-shun bed-Ø se-me-enda
grab-Abs wait-after:S/A>A grab-Imper pierce-Caus-Neg Imper
"Grab them! Grab them after waiting for them! Don't let them shoot you!"
K-XXI 010 dëmushbo 30

Perhaps the least prototypical extended notion of causation coded by -me is the coding of unintentional, reflexive letting/enablement, as in (198) and (199a), a notion that can also

be expressed using the reflexive/passive suffix -ad (199b) in a construction resembling an English “*get-passive*” (§11.6.1.1).

(199a) <u>nisi-Ø</u> <u>pe-me-o-mpi</u> snake-Abs bite-Caus-Past-1A 'I let myself be bitten by a snake.'	(199b) <u>nisi-n</u> <u>pe-ad-o-bi</u> snake-Inst bite-Pass-Past-1S 'I got myself bitten by a snake.'
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In both (199a) and (199b) the entity that has ultimate control of the action is co-referential with the Patient, but in (199a), the valence is increased by adding a Causer (actually an “Enabler”) that is co-referent with the Patient, while in (199b) the valence is decreased by peripheralizing the A of the original verb.

The only evident partitioning of semantic domains by constructions with -me is that when -me is attached to an intransitive verb that has a lexical causative counterpart (§5.3.1.4), the range of meanings coded by the morphological causative does not usually include instances of more direct causation. In these cases, the causative transitive root codes the more direct meanings. But with transitive verbs and most intransitive verbs, the meanings coded by -me span the whole range of direct and indirect meanings, similarly to the Quechua causative suffix, *-chi*, (Weber 1989)

The suffix -me is used very productively, and can apparently be used with all verb stems except for a small set of intransitive roots (discussed in §5.3.1.4) and the copular verb ne ‘be.’ It can be used with transitive and intransitive verb stems (189-198), and even with ditransitive roots (200)¹⁸ and iteratively (201).¹⁹

¹⁸ The formal similarity between mene ‘give’ and -me ‘Causative’ is hard to ignore in light of Kemmer and Verhagen’s (1994:129) observation that, “In some languages, the causative marker is synchronically or diachronically the word for ‘give’.”

¹⁹ I have no text examples of causativized ditransitive roots or iterative applications of -me, but elicited sentences like (200) and (201) are acceptable (though ones with semi-lexicalized stems like pe-me ‘eat-Causative = feed’ and chish-me ‘suck-Causative = suckle’ are more readily accepted). Sentences using the same verb words with all 4 participants mentioned explicitly are more objectionable, but the only acceptable way of constructing them seems to be with one

(200) mene-me-o-sh
give-Caus-Past-3
'She made her give it to her.'

(201) te-me-me-o-sh
cut-Caus-Caus-Past-3
'He made him make him cut it.'

“Active” and “inactive” are grammatically relevant categories for causative constructions in some languages (Shibatani and Pardeshi 2002), but there is no formal distinction in Matses that correlates with these categories. However, this distinction may have been relevant in Matses in the past, as suggested by patterns in Matses lexical causatives (see §5.3.1). By Comrie’s (1989) definition, -me would be considered a prototypical morphological causative on account of having a very high level of productivity and being phonologically bound to the predicate. However, syntactically, morphological causative constructions with -me deviate from Comrie’s (1976) hierarchy of grammatical relations for coding the Causee, as discussed subsequently.

Causativization with -me results in a syntactic valence increase, i.e., it increases the number of core arguments that can be associated with the verb stem by one (but see §11.5.2). Thus, intransitive roots become transitive when causativized with -me, with the S argument of the original intransitive verb becoming co-referent with the O argument of the derived transitive causativized verb (both marked as absolutive), and a newly-introduced participant representing the Causer becoming the A argument (and thereby taking the ergative case marking). There is no alternative marking strategy. The following overheard sentences illustrate the syntactic relationship between a simple intransitive clause and its causativized counterpart:

(202a) checa-Ø _____ cuen-o-sh ‘The opossum ran off.’ [reported by Davy]
opossum-Abs run.off-Past-3

ergative noun phrase and 3 absolutive-marked noun phrases. The fact that all participants may be zero-pronominalized, however, is an indication that none of the participants are peripheral, as zero-pronominalization is a property restricted to third-person core arguments.

- (202b) debi-mpi-n checa-Ø cuen-me-o-sh
 Davy-small-Erg opossum-Abs run.off-Caus-Past-3
 ‘Little Davy let the opossum escape.’ [reported by Davy’s older sister]

Causativization of transitive roots (or stems) is a bit less straightforward with respect to the arguments of the causativized verbs. As with causativized intransitives, the A argument slot is filled by a newly-introduced participant representing the Causer and appearing in the ergative case. But the two other core arguments of the derived verb have identical morphological and syntactic properties corresponding to that of any O of a bivalent verb: both noun phrases are marked in the absolutive case and can occur in the same set of positions in the clause (but see §11.5.2 for an exception). In other words, if one analyzes a ditransitive clause as derivationally related to a particular non-causative transitive clause, the A and the O of the (“underlying”) non-causative clause both become O’s in the causative clause, with the one that was the A becoming the Causee. But, because there is no morpho-syntactic means of distinguishing the two absolutive-marked noun phrases in the ditransitive clause (as in basic ditransitive clauses, §11.4.2.1), sentences like (203a) are ambiguous with respect to the Patient and the Causee, as there is actually no way to determine if (203a) is derivationally related to (203b) or (203c).

- (203a) bacuë-bo-n cachita-Ø cachina-Ø pe-me-o-sh
 child-Pl-Erg caiman-Abs chicken-Abs eat-Caus-Past-3
 ‘The kids fed a chicken to the caiman.’
 ‘The kids fed caiman [meat] to the chickens.’

- (203b) cachita-n cachina-Ø pe-o-sh (203c) cachina-n cachita-Ø pe-o-sh
 caiman-Erg chicken-Abs eat-Past-3 chicken-Erg caiman-Abs eat-Past-3
 ‘The caiman ate the chicken.’ ‘The chicken ate caiman [meat].’

In most cases, however, trivalent phrases are disambiguated easily by context or common sense, as in (204). But there is no way to identify a “source” or “underlying” transitive

non-causative clause, and there is no morpho-syntactic means of distinguishing the two absolutive-marked noun phrases, so there is always a potential for ambiguity.

- (204) nuēcquid-uid-i-Ø onina-n aton bacuë-Ø pe-me-e-c
 fish-only-Emph-Abs giant.otter-Erg 3Gen offspring-Abs eat-Caus-Npast-Indic
 ‘The giant otter feeds only fish to its young.’
 ?‘The giant otter feeds its young only to fish.’ (nonsense)

1-p69-B onina 05

It is actually somewhat rare for trivalent clauses like (204) to have all the participants mentioned explicitly, since third person participants are often “zero-pronominalized” in response to topic-focus and determinacy motivations. Also, first, second, or third person Patients may be omitted when they are they are co-referential with the Causer, as in (198) and (199a). But when all participants are mentioned explicitly as in (204), the relative ordering of the constituents is not governed by proposed universals about the “iconicity of the construction” (Kozinsky and Polinsky 1993:225). Rather, the ordering in (204) is in response to the information given in (205), the sentence directly preceding (204) in the text: the new, focused information goes up front, old information further back.

- (205) acte dada quiusudquid-n-shun onina-n aton bacuë-Ø
 stream trunk bluff-Loc-Ev.Init.Tr giant.otter-Erg 3Gen offspring-Abs
tish-e-c
 give.birth.to-Npast-Indic
 ‘In a steep bank of a main stream, the giant otter gives birth to its young.’

A-p69 U onina 4

These ditransitive causative constructions can be considered cases of “syntactic doubling,” as described by Comrie (1976), where causativized transitive verbs come to have two noun phrases exhibiting the properties of a single grammatical relation type, be it direct object, indirect object, oblique, or subject. Matses, however, differs from those languages described in Comrie (1976) in that in Matses there appears to be no

grammatical distinction between direct and indirect objects in simple ditransitive sentences either, so “syntactic doubling” is not a characteristic unique to causative constructions. This brings us to a problem in typological description: if we cannot differentiate direct and indirect objects in clauses with ditransitive roots, do Matses causative-of-transitive constructions exhibit syntactic doubling of the direct object or of the indirect object? It is not uncommon for languages to lack the indirect object grammatical relation, but in these languages it is from the oblique grammatical relations that indirect objects are not distinguishable. By contrast, in Matses, obliques are easily distinguished morpho-syntactically from core arguments (§11.2.2), but it is direct objects and indirect objects that are not distinguishable.

If there were some way to distinguish direct objects from indirect objects in underived ditransitive clauses, it might be possible to determine if the Causees in derived ditransitive causative clauses were treated as direct objects or indirect objects. This is a significant distinction in that doubling of indirect objects is common, while doubling of direct objects occurs only in “restricted fashion” (Comrie 1976:295). However, no such distinction is forthcoming, and so Matses marking of the Causee resists conventional typological descriptions involving implicational hierarchies such as that found in Comrie (1976). The case in Matses is nevertheless consistent with the commonly observed coincidence that causative constructions tend to co-occur with syntactically similar non-causative clause types (Nedyalkov and Silnitsky 1973; Shibatani 1976; Comrie 1976, 1989; Dixon 2000). This observation together with the Matses facts, in light of the fact that the reverse is not true (i.e., languages like English that have non-causative double-object constructions do not necessarily have causative double-object constructions), seems to support Kemmer and Verhagen’s (1994) approach describing causative constructions as modeled after simple clauses. The model construction, the

three-argument clause with mene ‘give’ (§11.4.2.1), is almost never ambiguous because inanimate entities cannot be Recipients and the only usual event where one human is given to another involves a female being given to a male. However, it is not unlikely for there to be ambiguity as to which participant is the Causee and which is the Patient in causative clauses, or which is the Beneficiary/Maleficiary and which is the Patient in applicative clauses. Thus, it is as if valence-increased bivalent clauses made an unfortunate choice in picking a construction type to model.

This description of causation (an those in §§5.3.1, 11.5.2, 11.5.3, 12.5.2) supercede Fleck (2002) with some minor revisions. See Fleck (2001) for an ethno-linguistic perspective on causation in Matses.

11.5.2 Instrument “promotion” with -me ‘Causative’

The syntactic effects of -me would be very regular, if it were not for constructions like the following:

- (206) tiante-Ø dectan-shun matses-n nēishamē-Ø se-me-quid
 bamboo-Abs set.trap-after:S/A>A Matses-Erg tapir-Abs pierce-Caus-Hab
 ‘After setting a bamboo trap [a spring-loaded bamboo blade released by a trip-wire], Matses cause tapirs to get stabbed.’ [?lit. ‘...Matses make it stab tapirs.’]
 A-I 045 nēishamē 07

- (207) adembidi matses-n cues-me-shun ne-quid
 likewise:Tr Matses-Erg kill-Caus-after:S/A>A toss-Hab
 ‘Similarly, after Matses make [the rice rat] get killed [with the deadfall trap], they throw [the rice rat] away.’ [?lit. ‘...Matses make [the trap] kill [the rice rat]...’]
 A-IV 017 tacbid umu 05

The difficulty in the preceding sentences is that if we consider them causative constructions, we have trouble determining who or what the Causee is. The goal of this section is to understand the syntactic and semantic nature of the “Causee” in causative-like constructions involving trapping. Upon first initial inspection of (206) and

(207), one may suppose that the traps are the Causees, but what we find is that when the trap is mentioned explicitly, as in (208), the noun referring to the trap appears with instrumental marking, as opposed to appearing in the absolutive case, as overtly-stated Causees do in all other causative constructions with -me.

(208a) ad-en matses-n nēishamē-Ø pe-quid tiante-n
 like.that-Manr:Tr Matses-Erg tapir-Abs eat-Hab bamboo-Inst
se-me-shun
 pierce-Caus-after:S/A>A
 ‘Matses eat tapirs like that, after making them get pierced by a bamboo blade (trap).’

A-XIII 023 nēishamē dectante 10

(208b) matses-n tiante-n nēishamē-Ø se-me-quid
 Matses-Erg bamboo-Inst tapir-Abs pierce-Caus-Hab
 ‘Matses make tapirs get stabbed using bamboo blade traps.’

(208c) *matses-n tiante-Ø nēishamē-Ø se-me-quid
 Matses-Erg bamboo-Abs tapir-Abs pierce-Caus-Hab
 (‘Matses cause tapirs to get stabbed with bamboo.’)
 (‘Matses make the bamboo stab tapirs.’)

Example (208b) might be interpreted as a three-argument clause with a zero-pronominalized third person human Causee, meaning something like, ‘Matses make (him/her/them) stab tapirs with bamboo.’ However, this would be an unusual situation, and the context in the text examples (206-208a) makes it clear that no such human Causee is involved. Similarly, the Causee cannot be the tapir itself (as in, ‘Matses make the tapirs stab themselves’) because this would require the verb se ‘pierce’ to have a reflexive marker (cf. 199b). Neither could the tapir be both the Patient and the Causer (as in ‘Tapirs let themselves get stabbed by bamboo traps, by Matses’; cf. 199a) because nēishamē ‘tapir’ does not take the -n case marker. Another unacceptable interpretation is to claim that in Matses, inanimate Causee arguments are marked with the instrumental

postposition.²⁰ This would be inconsistent with Matses grammar in that instruments are otherwise never core arguments, and instrumental postpositional phrases otherwise never zero-pronominalize. Thus, if one wishes to consider (206) - (208a) to be causative constructions, one must consider these exceptional in that they do not result in a valence increase.

This leads us to question whether sentences like (206) - (208a) are causative constructions at all. One method used to describe valence-increasing processes is to compare a derived construction to an “underlying” sentence containing an underived clause (Comrie 1976, Dixon 2000). The problem with this approach is that it can be circular: without an *a priori* assumption that a morpheme is a causative marker, there is no way to determine the identity of the arguments in the underlying clause. This is especially true in sentences that already contain a causative lexical verb, where the underlying clause would already have causative semantics. Take for example, (209a). If (209b) is its underlying clause, (209a) would not be a causativization of (209b) because (209b) already describes a causative event. To be a causativization, it would have to be derived from the interpretation where the bamboo is in the ergative case (the second translation in 209c), which would not be normal in Matses (recall that Ergative and Instrumental markers are homophonous).

(209a) matses-n (tiantē-n) nēishamē-Ø se-me-quid
 Matses-Erg (bamboo-Inst) tapir-Abs pierce-Caus-Hab
 ‘Matses cause tapirs to get stabbed (with bamboo traps).’

(209b) matses-n nēishamē-Ø se-quid pierce-Hab
 Matses-Erg tapir-Abs
 ‘Matses stab tapirs.’

²⁰ These constructions are not parallel to those causative constructions in Hindi and Kannada described, respectively, in Saksena (1980) and Cole (1983), in that human Causees in Matses are never marked with the instrumental suffix.

(209c) tiantē-n něishāmě-Ø se-quid
 bamboo-Erg/Inst tapir-Abs pierce-Hab
 ‘[They] stabs tapirs with bamboo [spears].’/*‘Bamboo [traps] stab tapirs.’

If we compare (209a) and (209d), we find a minimal pair that seriously contests the analysis of -me as a causative marker in (209a)

(209d) matsēs-n (tiantē-n) něishāmě-Ø se-quid
 Matsēs-Erg (bamboo-Inst) tapir-Abs pierce-Hab
 ‘Matsēs stab tapirs with (with bamboo spears/*with bamboo traps).’

What -me seems to be coding in (209a), then, is that the event is an elaborate one, involving physical and/or temporal remoteness of the Agent (the initiator of the event) from the result of the caused event.²¹ This is evident in that the Matsēs word tiantē can refer to bamboo traps or to bamboo-head spears, and the former is appropriate with -me (209a) and the latter without -me (209d).²² The syntactic status (i.e., core vs. peripheral) of the argument tiantē does not change in (209a), but semantically the status of the Instrument is “promoted” from a tool that is used to help bring about a simple, focused transitive event, to an entity that is essential for linking a causing event and a temporally separated caused event. Furthermore, comparison of (209a) and (209d) shows that suffixation with -me does not necessarily result in an increase in valence. Thus, we find that -me does not always function syntactically or semantically as a causative (see definitions of causation at beginning of section 11.5.1).

²¹ A similar phenomenon occurs with the form *pa-* in Yogad, which “disengages” the Agent (Davis *et al.* 1998:286).

²² The Matsēs have two common ways of killing tapirs (a donkey-sized mammal). One is to set a spring-loaded trap where a sharp piece of bamboo tied to a sapling is released when a tapir steps across the trip-wire. These traps are set far from the village in mineral licks and checked about once every three days. The other way is to chase tapirs down with dogs. If the dogs follow the tapir closely enough, the tapir will try to take refuge from the dogs by submerging itself in a small stream. When the hunters catch up, they kill the tapir with bamboo-head spears by stabbing it while it is still submerged or as it tries to scramble out of the stream bed.

We can contrast the functions of -me and the applicative -shun in terms of an action chain (Langacker 1987, Achard 2002). With -shun, a participant is added at the end of the action chain; with the causative function of -me, a participant is added at the beginning of the action chain; and with the “instrument promotion” function of -me, a participant is added in the middle of the action chain (Figure 11.1).

Simple monotransitive event:	Agent → Patient
Applicative (<u>-shun</u>):	Agent → Patient → Beneficiary/Maleficiary
Causative (<u>-me</u>):	Causer → Agent → Patient
Inst. promotion (<u>-me</u>):	Agent → Instrument → Patient

Figure 11.1. New participants (shown in **bold**) introduced into transitive events by -shun and -me.

Syntactically, the applicative and the causative constructions are similar in that the introduced participant becomes a core argument of the clause, while with the instrument promotion construction, the instrument remains a peripheral argument—it just becomes *semantically* more prominent, to where it becomes a discrete link in the action chain. What the two construction types with -me have in common is that the Agent-Patient interaction is portrayed as more complex, with either a Causer taking responsibility for initiating the energy flow, or an Instrument being introduced as an intermediary in the energy flow from the Agent to Patient. Despite its different syntactic effects, -me consistently codes event complexity centered around the causing event and the Agent/Causer.

Thus we can contrast two causation types: i) **remote causation**, where the Causer is spatially distant from the Patient, and the causing event is temporally distant from the caused event; and ii) **focused causation**, where the Causer and the Patient (and therefore also the Causee) are temporally and spatially proximate as are the causing and the caused

events. Remote causation generally requires an intermediary (but not with the nominalizer *-anmēs*, §4.7.4.1, Fleck 2001) and is perhaps most prototypically accomplished with an agentive Causee, where the volitionality of the Causee easily allows for the separation between the caused event and the causing event (Shibatani 2001). But separation of the causing and the caused event can similarly be accomplished with an elaborate inanimate “Causee,” like a trap. So, if Causees and Instruments can be semantically similar, and if Instruments can be added to the middle of the action chain using *-me*, this leads us to question whether it is correct to analyze three-argument causative-of-transitive constructions as always involving the addition of a Causer, as opposed to the addition of a Causee. One of the functions of *-me* could be to add a participant to the middle of the action chain, syntactically promoting animate Causees, but promoting inanimate ones only semantically.

So there could be three ways in which *-me* adds participants to transitive events, as illustrated in Figure 11.2.

Causative (<i>-me</i>):	Causer → Causee → Patient
Causative (<i>-me</i>):	Agent → Causee → Patient
Inst. promotion (<i>-me</i>):	Agent → Instrument → Patient

Figure 11.2. Alternative schema of the functions of *-me* in adding new participants (shown in **bold**).

The issue here is that there seems to be no *a priori* reason to assume that the function of *-me* is to always add a participant to the beginning of the action chain. “Instrument promotion” constructions seem to show clearly that this is not always the function of *-me*, so why can’t Causees be newly added participants, too? The Causee-introducing function of *-me* would be most applicable when the main goal of the Causer is to affect

the Patient (e.g., *He had a hit man kill his enemy*), rather than to get the Causee to do something (e.g., *He made his son finish his Brussels sprouts*).

So there are two competing analyses of -me. The first, analysis is to characterize -me's basic function as coding causative events and its other function (semantic promotion of an Instrument), as an extension of its causative meaning. The second possible characterization of the function of -me is that it codes "remoteness" between the initiation of the event and the end (and therefore generally necessitating an additional participant). This would make -me consistent with its causative readings and its coding of permission, enablement, and prominence of an instrument. However, this would not explain the fact that -me sometimes codes direct causation, and so this would then have to be an extension of the meaning coded by -me. Both seem to be satisfactory analyses of -me, with the advantage the analysis of -me as coding "remoteness" associated with the Agent being that it encompasses the meanings associated with -me more efficiently, and its disadvantage being that it is perhaps a more abstract notion.

11.5.3 Applicatives

Because of the varied and numerous (sub-)functions associated with -me, one might imagine that it is a general transitivizer rather than a causativizer. But we find that benefactive/malefactive constructions are not accomplished with -me, but with the applicative suffix -shun. The suffix -shun is a productive verbal suffix that can be attached to transitive (but not intransitive; §5.5.1) verbs to express that the action significantly affects one of two absolutive-marked arguments. Usually this effect can be viewed as positive (benefactive) or negative (malefactive), hence the semantic role label Beneficiary/Maleficiary ("Affectee" would be a more accurate term). If we describe applicative constructions as being derived from non-applicative transitive clauses, then -shun would contrast with -me in that -shun increases the syntactic valence of the

transitive verb keeping the A and O arguments co-referent with the original A and O, and adding a newly-introduced core argument (the Beneficiary/Maleficiary) with all the morpho-syntactic properties of an O (210 & 211).

- (210) matses-n aton tsien chedo-bi-Ø chompish-Ø pe-shun-quid
 Matses-Erg 3Gen vulva too-Emph-Abs two.toed.sloth-Abs eat-Appl-Hab
 ‘Matses eat even its vulva, to the two-toed sloth’s [detriment].’
 A-IV 024 chompish 23
- (211) sicaid buenac buenac-te que-quin dada-n aton
 strained.beverage (redup=Distr) stir-Inst.Nzr say-while:S/A>A man-Erg 3Gen
chido-Ø bēda-mbo-en chēsh-shun-quid
 woman-Abs good-Aug-Advzr:Tr carve-Appl-Hab
 ‘Saying, “[It’s a] beverage stirrer,” men carve it well for their wives.’
 A-XIII 024 sicaid buenac-buenacte 07

By contrast, with causative constructions with -me, at least in the prototypical scenarios, the A of the non-class-changed transitive root is co-referential with an O (the Causee) in the -me-derived ditransitive verb (Figure 11.3).

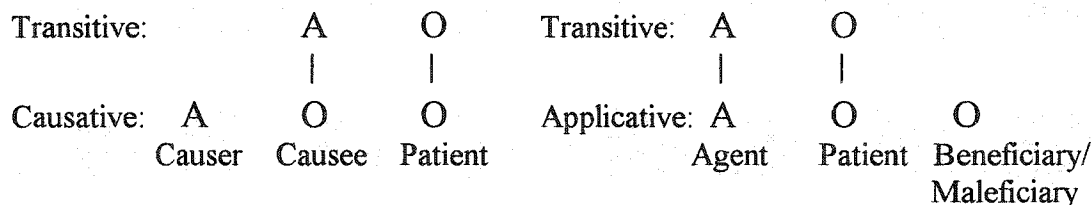


Figure 11.3. Co-reference relationships between core arguments of monotransitive verbs and ditransitive causative and applicative verb stems.

There is no way to paraphrase applicative constructions into bivalent simple transitive clauses, because there is no postposition that marks a Beneficiary or Maleficiary (or Recipient) role. The strategy that most closely approximates a paraphrase of an applicative construction in Matses is to mark the Beneficiary/Maleficiary with the genitive postposition, -n (i.e., *Bob built Jim a house* ≈ *Bob built Jim’s house*). This

works most of the time because if the Patient of the simple transitive clause is an object or a body part, the owner is likely to be affected by the action, or the beneficiary may become the owner of an object. But, this is not a true paraphrase because it does not entail that the possessor is affected by the action, and the genitive construction cannot be used when the affected party is not the present or future owner of the thing being acted upon. A more accurate paraphrase would require an additional clause.

The argument tracking suffix in (212) shows that the Beneficiary in (212) is a core argument, since the co-reference must be between the A of the subordinate clause and the Beneficiary (the woman who asked for the fruits) of the main clause, rather than the Patient (the cut branches/fruits). A fringe benefit of becoming a core argument is being able to take part in the grammar of inter-clausal co-reference.

- (212) ad-sho _____ më-te-shun-onda-mbi
do.that-when:A/S/O>O branch-cut-AppI-Dist.Past-1A
‘When she said that, I cut down some branches [with fruits] for her.’
+ K-XXII 011 chema 105

The applicative and the causative suffixes can, at least in elicitation, occur on the same verb root in either order:

- | | |
|---|---|
| <p>(213a) <u>buan-shun-me-o-sh</u>
 carry-AppI-Caus-Past-3
 ‘He made him carry it for him.’</p> | <p>(213b) <u>buan-me-shun-o-sh</u>
 carry-Caus-AppI-Past-3
 ‘He made him carry it for him.’</p> |
|---|---|

The English translations are ambiguous; in Matses there is a meaning difference. The distal suffix has wider scope: in (213a), the beneficiary benefits from the carrying (i.e., he doesn’t have to carry it himself), and in (213b), the beneficiary benefits from the causing event (i.e., he doesn’t have to coerce the carrier). See section 5.5.1.2 for more on combinations of valence-changing suffixes.

One unresolved issue is that exemplified in sentences like (214), where both O arguments seem to refer to the same entity. Perhaps it has an emphatic function, but more research need to be done on this topic to know what is really going on.

- (214) titado pe-quid cho-sho
 peach.palm eat-Agt.Nzr come-when:S/A/O>O
cuesunne-shun-bidan-e-c
 kill-AppI-go.stop.go.Tr-Npast-Indic
 “As the ones eating peach palm fruits are coming, we kill them (to their detriment?) and then keep on going.” [historical present]
 + K-XXII 014 chema 137

11.5.4 Prefixes vs. noun incorporation

It has been claimed that “Pano languages have no prefixes” (Loos 1999:243). Many Panoan languages have a set of body-part nouns that have monosyllabic counterparts that can be attached phonologically to verbs (Matses body-part prefixes are listed in Table 4.16, and their meanings and uses are discussed in §§4.5.1, 5.4.1, 6.5.1 & 10.4.2). Those that claim that these are not prefixes analyze them as instances of noun incorporation (Loos 1999). In Matses, however, it is evident that these forms function as a productive system of prefixation rather than as instances of noun incorporation. For example, the first clause in (215) may look like it could be a case of “possessor raising” (Launey 1999)/ “external possession” (Payne and Barshi 1999), a subtype of Mithun’s (1984) “Type II noun incorporation,” and translatable as ‘Biting their ears,...’. Or it might look like “saturating incorporation” (Launey 1999)/ N-V lexical compounding, Mithun’s (1984) “Type I noun incorporation,” translatable as ‘Ear-biting,...’ Matses, however, does not seem to exhibit the characteristics normally associated with either of these two types of noun incorporation. First, the paraphrase of prefixed verb constructions is one where the body-part term is grammatically in an oblique relationship

(in a locative postpositional phrase), rather than in a possessed relationship to the object, or in an object relationship to the verb (216).

- (215) pa-pe-quin cuesban-n opa pe-quiv 'Ear-biting them, bats bite dogs.'
 ear-bite-while:S/A>A bat-Erg dog eat-Hab
 H-XVII 039 cuesban 22

- (216) ado-shun-bi-c opa pabiate-no pe-quiv ne-e-c
 thus-after:S/A>A-Emph-Separ dog ear-Loc bite-Agt.Nzr be-Npast-Indic
 'Also, they are ones that bite dogs on the ears.'
 H-XVII 039 cuesban 21

More compelling than paraphrases is the fact that prefixed terms may occur in addition to their corresponding body-part noun roots (217 & 218).

- (217) podo pë-pe-ash ad-quiv an-didique-quiv
 frond frond-bite-after:S/A>S like.that-Agt.Nzr inside-hang-Hab
 '... after biting the frond [to shape it into a tent], that one [bat sp.] hangs inside.'
 E-XI 049 cuesban 04

- (218) bëtantete-no bë-piu bë-piu-mbo chëshëid ic-quiv
 face-Loc (redup=partly) face-red-Aug spider.monkey be-Hab
 'Spider monkeys have red on part of their faces.'
 + A-I 053 chëshëid 03

In (217), the two forms occur to emphasize where the bat is biting, and the sentence would mean essentially the same thing if either podo or pë- were excluded. In (218), reduplication of the prefixed adjective indicates that the characteristic designated by the adjective applies only to subpart of the body part specified by the prefix (§6.7.2), so excluding bë- here would change the meaning, but leaving out bëtantete would not. Thus, we see that prefixation in Matses has no syntactic consequences on the transitivity of the verb or the status of arguments. Rather, it functions as system of stem modification providing locative orientation, with respect to the S or O argument.

The fact that Matses prefixes can be attached to adjectives (218) and nouns (219) as well as verbs, is further evidence that this is not an instance of noun incorporation.

(219a) <u>ma-tucu</u>	(219b) <u>sha-bu</u>	(219c) <u>ta-shëcuë</u>	(219d) <u>an-quënë</u>
head-lump	crotch-hair	root-hole	inside-enclosure
'lump on head'	'pubic hair'	'hole in root'	'room in house'

However, noun incorporation is only one subtype of lexical compounding, and so Matses prefixation might appear to represent a type of compounding where the first word is regularly reduced to a single syllable. However, there are several characteristics of Matses prefixes that discourage this interpretation as well. According to Anderson (1985b) if one of the elements in a word formation is drawn from a circumscribed list that does not correspond to a part of speech in the language, it should be treated as an instance of stem modification, rather than as compounding. The set of elements that may be used as prefixes in Matses are made of a subset body part terms and one non-body-part term (në- 'in water or fire'), a collection of forms that does not otherwise form a separate part of speech. Similarly, Matses prefixation does not meet the semantic criterion that the meaning of a compound should be either more specific or entirely different than the two meanings of the words that make up the compound (Payne 1997). What we find in Matses is that these locative orientational prefixes have more *extended* meanings than their root counterparts (220; see also Table 4.16), and the second element in the compound never changes in meaning. Thus the meaning of the combination of morphemes is completely predictable if we focus on the meanings of the prefixes, rather than their corresponding noun roots.

(220a) <u>ana</u> 'mouth, tongue'	(220b) <u>dada</u> 'body, trunk, stem'
<u>an-</u> 'mouth, inside, underside, concave surface'	<u>da-</u> 'torso, trunk/stem, arrow shaft, outer surface, perimeter, side'

(220c) quate 'jaw'
cui- 'jaw, edge, gunwale'

(220d) taë 'foot/ankle'
ta- 'foot/ankle, root, base'

Another argument for considering these prefixes separate morphemes is that several forms do not have a corresponding root in the lexicon, and among those that do, there is no rule that would predict all the prefixed forms from their corresponding root (e.g., pë- ~ podo 'arm, wing, primary feather, branch, leaf'; chi- ~ tsipuis 'anus'; see also 220d).

The point of arguing that these prefixes are not instances of noun incorporation or compounding is not just to indulge in squabbling over linguistic labels. The interesting aspect of this feature is what it can tell us about diachronic processes and grammaticalization. The fact that many of the prefixes are obviously related to noun roots and that superficially the process looks like noun incorporation suggests that prefixes are a recent feature of Matses grammar, and so Matses gives us an opportunity to get a look at how prefixes evolve from past noun incorporation constructions. For example, the system in Matses may fit the pattern described by Mithun (1984) for languages that had a noun incorporation system that was arrested for a while and later resuscitated as a productive system of affixation. This is particularly intriguing in light of the observations that noun classification systems develop when noun incorporation is not arrested (Mithun 1984) and that almost every language in Western Amazonia has a noun classification system, but no Panoan language does (Payne 1990).

Now that it should be clear that prefixation in Matses does not reduce the valence of the clause, here is the surprising part: as alluded to in section 10.4.2, in some instances, prefixes seem to actually *increase* the valence of the clause. When postpositional phrases occur with verbs that are prefixed with one of these body-part prefixes, locative postpositions are no longer necessary to mark locative participants (221-223).

- (221) [**shubu shēni**] an-diad-**quid** _____ cuesban-Ø shubu nuntan
 house old underside-hang-Hab bat-Abs house inside
 ‘Bats hang in old houses, inside the houses.’
 H-XVII 039 cuesban 12
- (222) utsi-bi-Ø _____ **cuēte** da-diad-**tsēc-ec** _____ ush-e-c
 other-Emph-Abs **dicot.tree** trunk-hang-Dim-while:S/A>S sleep-Npast-Indic
cuēte tēdion
 dicot.tree below
 ‘Still other (small bats) sleep hanging on the trunk of a tree, on the underside of
 the [fallen] tree.’
 A-I 051 cuesban 21
- (223) [**shubu podo**] sha-ue-**tsēc-ec** _____ ush-**quid**
 palm.species frond crown-lie-Dim-while:S/A>S sleep-Hab
 ‘They [rice rats] sleep laying in shubu palm fronds at the crown [where the palm
 fronds emerge from trunk].’
 A-IV 017 tacbid umu 13

And in some instances, the locative postposition cannot even co-occur with the body part prefix (224c & 225c; cf. 218).

- (224a) acte **nē-**tsad-Ø****
 water in.water-sit-Imper
 ‘Sit in the water!’
- (224b) acte-**n** _____ **tsad-Ø**
 water-Loc sit-Imper
 ‘Sit in the water!’ (less-preferred form)
- (224c) *acte-**n** **nē-**tsad-Ø****
- (225a) cuēte **da-**diad-**quid** _____ cuesban-Ø****
 tree trunk-hang-Hab bat-Abs
 ‘Bats hang (roost) on tree trunks.’
- (225b) cuēte-**n** **diad-**quid** _____ cuesban-Ø**
 tree-Loc hang-Hab bat-Abs
 ‘Bats hang (roost) on/in trees.’
- (225c) *cuēte-**n** **da-**diad-**quid** _____ cuesban****
- (225d) *cuēte _____ **diad-**quid** _____ cuesban**

It seems that in these cases the prefix somehow acts as the locative postposition, taking the nominal element referring to the location as its object. It is as if a locative postposition were pro-cliticized to the verb, remaining phonologically unattached to its object. The effect is that the prefixed verb appears to increase in valence, specifying an additional unmarked argument in the clause, which one could consider the object of the

prefix. But this “object” is not really an argument of the verb, at least as far as the co-reference system, and other syntactic processes are concerned, and semantically it specifies locative information, rather than typical semantic roles of O’s such as Patient, Recipient, Beneficiary, etc. (cf. English: *He went home*). More work on this topic is required to categorize this noun phrase slot with precision, for now we can simply say that it can act as a postpositional object of a prefix that directly follows it on a verb.

11.6 Valence-decreased clauses

There are three verbal suffixes that decrease the valence of a verb. These are -nan ‘Reciprocal,’ -an ‘Antipassive’ and -ad ‘Reflexive, Anticausative (\approx Middle), Passive.’ These can only be attached to transitive verbs, including ditransitive verbs (§5.5.1). They all decrease the valence of the clause by one, making transitive verbs intransitive, including ditransitive verbs, which become “double absolutive” verb stems, a subtype of intransitive verbs (see the end of §11.4.3 for valence-decreased ditransitive verbs). They decrease the valence of monotransitive verbs by converting the A and/or O into the S of the intransitive verb, as illustrated in Table 11.8.

Table 11.8. Comparison of the effects of the different Matses detransitivizing processes.

Suffix	Process	Co-reference with S	Characteristics of S argument	Meaning/function
<u>-nan</u>	Reciprocal	A=O	animate, agentive & patientive, plural	Agents and Patients alternate roles
<u>-ad</u>	Reflexive	A=O	animate, agentive & patientive	Agent acts on itself
<u>-ad</u>	Anticausative	O	inanimate, patientive	Agent eliminated altogether
<u>-ad</u>	Passive	O=Enabler	animate, patientive	Agent peripheralized
<u>-an</u>	Antipassive	A	animate, agentive	Patient peripheralized

The reciprocal and the reflexive constructions are similar in that neither of the semantic roles specified by the core arguments of the transitive verb is lost or peripheralized in the detransitivized clause. They differ in that *-nan* ‘Reciprocal’ requires that the S be plural and that the entities involved alternate Agent and Patient roles, i.e., that they perform the action on each other (226). The reflexive marker, by contrast, can have a singular S (227). And when the S of the reflexive is plural, this notion of alternation of roles is absent, but rather the action is portrayed as performed by a homogenous group (228).

(226) opa-Ø pe-nan-e-c ‘The dogs are biting each other.’
dog-Abs bite-**Recip**-Npast-Indic

(227) ompo-ad-shun is-onda-mpi
hide-**Rflx**-after:S/A>A see-Dist.Past-1A
‘I saw them after having hidden (lit. ‘hidden myself”).’

K-XXI 010 demushbo 33

(228) chooc que-ec poshto tsid-ad-quid
woolly.monkey.call say-while:S/A>S woolly.monkey gather-**Rflx**-Hab
‘The woolly monkeys holler, “chooc” as they gather into a group.’

A-I 052 poshto 12

The syntactic properties of the reflexive and anticausative²³ meanings of *-ad* are identical: they both simply create a clause with one fewer core argument. The passive use of *-ad* is actually more complicated in that it allows the peripheralized Agent to occur in the instrumental case in some instances. The main semantic differences between the anticausative function of *-ad* and the other two functions are: i) The S of an anticausative is always co-referent with an inanimate O, while the reflexive always requires an animate

²³ Some authors have used the term “middle” instead of “anticausative” to refer to the type of construction I am talking about here (O=S, Agent role not implied), but, as pointed out by Dixon and Aikhenvald (2000), the term “middle” is vague and often poorly defined.

make the Patient more prominent and less victim-like: in reflexives, the Patient is acted upon by itself; in anticausatives, the Patient is portrayed as not acted upon by an Agent; and in the (reflexive) passives, the Patient assumes some responsibility for the action. By the same token, these functions also have in common the property of defocusing the Agent.

The antipassive is also a bit complex, and will be discussed in its own section (§11.6.2). Unlike the suffix *-ad*, the suffix *-an* has only one detransitivizing function: antipassive. There is, however, the suffix *-an* ‘Inceptive/Inchoative,’ which, despite having no effect on valence, might be analyzed as polysemous with *-an* ‘Antipassive’ and even as sharing a core meaning (§5.5.2.1; Fleck 2001).

11.6.1 Passive sentences

Dixon and Aikhenvald (2000:4) list the following four criteria for a prototypical passive:

- (a) Passive applies to an underlying transitive clause and forms a derived intransitive.
- (b) The underlying O becomes S of the passive.
- (c) The underlying A argument goes into a peripheral function, being marked by a non-core case, adposition, etc.; this argument can be omitted, although there is always the option of including it.
- (d) There is some explicit formal marking of a passive construction—generally, by a verbal affix or by a periphrastic verbal construction...

Keenan (1985a: 247) lists the following three properties of “basic passives”:

- (i) no agent phrase (e.g., *by Mary*) is present,
- (ii) the main verb (in its non-passive form) is transitive, and
- (iii) the main verb expresses an activity, taking agent subjects and patient objects.

And Shibatani (1985: 837) lists the following characterization of the passive prototype:

- a. Primary pragmatic function: Defocusing of agent.
- b. Semantic properties:
 - (i) Semantic valence: Predicate (agent, patient)
 - (ii) Subject is affected.
- c. Syntactic properties:
 - (i) Syntactic encoding: agent $\rightarrow \emptyset$ (not encoded)
patient \rightarrow subject
 - (ii) Valence of P[redicate]: Active = P/n;
Passive = P/n - 1.
- d. Morphological property:
 - Active = P;
 - Passive = P[+ passive].

In Matses, there is a passive construction, the “reflexive passive,” that comes about as close as satisfying all of these conditions at the same time as any passive in any language could. Obviously, it is impossible to have both Dixon and Aikenvald’s property (c) and Keenan’s property (i)/Shibatani’s property (c-i) at the same time, as they are contradictory, but the fact that the (instrumental-marked) Agent phrase in Matses passives is sometimes optional and in other situations unmentionable, partially satisfies both these properties. The other properties are fully satisfied by the Matses reflexive passive: it is a morphological passive accomplished by the detransitivizing verbal derivational suffix, *-ad*, in a construction resembling an English “*get*-passive” (Givón and Yang 1994), particularly an English *get*-passive with an expressed reflexive pronoun (e.g., *He got himself killed*). Thus, while prototypical and “basic” morpho-syntactically, this passive is not a semantically neutral passive, but one that carries special reflexive semantics. Furthermore, it is also rarely encountered in texts, evidently due to its limited semantic range. I describe in detail the reflexive passive in the first subsection of the present section.

The limited semantic coverage of the Matses reflexive passive is made up for by three much more common constructions that function to background A arguments in

semantically much more neutral manners. But by the definitions of passives quoted above, these are clearly not prototypical passive constructions, particularly with respect to morpho-syntactic properties. Two of these functional equivalents of passives involve complex constructions with either an embedded nominalized or adjectivalized clause. The other functional passive is simply the zero-pronominalization of an impersonal transitive subject, as discussed above in section 11.2.4; but since this is the same construction for coding anaphoric definite third-person subjects, it is not exclusively a passive construction. In subsection 11.6.1.2, I introduce briefly these functional passive construction types, reserving full description of complex passives for the chapter on complex constructions (§§12.2.2, 12.3.1).

11.6.1.1 Reflexive passives

The predicate of a reflexive passive clause is always an intransitive verb stem, derived from a transitive (monotransitive or ditransitive) verb root or stem. Although in my view passive *clauses* are not derived from intransitive *clauses*, it is illustrative to compare similar active and passive clauses, like those in (230), in order to see more clearly the effect of the verbal derivational process on the status of the arguments specified by the verb.

	A	O		
(230a)	<u>nisi-n</u>	<u>debi-Ø</u>	<u>pe-o-sh</u>	'A snake bit Davy.'
	snake-Erg	Davy-Abs	bite-Past-3	
	Agent	Patient		

	Oblique	S		
(230b)	<u>nisi-n</u>	<u>debi-Ø</u>	<u>pe-ad-o-sh</u>	
	snake-Inst	Davy-Abs	bite-Pass-Past-3	
	Agent/Enablee	Enabler-Patient		
	'Davy got himself bit by a snake.'			

Semantically, reflexive passives only code reflexive enablement (“letting”); i.e., situations where an “Enabler” (a type of Causer, not present in the transitive event) is co-referent with the Patient (as in the English, *I got myself beat up*), which is acted upon by an Agent²⁴ that is always implied and can be considered an “Enablee” (a type of Causee). Syntactically, the O argument of the corresponding active transitive clause occurs as the S of the (intransitive) passive clause; the A of the corresponding transitive clause is usually obligatorily or optionally omitted, but in some cases it can appear overtly in the instrumental case (230b). Only O’s become S of passives. The passive status of the verb is always overtly marked by the suffix *-ad*, which is a detransitivizer that also marks reflexives and antipassives (§§5.5.1.2, 11.6). Like in its reflexive and antipassive functions, the suffix *-ad* ‘Passive’ can only be attached to transitive verb roots or stems.

Reflexive and passive constructions can sometimes be formally identical, and teasing apart the semantic differences between the reflexive and passive readings of sentences like (231) can help clarify the co-reference relationships mentioned in the preceding paragraph.

- (231) *chēshte-n debi-Ø cues-ad-o-sh*
 machete-Inst Davy-Abs strike-**Rflx/Pass**-Past-3
 reflexive: ‘Davy cut himself with a machete.’
 passive: ‘Davy got himself cut with a machete (that someone else was swinging).’

The difference between the reflexive and the passive readings of (231) is completely semantic, not formal. In the reflexive reading, the Agent (the cutter) and the Patient (the cut person) are co-referential. In the passive reading, the Patient (the cut-person) is *not* co-referent with the Agent (the cutter), but with an additional role, the “Enabler” (the one

²⁴ I use the terms “Agent” and “Patient” here in a very broad sense; these could just as well be Experiencers or Themes, respectively.

who allowed the cutting to occur); the Agent (the cutter) is always implied, but in this case has been peripheralized to where it is not even mentionable. In addition to semantic co-reference relationships, another way to distinguish a simple active reflexive clause from a reflexive passive clause is that the passive clause will have a grammatical transitive counterpart with a roughly similar meaning (232a; cf. 231, passive reading), while active reflexive clauses do not (232b; cf. 231, reflexive reading).

(232a) (matses-n) chështe-n debi-Ø cues-o-sh
 person-Erg machete-Inst Davy-Abs strike-Past-3
Agent Patient
 ‘Someone cut Davy with a machete.’

(232b) ?debi-n chështe-n debi-Ø cues-o-sh
 Davy-Erg machete-Inst Davy-Abs strike-Past-3
Agent Patient
 (‘Davy cut Davy with a machete.’)

Sentence (232b) would be possible only if there were two different people named Davy.

Thus, we have two criteria for distinguishing active reflexives from reflexive passives: i) semantic co-reference of the absolutive-marked Patient (in passives, with an Enabler that is *not* the Agent; and in reflexives, with an Agent that is also ultimately responsible for the action); and ii) the ability to have a normal, grammatical transitive paraphrase. These two criteria are often really just two sides of the same coin, as will become evident when we try to identify the tricky example in (233) as a reflexive rather than a passive sentence. Thorns (or any inanimate object) cannot be ergative participants in Matses (234b), and therefore the thorns in (233) cannot be considered the peripheralized A of the corresponding underived transitive verb se ‘pierce.’ Therefore, since the thorns could not be the A of the transitive counterpart clause, and there being no other available entity to occur as the A, no transitive paraphrase is possible. By the same token, the fact that thorns (and inanimate objects) are not portrayed as Agents by Matses

speakers, means that (233) is not adequately translated as ‘...that don’t allow thorns to poke them.’; i.e., the Patient (the squirrel) must be co-referent with the Agent (the piker). Otherwise, if the Patient is co-referent with an Enabler instead, then the Agent role would be missing semantically. For (233) to take a passive reading there would have to be an additional Agent, such as someone who likes poking squirrels with thorns, as in the reflexive passive clause in (234a), where the Patient is co-referent with an Enabler that is distinct from the Agent.

(233) pinchuc-n mē-se-ad-esa capa ne-e-c
 thorn-Inst hand-pierce-Rflx-Neg.A.Nzr squirrel be-Npast-Indic
 ‘Amazon red squirrels are ones that don’t poke themselves on their hands with thorns.’

A-IV 008 capa 15

(234a) pinchuc-n mē-se-ad-o-bi
 thorn-Inst hand-pierce-Rflx/Pass-Past-1S
 ‘I stuck myself with a thorn.’ reflexive reading
 ‘I had/let myself get stuck with a thorn (by someone else).’ passive reading

(234b) pinchuc-n mē-se-o-sh-i transitive paraphrase of (234a) passive
 thorn-Inst/*Erg hand-pierce-Past-3-1O
 ‘(He) stuck me on my hand with a thorn.’
 *‘The thorn stuck me.’

In (231), the Agent cannot be mentioned explicitly, in the instrumental case or otherwise (the machete is a real Instrument, not an Agent). But in (230b), the snake is clearly semantically an Agent, yet it occurs overtly as an instrumental-marked participant. The factor that conditions whether the Agent can be occur overtly in (positive) reflexive passive clauses seems to be that the Agent must be something that can be construed as an Instrument. Humans are excluded, categorically by a subset of speakers (mostly older), and accepted marginally by other speakers (235). Thus, we find that it is not-so-agentive Agents that are most likely to appear overtly in passive clauses.

- (235) ?/*chido-n debi cues-ad-o-sh ('Davy let himself be hit by a woman.')
- woman-Inst Davy hit-Pass-Past-3

Now that I have briefly outlined the basic formal and semantic properties of these passive constructions and distinguished them from reflexives, I feel obliged to back up and show the reader that these really are passive constructions. I presume that upon initial inspection of (230a) and (230b), a two-part doubt entered the reader's mind: i) Is (230b) really an intransitive sentence?; and ii) If the ergative and the instrumental case markers are formally identical, how can you tell in (230b) that the -n is not an ergative marker? One could imagine the alternate interpretation that in cases like (230b), -ad does not alter the valence of the verb, but only alters the meaning, indicating that the O permitted the transitive action to happen. But all applicable morpho-syntactic tests for transitivity (§11.4.1) indicate clearly that (230b) is unquestionably intransitive. Three types of evidence are exemplified here: i) transitivity agreement on adverbs (236); ii) participant tracking on clause-chaining clauses (237); and iii) first person pronominal suffixes, which are (in some tenses) different for S and O (238).

- (236a) padpide-ec debi-Ø nisi-n pe-ad-o-sh
again-Intr Davy-Abs snake-Inst bite-Pass-Past-3
'Davy got himself bit by a snake again.'

- (236b) *padpide-en debi-Ø nisi-n pe-ad-o-sh
again-Tr Davy-Abs snake-Inst bite-Pass-Past-3

- (237a) tapucute chic-ash debi-Ø nisi-n pe-ad-o-sh
shoe remove-after:A/S>S Davy-Abs snake-Inst bite-Pass-Past-3
'After removing his shoes, Davy got himself bit by a snake.'

- (237b) *tapucute chic-shun debi-Ø nisi-n pe-ad-o-sh
shoe remove-after:A/S>A Davy-Abs snake-Inst bite-Pass-Past-3

- (238a) nisi-n pe-ad-o-bi
 snake-Inst bite-Pass-Past-1S
 ‘I got myself bit by a snake.’
- (238b) nisi-n pe-o-sh-i
 snake-Erg bite-Past-3-1O
 ‘A snake bit me.’
- (238c) *nisi-n pe-ad-o-sh-i
 snake-Inst/Erg bite-Pass-Past-3-1O

The second part of the question, “How can you tell that that the -n is not an ergative marker in sentences like (230b)?” can also be addressed with morpho-syntactic evidence. Part of the answer is circular: it hangs on the preceding identification of passive clauses as intransitive and the definition of ergative participants as occurring only in transitive clauses. One syntactic argument is that in active sentences, it is possible for an ergative and an instrumental participant to occur in the same clause (239 & 240a), but never two instrumental participants (unless one is marked as comitative; §11.2.3). We find similarly in passives that if the -n-marked Agent occurs overtly, an additional instrumental marked participant representing a true Instrument cannot occur in the clause (240b).

- (239) matses-n pia-n se-shun pe-quid poshto-Ø
 Matses-Erg arrow-Inst pierce-after:S/A>A eat-Hab woolly.monkey-Abs
 ‘Matses kill them with arrows and then eat the woolly monkeys.’
 A-I 052 poshto 26
- (240a) secte-n (aton incuente-n) debi-Ø se-o-sh active
 sting.ray-Erg 3Gen tail-Inst Davy-Abs pierce-Past-3
 ‘A stingray stung Davy (with its tail).’
- (240b) secte-n (*aton incuente-n) debi-Ø se-ad-o-sh passive
 sting.ray-Inst 3Gen tail-Inst Davy-Abs pierce-Pass-Past-3
 ‘Davy got himself stung by a stingray (*with its tail).’

If secte-n was analyzed as Ergative-marked in (240b), it would be difficult to understand the restriction against including the Instrument. Additionally, if the -n-marked noun phrase were Ergative, then, in line with our generalization in section 11.2.7, we would

expect the Ergative participant to be the subject, and thereby control subject person agreement (241) and participant co-reference (242; see also 237a). Of course, this hangs on our definition of Ergative as always being a core argument.

(241a) ada secte-n mibi si-ad-o-Ø
 Uncert stingray-Inst 2Abs pierce-Pass-Past: Interr: 1/2
 ‘Did you get yourself stung by a stingray?’

(241b) ada secte-n mibi si-o-sh
 Uncert stingray-Erg 2Abs pierce-Past-3
 ‘Did you get yourself stung by a stingray?’

(242) secte-n si-ad-ash debi-Ø shubi-o-sh
 stingray-Inst pierce-Pass-after: S/A>S Davy cry-Past-3
 ‘After getting himself stung by a stingray, Davy cried.’

Another argument is based on semantics: the entities most likely to be ergative arguments are prototypical Agents. Yet with (positive) reflexive passive clauses, the more prototypical Agents cannot occur overtly as -n-marked participants. The type of Agents that can appear overtly in reflexive passive clauses are non-prototypical in being non-human, and the construction itself is limited to situations where the Patient has ultimate control of the situation, rather than the Agent. It is Instrument-like Agents that are the most likely to be mentioned overtly, to the point that sometimes it can be difficult to determine whether the instrumental-marked participant is semantically an Agent or an Instrument. Illustrative are examples of passives referring to the Matses ritual where men voluntarily have themselves stung by up to four bullet ants (inch-long black ants with a very painful sting that hurts up to 24 hours) in order to improve their hunting prowess. The ant is captured with a split twig (that functions as tweezers) by a good marksman and held against another man’s chest or arm until the ant inserts its stinger. The ant is then released from the twig carefully and generally remains on the man’s body and is allowed

to sting the man for up to 20 minutes until it finally removes its stinger and falls off. This situation is regularly expressed using a passive construction, as in (243).

- (243) shēdē-n debi-Ø se-ad-o-sh
bullet.ant-Inst Davy-Abs pierce/sting-Pass-Past-3
'Davy had himself stung by bullet ants.'

While it is evident that the clause is a passive one, it is hard to say whether we should consider the bullet ant semantically an Instrument or an Agent. One factor suggesting that it is an Agent is that bullet ants make good Agents in active transitive sentences (244).

- (244) shēdē-n debi-Ø se-o-sh '(A) bullet ant(s) stung Davy.'
bullet.ant-Erg Davy-Abs pierce/sting-Past-3

It is important to consider, however, that in (243), as in (245), there is still an/another Agent (= Enablee) out there, the man holding the twig or shooting the arrow. But this factor disappears in another interpretation of (243), which obtains more easily with the reflexive pronoun a-ben-bi/a-ben-quoio/a-ben-quoio-bi (§4.4.5.1) which means roughly 'by himself, for no good reason' (246).

- (245) debi-Ø pia-n se-ad-o-sh
Davy-Abs arrow-Inst pierce/sting-Pass-Past-3
'Davy got himself pierced by an arrow.'

- (246) (a-ben-quoio-bi) debi-Ø shēdē-n se-ad-o-sh
3-self-Aug-Emph Davy-Abs bullet.ant-Inst pierce/sting-Pass-Past-3
'Davy got himself stung by a bullet ant (for stupidly messing with it).'

Comparison with reflexive passive sentences that are commonly used to refer to other similar rituals where one person has a substance applied by another person is illustrative. The sentence in (247) refers to a Matses ritual where one man makes a series of

superficial burns on another man's arm or chest and then applies venomous tree toad secretions to the open wounds (see Milton 1994 for a description of this ritual). And in (248), the reference is to where one man blows tobacco snuff up another man's nose with a tube (see text in appendix for a description of this ritual). In (249), the reference is to facial tattooing, which involves piercing a person's face with a thorn, and then applying a dye made from genipap fruits.

- (247) acate-n se-ad-ash matses diad-e-c di-n
 tree.toad-Inst pierce-Pass-after:S/A>S Matses hang-Npast-Indic hammock-Loc
 'After getting pireded with tree toad poison, Matses lie in hammocks.'
 A-XIII 019 acate 28
- (248) padnuen cania-bo-Ø nēnē-n dē-ne-ad-quiv matses
 by.contrast young.man-Pl-Abs tobacco-Inst nose-blow.in-Pass-Hab Matses
 'By contrast, the young men have tobacco blown up each other's noses...Matses.'
 + A-XIII 022 nēnē 19
- (249) ado-ash tan-se-ad-quiv chēshēte-n matses-Ø
 do.thus-after:S/A>S cheek-pierce-Pass-Hab genipap-Inst Matses-Abs
 'After doing that, Matses get their faces tatoed with genipap dye.'
 2-p81-L chēshēte 04

In the above sentences, the tree toad poison (note that acate refers to either the toad or its preserved venom), the tobacco, and the genipap dye are inanimate substances, and therefore not possibly Agents, and, as in the bullet ant ritual, the Patient does not perform the action on himself. So, by comparison, the bullet ant in (243) could be said to also be construed as an Instrument, with the true Agent being the (peripheralized, unmentionable) man applying the substance. Meanwhile, in (246), in the absence of an additional person handling the bullet ant, the bullet ant seems more like an Agent than an Instrument. It is perhaps not possible to determine decisively whether the instrumental-marked participant in sentences like (243) is semantically an Agent or an Instrument. But, sentences like (243) do allow us to make the generalization that the

more Instrument-like an Agent is, the more likely it is to be mentionable in the clause as an Instrument. Perhaps the speaker must be able to construe the Agent as an Instrument in order to mention it.

Negative reflexive passives are a bit different structurally, but shed some light on the issue of -n-marked participants in reflexive passive constructions. Just as in active negative clauses, negative reflexive passive clauses are formed by attaching a negative (non-finite) verbal suffix (§12.3.2) following -ad, and (except as subordinate clauses, as in 252 below) marking inflection on an auxiliary verb. And, most importantly, a human Agent may felicitously appear overtly (250), unlike in the positive reflexive passives where human Agents are completely or marginally unacceptable, depending on the speaker (unless the human is actually used as a tool or weapon, which speakers reject as nonsense).

(250a) umbi debi-Ø cues-ad-en-quo ic-o-sh
 1Inst Davy-Abs hit-Pass-Neg-Aug Aux-Past-3
 ‘Davy did’t let himself be hit by me.’

(250b) mimbi cues-ad-en-quo ic-e-bi ‘I won’t let myself be hit by you.’
 2Inst hit-Pass-Neg-Aug Aux-Npast-1S

(250c) debi-n cues-ad-en-quo ic-e-bi ‘I won’t let myself be hit by Davy.’
 Davy-Inst hit-Pass-Neg-Aug Aux-Npast-1S

The fact that very agentive Agents can appear as -n-marked participants (umbi could be alternately analyzed as u-n-bi ‘1-Erg/Inst-Emph’; §4.4.1), weakens my semantic argument for calling the -n-marked participants Instruments, particularly in light of the fact that first-person pronouns and humans are not naturally marked as Instruments in active clauses. On the other hand, it provides another strong piece of evidence showing that these constructions really are passives: person marking in Matses agrees with the subject (S/A) of a clause, and in (250a) it is clear that the person marking agrees with the

absolute participant, not the -n-marked participant. Note that if the -n-marked participant was an ergative argument, we would expect it to control subject agreement. The form of the pronoun in (250a) also serves to eliminate the possibility that the Agent is genitive (as one might suspect considering that -n is also the genitive marker): the first-person genitive pronoun is cun, not umbi. As such, I feel justified in calling all -n-marked participants in positive as well as negative reflexive passive clauses Instruments, but keeping in mind the connection between the ergative and the instrumental markers goes beyond their formal similarity.

I should remind the reader at this point, that despite my long discussion of instrumental-marked Agents, it is actually much more common for the Agent to not be mentioned overtly at all, particularly considering that much of the time the peripheralized Agent is human, and therefore not mentionable at all in positive reflexive passive clauses (251); and in negative reflexive passive clauses, the Agent is usually omitted as well (252).

- (251) cues-ad-esa tsauesamë ne-e-c
 kill-Pass-Neg.A.Nzr giant.armadillo be-Npast-Indic
 ‘The giant armadillo is one that does not allow itself to be killed.’
 1-p49-B tsauesamë 02

- (252) is-ad-en-quo nidaid ëquëduc-uid-bi capu-quid
 see-Pass-Neg-Aug ground inside-only-Emph locomote-Agt.Nzr
mencudu ne-e-c
 naked.tailed.armadillo be-Npast-Indic
 ‘It doesn’t let itself be seen, (because) the naked-tailed armadillo is one that travels inside the ground.’
 A-I 050 mencudu 06

Real Instruments, however, occur freely and commonly enough in reflexive passive clauses as optional peripheral participants. Whether overt or covert, the peripheralized Agent of reflexive passives clauses can be a specific or general person/entity. Generally

speaking, present habitual clauses have unspecified or general Agents: if the Agent is mentioned overtly, it generally refers to a category of Agents (253a). If unmentioned, we may not even be sure if there is any category referred to more narrowly than the class of entities that could possibly be Agents of the verb. For example, in (251) it is hard to know if the speaker is referring only to human Agents, only to jaguars and pumas, or to all entities capable of killing large animals (copular clauses with nominalizations as subjects are another way to express habitual aspect, and are functionally equivalent to 253b). Similarly, (252) seems most likely to refer to humans, but could just as well refer to a category including humans and non-human predators.

(253a) matses-n tsauesamë-Ø cues-ad-esa
 Matses-Inst giant.armadillo-Abs kill-Pass-Neg.Hab
 ‘Giant armadillos do not allow themselves to be killed by Matses/humans.’

(253b) tsauesamë-Ø cues-ad-esa
 giant.armadillo-Abs kill-Pass-Neg.Hab
 ‘Giant armadillos do not allow themselves to be killed.’

In addition to the identity of the Agent being vague in habitual passive clauses, it usually refers to many different individual Agents, possibly of different kinds, as would be expected of a reference to multiple events (254a). By contrast, with non-habitual aspects, which refer to specific events, a particular Agent may be implied. Evidentiality has an effect on the identifiability of the Agent: experiential inflections like -o ‘Recent Past: Experiential’ require that the speaker witnessed the event, and so the identity of the Agent is known, at least to the speaker (254b). But with inferential inflections, like -ac ‘Recent Past: Inference’ the identity of the Agent may be a complete mystery (254c).

(254a) tsauesamë-Ø cues-ad-**quid**
 giant.armadillo-Abs kill-Pass-**Hab**
 ‘Giant armadillos allow themselves to be killed.’

(254b) tsauesamë-Ø cues-ad-o-sh
 giant.armadillo-Abs kill-Pass-Past-3
 ‘The giant armadillo allowed itself to be killed (speaker witnessed killing).’

(254c) tsauesamë-Ø cues-ad-ac
 giant.armadillo-Abs kill-Pass-Infer
 ‘The giant armadillo allowed itself to be killed (said upon finding the carcass).’

It is interesting to contrast (254c) with its active transitive counterpart containing a zero third-person pronoun (255).

(255) tsauesamë-Ø cues-ac
 giant.armadillo-Abs kill-Infer
 ‘(He/She/It/They/Someone/Something) killed a/the giant armadillo (said upon finding the carcass).’

In both (254c) and (255), the identity of the armadillo killer may be a mystery, and neither requires (254c actually doesn't *allow*) the speaker to specify the Agent. The main semantic difference between (254c) and the impersonal A reading of (255), is that in (254c) the armadillo's fate is to some extent the armadillo's own fault, while (255) is neutral in this respect. Thus, (255) could be considered the functional equivalent of a neutral (i.e., non-reflexive) passive in Matses; but there is plenty of evidence to show that sentences like (255) are syntactically transitive clauses (§11.2.4).

The word orders in (256) seem to be preferred over those in (257), but word order seems to have no additional restrictions that do not occur in active clauses (see §11.12 for word order):

(256a) debi-Ø cues-ad-o-sh
 Davy-Abs hit-Pass-Past-3
 ‘Davy got himself hit.’

(256b) debi-Ø chichun-n se-ad-o-sh
 Davy-Abs dog-Inst sting-Pass-Past-3
 ‘Davy got himself stung by a scorpion.’

(257a) cues-ad-o-sh debi-Ø
hit-Pass-Past-3 Davy-Abs
'Davy got himself hit.'

(257b) chichun-n debi-Ø se-ad-o-sh
dog-Inst Davy-Abs sting-Pass-Past-3
'Davy got himself stung by a scorpion.'

A final property of reflexive passives left to discuss is the issue of "control." The factor that allows Patients of originally transitive verbs to occur as subjects of intransitives is that they must assume some degree of control. This control can be intentional, as in having yourself stung by bullet ants and the other rituals described above (243; 247-249), or by being a fool and unwittingly putting yourself in an avoidable situation where you expose yourself to some negative experience (230b, 240b, 242, 245, 246, & 256b). But this control must not be complete: with intentional actions, the Patient has someone else perform the action on him/her/it, while with unintentional actions the Agent is responsible because he had control to avoid the situation, but failed to do so. When a Patient is clearly in full control of the situation, a causative construction is preferred (258a; §11.5.1). But there is a bit of overlap/interplay where both the causative and the passive constructions can be used to refer to the same situation (258).

(258a) debi-n opa-Ø pe-me-o-sh
Davy-Erg dog-Abs bite-Caus-Past-3
'Davy let himself be bitten by a dog.'

(258b) debi-Ø opa-n pe-ad-o-sh
Davy dog-Inst bite-Pass-Past-3
'Davy got himself bitten by a dog.'

Both sentences in (258) could refer to the situation where Davy unintentionally, foolishly goes visiting at night to a house where well-known vicious dogs reside. But (258a) could also refer to a situation where for some reason Davy held a dog's head in his hands and made it bite his leg, a situation (258b) does not lend itself to.²⁵ In both (258a) and (258b), the entity that has ultimate control of (or at least responsibility for) the action is co-referential with the Patient, but in (258a) the Enabler (Causer) is added by increasing

²⁵ (247a) could also mean "Davy fed the dog" if the dog is taken as the Patient, rather than the Causee.)

the valence and presenting the Enabler-Patient as the ergative participant, while in (258b), the Enabler is added by making it co-referential to the Patient, and the Agent is peripheralized, thereby decreasing the valence of the clause. Both sentences in (258) contrast with the simple transitive clause in (259) in that in (259) the dog is presented as being responsible for and in control of the action, while in (258), the blame and control is shifted at least partially from the dog to Davy.

(259) opa-n debi-Ø pe-o-sh 'The dog bit Davy.'
 dog-Erg Davy-Abs bite-Past-3

It is interesting to present a construction type that, although not acceptable to most speakers without a reflexive pronoun, can tell us something about reflexive passive and reflexive causative/"letting" constructions. The combination of the causative and the passive suffixes (260b) gives a reading that is in a way a hybrid or intermediate between the passive (260a) and the causative (260c) constructions, forming a cline in the amount of control the Patient has.

(260a) a-ben-bi opa-n debi-Ø pe-ad-o-sh
 3-self-Emph dog-Inst Davy-Abs bite-Pass-Past-3
 'Davy let himself be bitten by a dog (unintentionally).'

(260b) a-ben-bi opa-n debi-Ø pe-me-ad-o-sh
 3-self-Emph dog-Inst Davy-Abs bite-Caus-Pass-Past-3
 'Davy let himself be bitten by a dog (unintentionally or intentionally; if intentionally, without physically handling the dog).'

(260c) a-n-ben-bi opa-Ø debi-n pe-me-o-sh
 3-Erg-self-Emph dog-Abs Davy-Erg bite-Caus-Past-3
 'Davy let himself be bitten by a dog (unintentionally or intentionally; if intentionally, could be by physically handling the dog or by just standing there).'

Note that the reverse order of -me and -ad does not work the same way:

- (261) (a-n-ben-bi) opa-Ø debi-n pe-ad-me-o-sh
 3-Erg-self-Emph dog-Abs Davy-Erg bite-**Rflx-Caus**-Past-3
 ‘Davy made the dog bite itself (for no good reason).’

Generally speaking, detransitivized verb stems with -ad have an anticausative reading when the S is inanimate. The semantic requirement that the S of reflexive passives have control seems to preclude inanimate S’s in reflexive passives. However, passives with inanimate subjects, like (262), do occasionally crop up, and they are a bit tricky to interpret.

- (262) cun tied baded-quo nain-ad-en-quo ic-o-sh
 1Gen swidden quickly-Aug finish-**Antcaus-Neg-Aug** Aux-Past-3
 ‘My swidden did not get done (in this case, the weeding) quickly.’

The overheard sentence in (262) cannot be a normal reflexive passive, since a swidden (a slash-and-burn agricultural plot) cannot have control or responsibility and therefore cannot be an Enablee. On the other hand, it seems evident that the weeding cannot happen spontaneously (nor does the speaker wish to portray the weeding as happening spontaneously), and therefore an Agent is implied, ruling out an anticausative reading. One clue is the intent of this sentence: the speaker wished to present the long duration of the task as a function of the properties of his swidden (large size, soil type prone to weed growth, etc.), rather than a result of his laziness or lack of skill. Thus, it is possible that the swidden is metaphorically portrayed as resisting control, and we could metaphorically translate (262) as: ‘My swidden did not allow itself to get done quickly.’ Regardless of whether one accepts this metaphor analysis, sentence (262) serves to remind us that there is overlap among Matses passives, anticausatives, and reflexives.

Passivization of ditransitive and double absolutive verbs was already discussed in sections 11.4.1 (ex. 126), 11.4.2.1 (ex. 142b) and 11.4.3 (ex. 186).

11.6.1.2 Functional equivalents of passives

When nominalized (263) or adjectivalized (264) clauses containing an ergative participant occur as part of the complex predicate of a copular clause, a passive effect results, despite the absence of typical passive morphology or syntax. I call these functional equivalents of passives because the copular clauses (= main clauses) have patientive subjects (*itia* in 263 & *-bi* in 264), which correspond to the O's of the basic clauses. And the agentive ergative-marked nominals in the subordinate clauses, which would be the subjects in a simplex active paraphrase, are not main clause subjects (as evidenced, for example, by the first-person pronomial enclitic in 264).

- (263) [shēcten-chedo-n pe]-aid itia ne-e-c
 collared.peccary-etc/too-Erg eat-Pat.Nzr swamp.palm be-Npast-Indic
 ‘The swamp palm is eaten by collared peccaries and similar animals, too.’
 lit. ‘The swamp palm is a collared-peccary(etc.)-eaten one.’

A-I 029 itia 05

- (264) [bacuë-bo-n chud]-tiapi-mbo ic-e-bi que-onda-sh
 child-Pl-Erg copulate.with-Neg.Abil-Adjzr be-Npast-1S say-Dist.Past-3
 ‘‘I won’t let children have sex with me.’’ she told me.’
 lit. ‘I am non-children-screwable.’

+ K-XXII 010 chema 093

These sentence types, despite having copular clause syntax, are used for predication, rather than equation. The other functional equivalent of passives is simple active transitive sentence with a covert impersonal A argument. Although these could occur in any TAM conditions, they are recognized most clearly in inferential (61 & 255) and conjecture (265) evidentiality, where it is specified that the speaker did not witness the event, and therefore is less likely to know the identity of the Agent.

- (265) pia-n se-shun poshto pe-pa-nēdash
 arrow-Inst pierce-after:S/A>A woolly.monkey eat-Comment-Dist.Past:Conjec
 ‘A long time ago, presumably woolly monkeys were eaten after being shot with
 arrows.’

1-p56-B poshto 08

Considering that the syntactically prototypical passive construction (i.e., that formed with -ad) is restricted to situations with reflexive enablement semantics, and that in most situations does not allow the Agent to be mentioned overtly, these other constructions are encountered frequently in the language as functional equivalents of passives. See sections 11.2.4, 12.2.2, and 12.3.1 for descriptions of these sentence types.

11.6.2 *Antipassive sentences*

As one would suspect of a language with ergative case marking, Matses has antipassive constructions. Dixon and Aikhenvald (2000:9) list the following four criteria for a prototypical antipassive:

- (a) Antipassive applies to an underlying transitive clause and forms a derived intransitive.
- (b) The underlying A becomes S of the antipassive.
- (c) The underlying O argument goes into a peripheral function, being marked by a non-core case, adposition, etc.; this argument can be omitted, although there is always the option of including it.
- (d) There is some explicit formal marking of an antipassive construction (same basic possibilities as for passives).

One Matses antipassive type, the -an antipassive, is almost perfectly prototypical according to the above criteria, the minor deviation being that the (c) criterion is not satisfied completely: the O argument of the underived transitive root/stem cannot appear overtly at all in Matses antipassives. We could say that there are two subtypes of antipassive: one is the -an antipassive, and the other, the “suppletive antipassive,” which involves the replacement of a transitive verb with an intransitive counterpart. The two

are identical syntactically, semantically, and functionally, but the suppletive antipassive lacks an overt morphological antipassive marker. Both are described in turn in the following subsections of the present section. The functional equivalent of an antipassive is an active transitive clause where the O participant occurs as a covert impersonal third-person pronoun. This was already briefly introduced in section 11.2.4, and its interplay with the -an antipassive is discussed in more detail in the following subsection.

11.6.2.1 -an antipassives

The interesting aspects of the Matses antipassive are that it does not occur with all transitive verbs, and that the peripheralized Patient can be an (obvious) first-person participant. Before discussing these issues, I will describe the basic form and semantics of the Matses antipassive.

Antipassive clauses are formed by adding the suffix -an to a transitive verb root or stem. The verb then becomes intransitive and the Agent is marked in the absolutive case instead of the ergative; i.e., the A of the active transitive paraphrase is an S in the antipassive clause (266).

- | | | | | | |
|--------|------------------------------------|--|--------------------------|------------------|-------------|
| | A | | O | | |
| (266a) | [aid | opa]-n | matses-Ø | pe-e-c | active |
| | that.one | dog-Erg | people-Abs | bite-Npast-Indic | |
| | | Agent | | Patient | |
| | | 'That dog bites people.' | | | |
| | | S | | | |
| (266b) | [aid | opa]-Ø | pe-an-e-c | | antipassive |
| | that.one | dog-Abs | bite-Antpass-Npast-Indic | | |
| | | Agent | | | |
| | | 'That dog bites.'/'That dog always bites me/is biting me.' | | | |
| (266c) | *[aid opa]-Ø matses-Ø/-n pe-an-e-c | | | | |

And the Patient (the O of the transitive verb), which may be either unknown/indefinite (267) or first person (268), cannot occur overtly in the clause, as a peripheral participant or otherwise (266c). Antipassives of bivalent verbs (the most common situation) become univalent intransitive verbs (e.g., 267), and therefore the Patient is eliminated altogether syntactically, not just a zero third-person pronoun.

- (267) aid-bi mauédante-bi ma-uéd-an-e-c
 that.one-Emph palm.genus-Emph head-entangle-**Antpass**-Npast -Indic
 ‘That same one, the mauédante palm, entangles in **people’s** hair.’
 A-I 030 mauédante 04

- (268) taë-n bed-ta se-me-an-enda que-quin
 foot-Loc grab-Imper pierce-Caus-**Antpass**-Neg Imper say-while:S/A>A
 ‘Saying... grab his foot (in order to) not let him shoot **me** (with an arrow)!’”
 K-XXI 010 dëmushbo 31

The S (= Agent) may be referential and specific (269a, first reading) or general (269a, second reading), and, as in other clause types, may occur covertly as a third-person zero pronoun (269b).

- | | |
|---|---|
| (269a) <u>chichun-Ø se-an-e-c</u>
scorpion-Abs pierce- Antpass -Npast-Indic
‘The scorpion is stinging me.’
‘Scorpions sting.’ | (269b) <u>se-an-e-c</u>
pierce- Antpass -Npast-Indic
‘It is stinging me.’
‘It/They sting(s).’ |
|---|---|

Antipassive clauses can be shown to be grammatically intransitive. In addition to absolutive case-marking of the subject (see above examples), three other lines of evidence show that antipassives are in fact intransitive: i) transitivity agreement on adverbs (270); ii) participant tracking on adverbial/clause-chaining clauses (271); and iii) first person pronominal suffixes, which are, in some tenses, different for S and A (272).²⁶

²⁶ A tricky aspect of working with the antipassive marker is that it is homophonous with an inceptive/inchoative marker (§5.5.2.1), which occurs in about the same position on the verb and

- (270) acqui-mbo-ec _____ pe-an-e-c 'It bites hard.'
intensely-Aug-Manr:Intr bite-Antpass-Npast-Indic
- (271) nēish-ash _____ pe-an-e-c 'It bites when it gets mad.'
get.mad-after:S/A>S bite-Antpass-Npast-Indic
- (272) cuessunne-an-onda-bi 'I used to kill.'
kill-Antpass-Dist.Past-1S

Antipassivization of ditransitive verbs results in clauses with two absolutive-marked participants:

- (273a) debi-n _____ piucquid-Ø ubi mene-e-c 'Davy gives me money.'
Davy-Erg money-Abs 1Abs give-Npast-Indic
- (273b) debi-Ø _____ piucquid-Ø mene-an-e-c 'Davy gives me money.'
Davy-Abs money-Abs give-Antpass-Npast-Indic

The aspect of the proposition in the antipassive clause may be punctual or habitual. Many inflectional suffixes do not specify aspect, and when aspect is not marked

does not detransitivize the verb. And since transitive verbs can occur with non-specific covert objects, it is not possible to provide ungrammatical transitive counterparts for (270-272) with verbs that are formally identical (270'-272').

- (270') acqui-mbo-en _____ pe-an-e-c
intensely-Aug-Manr:Tr bite-Incep-Npast-Indic
'It will start to bite hard.'
- (271') nēish-shun _____ pi-an-e-c (272') cuessunne-an-onda-**mbi**
get.mad-after:S/A>A bite-Incep-Npast-Indic kill-Incep-Dist.Past-1A
'When it gets mad, it starts to bite.' 'I started to kill (a long time ago).'

Note that (266c) could be grammatical with an inceptive interpretation, but with a meaning that speakers reject as nonsense:

- (266c') ?[aid _____ opa]-Ø matses-n pe-an-e-c
that.one dog-Abs people-Erg bite/eat-Incep-Npast-Indic
'People will start biting/eating that dog.'

In this section, I will ignore possible inceptive/inchoative interpretations.

by a derivational suffix, pragmatic factors or properties of the verb affect the aspectual reading of the sentence. In the case of antipassives with impersonal Patients, imperfective aspect obtains, while with first person Patients, either imperfective or perfective readings are possible (274a); compare this the aspect possibilities in a simple transitive clause (274b).²⁷

<p>(274a) <u>debi-Ø</u> <u>pe-an-onda-sh</u> Davy-Abs bite-Antpass-Dist.Past-3 *‘Davy bit (long ago).’ ‘Davy used to bite (e.g., as a child).’ ‘Davy bit me (long ago).’ ‘Davy used to bite me.’</p>	<p>(274b) <u>debi-n</u> <u>pe-onda-sh</u> Davy-Erg bite-Antpass-3 ‘Davy bit him (long ago).’ ‘Davy used to bite him.’ *‘Davy bit me/you.’ *‘Davy used to bite me/you.’</p>
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The impersonal antipassive and the first-person antipassive have identical morpho-syntax, yet their functions are clearly disparate. Nevertheless, it is possible to identify a common core function, which is to background the Patient of a transitive event, and simultaneously foreground the Agent. In the impersonal Patient reading of the antipassive in (274a ‘Davy used to bite’), backgrounding seems to be motivated by the very nature of the referent of the Patient: it may be unknown to the speaker, it may be general, plural or indefinite, or otherwise difficult to identify. For example, the sentence in (275) refers to the Matses belief that after butchering a tapir in the forest, one must not look back as they walk to the village packing the meat, otherwise someone in the village will die within a short span of time. Similarly, (276; quoted speech in brackets) refers to the Matses belief that if one looks at a giant armadillo or steps on its diggings, someone in the villages will die. In either situation, no one knows who it is that will die, but it will definitely be somebody. In (275), then, the Patient is unknown and indefinite; in (276) it

²⁷ Note that pe can also mean ‘eat,’ where it can occur in the active voice naturally with a backgrounded impersonal O. This will be discussed below.

is general and plural (see Fleck 2001 for a description of the grammatical coding of these Matses beliefs).

(275) dachui-an-mane que-quin tantia-e-c
 curse.to.die-**Antpass**-Fut:Poten:1 say-while:S/A>A think-Npast-Indic
 ‘He thinks saying, ‘I might curse someone to die [so I won’t look back].’
 C-III 001 shëcten 39

(276) is-ash matses [tsauesamë dachui-an-e-c]
 see-after:S/A>S Matses giant.armadillo curse.to.die-**Antpass**-Npast-Indic
que-quid ne-e-c
 say-Agt.Nzr be-Npast-Indic
 ‘Matses are ones that after seeing it, say, “Giant armadillos cause [people] to die.’
 A-I 049 tsauesamë 15

In (277), the Patient refers not only to many entities, but to many types of entities, e.g., arrowheads, fletching, spear heads, paca-tooth arrow sharpeners, etc.

(277) bitacca-an-quid buid ne-e-c
 stick-**Antpass**-Agt.Nzr pitch be-Npast-Indic
 ‘Pitch is one that is for gluing things.’
 A-XIII 001 buid 03

The function of the first-person antipassive is less obvious. Generally, we can say it functions to focus on the Agent by peripheralizing the Patient. In first-person antipassives, the Patient is certainly not difficult to identify as a “unique individual in discourse” (Cooreman 1994:52). It seems that in addition to peripheralizing the most difficult to identify Patients, the Matses antipassive also peripheralizes the most obvious or important participant. It is interesting to note the one clear case where the Matses antipassive peripheralizes the second person participant: in questions directed at the second person where the second person him/herself is the Patient, as in (278a):

(278a) ada biush-Ø che-an-e-c ‘Are mosquitos biting you?’
 Uncert mosquito-Abs eat-**Antpass**-Npast-Indic

Besides imperatives, the only other situation where second-person pronouns may be deleted is in simplex questions where there is a second person subject. If (278a) was transitive, the second person pronoun could not be deleted because it would be an object (278b). To delete the second person pronoun, you have to antipassivize the sentence. Question (278a) is more about the mosquitoes, (278b) is more about the second person.

(278b) ada biush-n mibi che-e-c 'Are mosquitos biting *you*.'
 Uncert mosquito-Erg 2Abs eat-Npast-Indic

The effect of peripheralizing the otherwise most important participants seems to be a type of “referential backgrounding” (Cooreman 1994:67), where the Patient is left unmentioned so that it is understood as unimportant or of marginal importance to the discourse. When speakers are asked to contrast the sentences in (279), most say they are identical. But when asked why someone would use one of these sentences to bring up this seemingly irrelevant (long-past) event, some speakers suggested that one would use (279a) when talking about scorpions and the fact that they sting, confirming this knowledge by reporting a first-hand experience. Sentence (279b), some speakers suggest, would be good when one is telling about the things that happened to him during some past episode.

(279a) chichun se-an-onda-sh (279b) chichun-n se-onda-sh-i
 scorpion sting-Antpass-Dist.Past-3 scorpion-Erg sting-Dist.Past-3-10
 ‘A scorpion stung me.’ ‘A scorpion stung me.’

Similarly, (280a) might be spoken by a little kid telling on Davy, wanting him to get in trouble, while (280b) would be a good answer to “Why are you crying.”

(280a) debi se-an-o-sh
 Davy strike-Antpass-Past-3
 ‘Davy punched me.’

(280b) debi-n se-o-sh-i
 Davy-Erg strike-Antpass-Past-3-10
 ‘Davy punched me.’

With first/second person Patient readings, the Patient cannot be unknown, general, indefinite, or secret, and so the function of these antipassives cannot really be to hide the identity of the Patient, but to de-focus Patients and focus on the Agent.

Thus, we can summarize the function of antipassives as twofold. The antipassive allows one to express a transitive event without mentioning the Patient i) in order to talk about an event where the Patient is hard to identify (e.g., unknown, indefinite, etc.); or ii) to portray the otherwise most important participant in the discourse as less important. Both can be considered types of referential backgrounding. We can also speculate that the connection between the impersonal Patient and first-person Patient meaning is historical, with -an possibly having originated as a marking only first-person Patients, and used initially transparently to refer to impersonal Patients. Although I have no evidence for this, a comparison with Spanish is suggestive (note that Matses does not distinguish between 1Sg and 1+3; §4.4.1):

(281a) *El alacrán nos pica.* ‘Scorpions sting.’ lit. ‘The scorpion stings **us**.’

(281b) *El lagarto nos come.* ‘Caimans eat people’ lit. ‘The caiman eats **us**.’

Unlike Matses reflexive passives, Matses antipassives can be considered “semantically neutral,” in that no extra or special semantics are introduced into the antipassive construction, and so limited semantic breadth does not seem to be a factor inhibiting its integration into the language. Nevertheless, like the reflexive passives, Matses -an antipassives are not encountered in the language as frequently as one would expect. The reason is quickly identified: there is a limited number of verbs with which

the -an antipassive occurs freely to code an impersonal Patient.²⁸ Verbs that naturally have impersonal objects do not naturally form impersonal antipassives, preferring to background the O by zero pronominalization. Take for example the transitive verb ucbud 'vomit,' which can occur with an overt object, such as 'his supper' or 'the beer' but most of the time it is not important or known (or even desirable to know) what is being thrown up. As a result, when the verb ucbud occurs with a covert third-person object pronoun, as in (282a), it is most naturally interpreted as an impersonal object. The less naturally or frequently that a verb occurs with a referential third-person object argument, the less likely speakers are to accept it antipassivized with -an (282b).²⁹

- | | |
|--|--|
| (282a) <u>debi-n</u> <u>ucbud-o-sh</u>
Davy-Erg vomit-Past-3
'Davy vomited.'/?'Davy vomited it.' | (282b) * <u>debi-n</u> <u>ucbud-an-o-sh</u>
Davy-Erg vomit-Antpass-Past-3 |
|--|--|

By contrast, we have verbs like se 'sting/pierce' or cues 'hit/kill by striking' dachui 'curse to die,' which are unlikely to occur with impersonal objects. When these verbs occur with a covert third-person object pronoun, as in (283a) and (283a) the referential covert pronoun reading is the most natural. These are just the sort of verbs that -an is meant for: it specifies the impersonal Patient reading, on verbs where one would not expect it unless marked overtly (283b & 283b).

- | | |
|--|--|
| (283a) <u>debi-n</u> <u>cues-o-sh</u>
Davy-Erg hit/kill-Past-3
'Davy hit/killed it/him/her/them.'
?'Davy hit/killed.' | (283b) <u>debi-Ø</u> <u>cues-an-o-sh</u>
Davy-Abs hit/kill-Antpass-Past-3
'Davy used to hit/kill.'
'Davy hit/killed a bunch of people.' |
|--|--|

²⁸ The first-person Patient use of -an is applicable a larger number of verbs, but, as would be expected, not with verbs that cannot have a human O.

²⁹ (270b) would be acceptable interpreting -an as the homophonous (non-valence-changing) inceptive/inchoative verbal suffix, meaning: 'Davy began vomiting.'

(284a) aca-n dachui-o-sh
 egret-Erg curse.to.die-Past-3
 ‘The egret cursed him to die.’
 (said once a person dies)

(284b) aca-Ø dachui-an-o-sh
 egret-Abs curse.to.die-Antpass-Past-3
 ‘The egret cursed someone to die.’
 (said before someone dies)

Another interesting verb is pe, which can mean ‘bite’ or ‘eat’—when meaning ‘eat’ the active clause can have a referential or impersonal reading, but when meaning ‘bite’ only the referential reading is natural. As a result, in sentences like (266a) above, pe-an is only interpreted as meaning ‘bite’ and not ‘eat.’ See section 11.2.4 for more examples with active and antipassive sentences with pe and other verbs. A more systematic study involving a larger number of verbs is needed to see if other semantic correlates govern the use of the antipassive -an. One other pattern is evident at this point: it is easier to get the first person Patient reading for many verbs than it is to get the impersonal Patient reading.

11.6.2.2 *Suppletive antipassives*

This other antipassive is very similar syntactically to the -an antipassive. The “suppletive antipassive,” rather than being accomplished morphologically by suffixation of the verb with -an, is accomplished by substituting the intransitive counterpart verb of a ca/que transitive/intransitive verb pair (arguably ablaut, §§2.6.6.4, 5.3.1.4; see §2.9 for a general description of this class of verbs). Several relations can exist between intransitive verbs ending in que and transitive verbs ending in ca (§5.3.1.4). Here, I briefly contrast two of these relationships: causative/anticausative relations, where the S of the intransitive counterpart is co-referential with the O of its transitive counterpart (285), and applicative/antipassive relations, where the S of the intransitive counterpart is

co-referential with the A of the its transitive counterpart (285),³⁰ but never a definite pronominal ‘him,’ ‘her,’ ‘it,’ or ‘them.’

Intransitive	Transitive
(285a) <u>nique</u> ‘run off (plural S)’	<u>nica</u> ‘chase off, make run off (plural O)’
(285b) <u>tadanque</u> ‘slip’	<u>tadanca</u> ‘cause to slip’
(285c) <u>pichique</u> ‘be on fire, burn oneself’	<u>pichica</u> ‘burn something’

Intransitive	Transitive
(286a) <u>sedenque</u> ‘weep’	<u>sedenca</u> ‘weep for someone’
(286b) <u>onque</u> ‘talk’	<u>onca</u> ‘tease verbally, flirt’
(286c) <u>que</u> ‘say’	<u>ca</u> ‘say to/tell’
(286d) <u>chushque</u> ‘complain, bark’	<u>chushca</u> ‘complain about someone, reprimand’

With these transitive/intransitive applicative/antipassive pairs, antipassivization is accomplished by replacing the transitive verb with its intransitive counterpart. As with the -an antipassives, the Patient may be unknown/indefinite (287b) or first person (287b & 288).

(287a) <u>debi-n</u> <u>chushca-o-sh</u> Davy-Erg reprimand-Past-3 ‘Davy reprimanded him.’ ‘Davy was reprimanding him.’	(287b) <u>debi</u> <u>chushque-o-sh</u> Davy reprimand-Past-3 ‘Davy was reprimanding.’ (antipassive) ‘Davy reprimanded me.’ (antipassive) ‘Davy complained.’ (intransitive) ‘Davy was complaining.’ (intransitive)
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(288) <u>min</u> <u>matses-bi</u> <u>ne-e-c-que</u> 2Gen person-Emph be-Npast-Indic-so <u>que-onda-sh</u> say-Dist.Past-3	<u>chui-enda</u> <u>que-o-sh</u> tell-Neg.Imper say-Past-3
---	--

“‘They are your own people, so don’t tell them,’ they told me,” she told me.’

+ K-XXII 013 chema 122

³⁰ Note that these terms, e.g., “applicative/antipassive relation” refer to the syntactic relation of the co-referential arguments in the verb pairs; the actual semantics of the verb pairs may differ enough to where the intransitive verb is not always semantically acceptable, e.g., ‘antipassive’ of the transitive verb.

Sentence (288) and the first two interpretations of (287b) show clearly that these are not just intransitive clauses, but antipassive clauses with implied Patient participants in addition to the agentive subject argument.

11.7 Stative predicates/copular clauses

There is a class of constructions where a noun phrase is “equated” or “associated” with another constituent, which may be another noun phrase (as in, *He is a teacher*), an adjective (as in, *He is good*), a postpositional phrase (as in, *He is in the bathroom*), etc. These constructions all have in common the property that the predication, rather than being expressed mainly by a verb, is expressed by the noun phrase, adjective phrase, etc., and the verb serves only to equate the phrases. These are sometimes called “stative predicates” or “predicate nominals.” Payne (1997) recognizes six semantically-defined stative predicate clause types: equative, proper inclusion, attributive (I will call these “attribute-predicating” here to avoid confusion with Bolinger’s [1967:1] “attributive modification”), locative, existential, and possessive clauses. Payne’s (1997) typology of predicate nominals includes the following construction types: juxtaposition and copular clauses, the copula potentially being a verb, a pronoun, a particle, or a derivational operation. In this section, I take Payne’s (1997) suggestion and treat all of these clause types together and compare them. The subsections herein are organized in terms of the morpho-syntactically distinct stative predicate construction types in Matses. Only in a few cases do these construction types match one-to-one Payne’s semantic classification. Payne’s terms are nevertheless useful for talking about the semantics of these clauses, and for comparison with other languages, but not for classifying Matses stative predicate clause types. Subsection 11.7.6 then compares the different construction types used to express these semantically-defined categories, categorizing them in terms of formal properties and comparing them to the patterns found in English and Spanish.

First, some generalities that apply to all these constructions. All stative predicates in Matses are constructed using copular verbs. These copular verbs have all the morpho-syntactic properties of any (intransitive) verb in Matses, with the exception that the absolutive participant may be hard to distinguish from the predicated participant in clauses where two nouns are being equated. Simple juxtaposition of two noun phrases (or of a noun phrase and another phrase type) is impossible in Matses without the copular verb. There are no copular pronouns or particles in Matses. Although nouns, adjectives, and some adverbs can be verbalized by simply attaching verbal morphology (§5.10), this derivational process accomplishes only inchoative constructions, not equative ones, as in the following utterances that a Matses might say in jest to a man who is caught cooking:

(289a) mibi chido-ac
2Abs woman-Infer
'You have become a woman.'

(289b) mibi chido-e-c
2Abs woman-Npast-Indic
'You are becoming a woman.'
*'You are a woman.'

Thus, for Matses we can refer to all the clause types described in this section collectively as "**copular clauses.**"

The purest copular verb is ne, in that it carries no non-equative semantics and is found only in copular constructions. However, a possible source of confusion is the homophonous (and polysemous?) forms of ne. There is a transitive verb ne, which means 'toss' or 'throw out' or 'get rid of,' but because of the ergative-marked participant (and other signs of transitivity) and the totally different meaning, this is not very confusing. But the intransitive "pro-verb," ne 'do,' can cause confusion. It contrasts with the transitive pro-verb na 'do' (290).

(290a) baded-quo ne-Ø
quickly-Aug **do**:Intr-Imper
'Do it quickly (e.g., bathe).'

(290b) baded-quo na-Ø
quickly-Aug **do**:Tr-Imper
'Do it quickly (e.g., chop wood).'

In sentences like (290a), there is not a possible copular reading, but other clauses can appear ambiguous. For example, (292) could be an answer to either (291a) or (291b). But it could not be the answer to (293a) because it involves a transitive verb; (293a) could be answered with (293b).

- | | |
|---|--|
| (291a) <u>tsuda ne-e-c</u>
who be-Npast-Indic
'Who is it?' | (291b) <u>tsuda onque-e-c</u>
who talk-Npast-Indic
'Who is talking.' |
| (292) <u>debi ne-e-c</u>
Davy do:Intr/be-Npast-Indic | 'It's Davy.'
'Davy is doing it.' |
| (293a) <u>tsundan tonca-e-c</u>
who:Erg shoot gun-Npast-Indic
'Who is shooting?'
(asked upon hearing a firearm report) | (293b) <u>debi-n na-e-c</u>
Davy-Erg do:Tr-Npast-Indic
'Davy is doing it.' |

In fact, I'm not sure the two possible readings of (292) represent answers with relevantly different meanings. The issue is whether (292) is in fact ambiguous or whether it represents only one clause type: a direct identification equative copular clause or a simple intransitive clause. This issue is relevant for the description of the syntactic properties of equative clauses, and I will return to this topic in section 11.7.1.

The other main copular verb, ic, in addition to its function as a copular verb, can be translated as 'exist' in locative and existential copular clauses, and as 'live' in some locative copular clauses. But in other clause types (e.g. predicate nominals and predicate adjective clauses), it does not seem to ever carry any additional non-copular meaning. Posture verbs like tsad 'sit' and tabad 'stand/sit: Plural,' only occur with strictly copular meanings in a few specific situations, and will be considered separately in subsection 11.7.7. The verb ic is also used as a (semantically empty) auxiliary verb in a negative

construction type (§12.3.2). Table 11.9 summarizes the meanings associated with the copular verbs and the clause types that they occur in; then each individual clause type is considered in a separate subsection (§§11.7.1-11.7.7).

Table 11.9. Copular verbs in Matses.

Copula	Gloss	Copular clause type used in
<u>ne</u>	‘be, do’	predicate nominal
<u>ic</u>	‘be, exist, live’	predicate nominal, adjective, adverbial, locative, existential
<u>nibəd</u>	‘not be, not exist’	predicate locative, existential
<u>tsad</u>	‘be, sit’	predicate adjective, adverbial, locative
<u>tabad</u>	‘be (Pl), sit/stand (Pl)’	predicate locative
<u>saməd</u>	‘be (Sg), lay (Sg)’	predicate locative
<u>ue</u>	‘be, lay (Sg)’	predicate locative
<u>nid</u>	‘be (inanimate), stand, go’	predicate locative

11.7.1 Predicate nominal clauses

Predicate nominal clauses in Matses are those where two noun phrases are associated by means of a copular verb. Payne (1997:114) recognizes two logical ways that two noun phrases can be associated in a stative predicate clause: **equative clauses**, where “a particular entity (the subject of the clause) is identical to the entity specified in the predicate nominal,” as in (294); and **proper inclusion**, where “a specific entity is asserted to be among the class of items specified in the nominal predicate,” as in (295).

- (294) ubi dēsi ne-e-c que-onda-sh
 1Abs woman’s.name be-Npast-Indic say-Dist.Past-3
 ‘‘I am Dēsi,’’ she told me.’

+ K-XXII 006 chema 054

- (295) tambisēmpi [maca tanun] ne-e-c
 small.rodent rat gray be-Npast-Indic
 ‘The water rat [lit. ‘gray rat’] is a (kind of) small rodent.’

A-IV 015 maca tanun 03

In addition to these identification and classification functions, predicate nominals in Matses also function to code attribution:

(296) pada [cun nidaid] ic-e-c
 flatness 1Gen land be-Npast-Indic
 ‘My country is flat (lit. ‘My country is flatness’; i.e. not hilly/mountainous).’

(297) bëchun cuididi-mbo ne-e-c
 capuchin.monkey naughty.one-Aug be-Npast-Indic
 ‘Capuchins are very naughty (lit. ‘Capuchins are true naughty ones).’

A-IV 001 bëchun 05

Examples (296) and (297) can be identified semantically as **attribute-predicating** clauses, clauses where a property concept (contained in the predicate) is attributed to a noun phrase (the subject of the clause). It is clear that the examples in (296) and (297) are not proper inclusion clauses because they do not specify class membership. One could, of course, claim that there exist classes of “flat things” and “naughty ones,” but then so would there be a class of “red things” and “large things,” and so such an analysis would function simply to expand the definition of proper inclusion to include attribution. In Matses, attribute-predicating copular clauses include predicate nominal, predicate adjective (next section), and predicate adverbial (§11.7.3) clauses. This is not surprising, considering that in addition to an open class of adjectives, dimension notions in Matses are coded by adverbs, and many (mostly time-stable) notions that are adjectives in English are nouns in Matses.

Another semantic subtype of predicate nominals is **possessive** clauses, where possession is expressed by associating a possessive noun phrase (the predicate noun phrase) with the subject noun phrase, as in (298 & 299).

- (298) aid [matses-n shocosh] ne-e-c 'Those are Matses's pots.'
 that.one Matses-Gen metal.pot be-Npast-Indic [In reference to pottery]
 A-IX 013 tēchu 18
- (299) [aid chompian] cun-a ne-e-c 'That gun is mine.'
 that.one gun 1Gen-3 be-Npast-Indic

This is one of several strategies for expressing possession in Matses (see also §11.7.5).

Both copular verbs, ne and ic, can occur in predicate nominal copular clauses, in all four semantic subtypes. These two copulas function identically morpho-syntactically in predicate nominal clauses, but differ semantically in that ne refers to more permanent or comprehensive relationships between the two entities represented by the noun phrases (300a), and ic refers to more transient or partial connections between the two entities (300b).

- (300a) chucquid ne-e-bi (300b) chucquid ic-e-bi
 chief be-Npast-1S chief be-Npast-1S
 'I am (the/a) chief.' 'I am the/an acting chief.'

Thus, there are two construction types for each of these four semantically-defined clause types. The details of the semantic differences between ic and ne predicate nominal clauses will be explained below, after I first describe the formal properties of these clauses.

Predicate nominal clauses are characterized by having a noun phrase as a subject, a noun phrase as part of the predicate, and either ne or ic as the copular verb:

(NP) NP ne (constituent order not fixed)
 (NP) NP ic " " " "

The two clause types behave formally identically to one another. The copulas have all the morphological possibilities of (intransitive) verbs in Matses (semantics permitting);

e.g., they take derivational and inflectional suffixes (294-303), first-person pronominal enclitics (300-302), and the conjunction *-que* ‘so’ (303).

- (301) bacuë bacuë-mbo ic-onda-bi ‘A child...I was really a child (way back then).’
child child-Aug **be-Dist.Past-1S**

K-XXI 010 dëmushbo 40

- (302) ubi ac-enda cun chuca uaqui ne-e-bi
1 Abs kill-Neg.Imper 1 Gen younger.namesake man’s.name **be-e-1S**
“‘Don’t kill me, younger namesake! I am Uaqui.’”

+ K-XXII 004 chema 034

- (303) min matses-bi ne-e-c-que chui-enda que-o-sh
2 Gen person-Emph **be-Npast-Indic-so** tell-Neg.Imper say-Past-3
que-onda-sh
say-Dist.Past-3

““(They) are your own people, so don’t tell them,’ they told me,” she told me.”

+ K-XXII 013 chema 122

There are some syntactic properties that distinguish copular verbs from other verbs in Matses. Word order in predicate nominal clauses is less free than in transitive clauses, which also contain two noun phrases (304). (A transitive verb and its two arguments can occur in all 6 logical orders without a change in meaning; §11.12.) Basically, the verb cannot occur clause-initially, and the position of the predicate noun phrase is preferred preceding (but not necessarily *directly* preceding) the copular verb. The subject, like absolutive arguments of other intransitive verbs, is freer to move about.

- (304a) debi chotac ne-e-c
Davy foreigner be-Npast-Indic
‘Davy is a foreigner.’

- (304b) chotac debi ne-e-c
foreigner Davy be-Npast-Indic
‘Davy is a foreigner.’

- (304c) chotac ne-e-c debi
foreigner be-Npast-Indic Davy
‘Davy is a foreigner.’

- (304d) ?debi ne-e-c chotac
(304e) *ne-e-c debi chotac
(304f) *ne-e-c chotac debi

The predicate noun and the copular verb therefore do not have constituency status: there is no adjacency requirement, and linear ordering is only a preference.

Unlike most other verbs in Matses, neither the verb ne nor the verb ic can occur as the only word in a clause (the exception being that ic can occur alone in existential clauses). But predicate nominal copular clauses with only one overtly-stated noun phrase are common enough (303). In proper inclusion and attribute-predicating clauses, it is only the subject noun phrase that may be a pronoun and, if third-person, not stated overtly. Once a clause is recognized as a proper inclusion or attribute-predicating nominal clause, it is fairly clear that there is a zero third-person absolutive argument representing the missing noun phrase (305). But with one type of direct identification (equative) clause, it is not so clear if there is a third-person participant or not (306), and it would not be obvious whether it is the subject or the predicate noun phrase that is missing. In proper inclusion and attribute-predicating clauses, however, it is easy to see that the predicate cannot be zero-pronominalized, as deletion of the predicate noun phrase changes the clause from a proper inclusion clause to an identification clause (307).

(305a) Ø chotac ne-e-c
 3 foreigner be-Npast-Indic
 'He is a foreigner.'
 * 'I/you/we are/am a foreigner.'

(305b) Ø pada ic-e-c
 3 flat be-Npast-Indic
 'It is flat.'
 * 'I/you/we are/am flat.'

(306a) chotac ne-e-c
 foreigner be-Npast-Indic
 'It's the foreigner [e.g., who just arrived].'

(306b) debi ne-e-c
 Davy be-Npast-Indic
 'It's Davy [e.g., who is talking].'

(307a) ubi chotac ne-e-c
 1Abs foreigner be-Npast-Indic
 'I am a foreigner.'

(307b) ubi ne-e-c
 1Abs be-Npast-Indic
 'It's me.'
 * 'I am it/that (i.e., a foreigner).'

So what are we to make of sentences like those in (306)? One possible analysis is that there is a zero third-person subject identifiable as ‘the one who just arrived’ in (306a) and ‘the one who is talking’ in (306b). Another possibility is, that the verb ne is actually the polysemous/homophonous pro-verb meaning ‘do’ described above in section 11.7. Still another possibility is that this is a different construction altogether in which only one noun phrase is used with the copula. I’m not sure at this point how to test which of these analyses is correct, so at least provisionally, I chose the first analysis (a third-person zero pronoun in a direct identification predicate nominal copular clause).

With inflections that exhibit subject person agreement, it is easy to determine which of the noun phrases is the subject when one of the noun phrases is first or second person (308). The noun phrase that is not the subject can never occur as a pronoun.

(308a) <u>chucquid ubi ne-onda-c</u> chief 1Abs be-Dist.Past-Indic:1/2 ‘I was chief.’	(308b) <u>mibi chucquid ic-onda-c</u> 2Abs chief be-Dist.Past-Indic:1/2 ‘You were acting chief.’
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Thus, with direct identification clauses being the only potential exception, it is possible to distinguish the two noun phrases in predicate nominal constructions in Matses. There is a subject that has the same syntactic pattern as absolutive arguments of other intransitive verbs in the language (free word order, pronominalization, and control of subject person agreement), and another noun phrase, which I will call the predicate noun phrase, that together with the copular verb makes up the predicate of the clause. Of the stative predicate clauses, predicate nominal constructions can be the trickiest to classify with the other verbs in the language because they contain two non-peripheral noun phrases in the clause, while with the other stative predicate types (e.g., predicate adjective clauses), this issue does not come up. Thus, since it is possible to identify the single absolutive argument in predicate nominal clauses, I can justify calling all copular

constructions/stative predicates intransitive clauses, and categorizing ne and ic as intransitive verbs (but noting that they are exceptional in multiple ways).

Negative predicate nominal clauses are constructed by attaching the enclitic/particle -penquio/penquio after the predicate noun phrase and before the copula (309).

- (309) cun matses penquio ne-e-c is-acmaid matses utsi
 1Gen person Neg be-Npast-Indic see-Neg.Perf.Nzr Indian other
ne-e-c ca-onda-mbi que-onda-sh
 be-Npast-Indic say-Dist.Past-1A say-Dist.Past-3
 ““They are not my (tribe’s) people, they are other people whom I have never before seen,’ I told them,” she told me.’

+ K-XXII 013 chema 123

As with predicate adjectives (next section), the predicate in negative predicate nominal clauses must always precede the copula, though not necessarily directly (as described above, this is only a *preference* for non-negative predicate nominal clauses); if this order is not adhered to, the meaning of the phrase changes (310).

- (310a) debi chotac-penquio ne-e-c ‘Davy is not a foreigner.’
 Davy foreigner-Neg be-Npast-Indic
- (310b) debi ne-e-c chotac-penquio ‘It’s Davy, not a foreigner.’

In non-copular clauses, the predicate is usually negated by a negative verbal suffix (-en-quio, -a-mbo or -a-bi; §12.3.2), but ne can never take these suffixes, and ic cannot take them in predicate nominal constructions (but *can* in other copular clause types, see following sections). Instead, the strategy used for predicate nominals is to negate the predicate noun phrase. The other negation strategy used in copular constructions, using the negative copular verb nibēd ‘not be’ (used in predicate locative and existential clause, §§11.7.3.2, 11.7.4) cannot be used in predicate nominal copular clauses.

Now I will try to explain the sometimes complex semantic differences between predicate nominals using the copular verb ne and those using ic. Basically, the central meaning of ne could be characterized as conveying “complete” or “whole” association between the noun phrases, and that of ic as conveying a more “incomplete” or “partial” association. In the spatial domain, this distinction is easy to see, as in (311) (some speakers rejected 311a). And it is evident why (312b) is rejected: fawns are spotted only on their torso, and the spots disappear as they get older. One speaker suggested that if fawns were completely and permanently spotted, (312b) might be a bit more acceptable, but still would sound strange because “spottedness” is a superficial property. The fact that bēdi is a noun that refers to a partial and superficial property, allows it to modify a noun phrase as a possessed noun in an existential clause (312c).

(311a) ?pada cun nidaid ne-e-c (311b) pada cun nidaid ic-e-c
 flatness 1Gen land **be-Npast-Indic** flatness 1Gen land **be-Npast-Indic**
 ‘My country is (all/mostly) flat.’ ‘My country is flat (in parts, at least).’

(312a) senad-n bacuë bēdi ic-e-c ‘Fawns are spotted.’
 deer-Gen offspring spotted.pattern **be-Npast-Indic**

(312b) *senad-n bacuë bēdi ne-e-c

(312c) senad-n bacuë-n bēdi ic-e-c
 deer-Gen offspring-Gen spotted.patten **be-Npast-Indic**
 ‘Fawns are spotted (lit. Fawns’ spots/spottedness exist).’

It should be emphasized that clauses like (311a) and (311b) really are attribute-predicating nominal clauses. Looking at (311b), one might hope to analyze the clause as a predicate locative, meaning ‘There is flatness in my country.’ One problem with this analysis is that the noun phrase cun nidaid is neither followed by a locative postposition, nor is the noun phrase polysemously a locative adverb. The other problem is that the term pada does not refer to an entity, but to a property, so that even if we put a locative

postposition on cun nidaid, as in (313), the speaker would have to ask, “There is flat *what* in your country?”

(313) pada cun nidaid-n ic-e-c ‘There is flatness in my country.’
flatness 1Gen land-Loc be-Npast-Indic

In the temporal domain, these central meanings are realized as permanent/enduring vs. temporary/fleeting, as can be seen in the example in (300), repeated below as (314) with Spanish translations, which help illustrate the difference.

(314a) chuicquid ne-e-bi
chief be-Npast-1S
‘I am the/a chief.’
‘(Yo) soy (el) jefe.’

(314b) chuicquid ic-e-bi
chief be-Npast-1S
‘I am the/an acting chief.’
‘Estoy de jefe.’

In reference to the past tense, completeness is gauged in terms of overlap during the relevant time frame. So (315a) would refer to how Davy acted at a party (the whole time he was at the party), especially when uttered by someone who only knew Davy from that party. The clause in (315b) could be uttered by Davy’s mother, telling how he used to be when he was younger, but no longer is.

(315a) debi cuididi ne-onda-sh (315b) debi cuididi ic-onda-sh
Davy naughty.one be-Dist.Past-3 Davy naughty.one be-Dist.Past-3
‘Davy was naughty.’ ‘Davy used to be naughty.’

With possessive clauses, the semantic difference between the two clause types is that with ic there is usually an implication that at some point in time the subject does not possess the object, while with ne there is no such implication. In the nonpast tense, possessive copular clauses with ic will generally be read as future (i.e., with the possessive relation not holding at present) or with a perfective aspect (i.e., the possessive

relation did not hold sometime in the past), while with ne, a neutral present reading is expected (316).

- | | |
|--|--|
| (316a) <u>aid</u> <u>cun-a</u> <u>ne-e-c</u>
that.one 1Gen-3 be-Npast-Indic
'That one is mine.' | (316b) <u>aid</u> <u>cun-a</u> <u>ic-e-c</u>
that.one 1Gen-3 be-Npast-Indic
'That one will be mine.'
'That one is mine now.' |
|--|--|

One might expect that identification, especially in terms of names, would involve a very permanent association that would always require ne, as in (317). In light of this, it is surprising to find sentences like (318), where the name identification clause uses ic as the copular verb. But this is a bit less surprising when we find is that ic is used for name identification only when the person referred to is dead, as was the case in (318).

- (317) cun champi tupa ne-e-c que-onda-sh
1Gen daughter woman's.name be-Npast-Indic say-Dist.Past-3
'“My daughter is Tupa,” she said.'

+ K-XXII 006 chema 056

- (318) cun tita edisa ic-onda-sh cun tita
1Gen mother Elisa be-Dist.Past-3 1Gen mother
'My mother was Elisa...my mother.'

K-XXI 007 dëmushbo 04

We can say that Matses treats proper inclusion and equative phrases identically, although equative phrase are less likely to occur with the copular verb ic than are proper inclusion phrases (as will be expanded below). Also, my impression is that attribute-predicating proper inclusion noun phrases occur with ic more often than do proper inclusion noun phrases. What is certain, and which the reader can confirm by looking at the text examples in this section, is that predicate nominal clauses (attribute-predicating ones included) overall occur much more frequently with ne than with ic. Attribute-

predicating predicate adjective clauses, by contrast occur only with *ic*, as will be pointed out in the next section.

As a final note on predicate nominal clauses, it should be mentioned that a common form of predication is to equate an entity to a nominalized phrase (§12.2.2), as in (319a). Formally, sentences like (319a) are predicate nominals, but their function is not equation/identification, proper inclusion/assignment of class membership, or attribution. Rather, their function is predication. The difference between (319a) and its active clause counterpart (319b) is that (319a) conveys a more permanent trait or characteristic habit of the nine-banded armadillo, while (319b) could also be a casual statement, relating a rare or non-characteristic action of the nine-banded armadillo. There may also be discourse motivations for using one phrase over the other.

(319a) adembidi nuen pe-quid sedudi ne-e-c
 likewise:Tr worm eat-Agt.Nzr nine.banded.armadillo be-Npast-Indic
 ‘Also, the nine-banded armadillo eats worms.’ (lit. ‘is a worm eater.’)
 A-I 048 sedudi 08

(319b) adembidi sedudi-n nuen pe-e-c
 likewise:Tr nine.banded.armadillo-Erg worm eat-Npast-Indic
 ‘Also, the nine-banded armadillo eats worms.’

The issue here is that the type of clause in (319a) should be recognized as a further semantic subtype of predicate nominal clauses, even if its function is different from that of typical predicate nominal copular clauses. More on this topic in section 12.2.2.

11.7.2 *Predicate adjective clauses*

Predicate adjective clauses are “clauses in which the main semantic content is expressed by an adjective” (Payne 1997:111). Matses, having an open class of adjectives, exploits this construction type. Semantically, predicate adjective copular clauses can be characterized as attribute-predicating clauses where a property concept is

predicated to apply to an entity (the subject noun phrase), modifying it with respect to some quality like color, value, size, etc. In Matses, property concepts are contained not only in adjectives, but also in nouns and adverbs, and thus predicate adjective clauses are only one of several types of attribute-predicating clauses. There are actually four clause types that can be identified as attribute-predicating clause: the two types of predicate nominal copular clauses described in the preceding section (320 & 321), predicate adverbial clauses (322; next section), and predicate adjective clauses (323).

- (NP) NP ne (320) bëchun cuididi-mbo ne-e-c
 capuchin.monkey naughty.one-Aug be-Npast-Indic
 ‘Capuchins are very naughty.’
 A-IV 001 bëchun 05
- (NP) NP ic (321) tambis bëdi ic-e-c ‘Pacas (rodent) are spotted.’
 paca spotted.pattern be-Npast-Indic
- (NP) Advl ic (322) dada pictsëc ic-tsëc-e-c ‘The trunk is small.’
 trunk small be-Dim-Npast-Indic
 A-I 018 toncate 05
- (NP) Adj ic (323) senta piu-mbo ic-e-c ‘Uakari monkeys are red.’
 uakari.monkey red-Aug be-Npast-Indic
 A-I 057 senta 03

It should be pointed out, however, that predicate adjective and predicate adverbial clauses are the preferred forms for predicating temporary or partial attribution in Matses. Thus, attribute-predicating predicate nominal clauses with ic do occur, but it is actually much more common for the noun to be adjectivalized through reduplication, as in (324) and (325).

- (324) aton bacuë senad-n bacuë bëdi bëdi-patsëc ic-quad
 3Gen offspringdeer-Gen offspring (redup=Adjzr) spotted.pattern-Dim be-Hab
 ‘It’s young, the deer’s young, are spotted.’
 A-I 046 senad 04

- (325) daun daun-quio tambis ic-quist 'The paca is striped.'
 (redup=Adjzr) stripe-Aug paca be-Hab

A-IV 010 tambis 03

Formally, predicate adjective clauses differ from predicate nominals in the following ways. First, rather than containing two noun phrases, predicate adjectives contain one noun phrase (the subject) and one adjective phrase (part of the predicate). Second, predicate adjective clauses occur only with the copula ic, never with ne (326).

- (326a) tanete ise-mbo ic-e-c 'The electric eel is smooth/slick.'
 electric.eel smooth-Aug be-Npast-Indic

- (326b) *tanete ise-mbo ne-e-c

A third difference is that constituent order is slightly more restricted in predicate adjectives. Predicate adjective constituent order can be summarized as follows: subjects are free to move around (327a-c); the copula cannot occur sentence initially (317e-f); and the copular verb must occur following the adjective phrase, though not necessarily directly (327d). Constituent order in predicate nominal clauses differs slightly in that this last property—that the copula must follow the rest of the predicate—is only a *preference* for predicate nominal copula clauses.

- (327a) capa piu-mbo ic-quist
 squirrel red-Aug be-Hab
 'Squirrels are red.'

A-IV 008 capa 03

- (327b) piu-mbo ic-quist capa
 red-Aug be-Hab squirrel
 'Squirrels are red.'

A-IV 008 capa 04

- (327c) piu-mbo capa ic-quist
 red-Aug squirrel be-Hab
 'Squirrels are red.'

- (327d) *capa ic-quist piu-mbo
 (327e) *ic-quist piu-mbo capa
 (327f) *ic-quist capa piu-mbo

A fourth difference is that the augmentative enclitic -mbo/-quio is semantically bleached, and it or another adjective-modifying enclitic obligatorily follows the adjective

in predicate adjective clauses (328), while it is optional and carries a clear augmentative meaning in predicate nominal clauses (329).

(328a) mauédante bacuë piu-mbo ic-quiv 'Mauédante palm fruits are red.'
 palm.genus fruit red-Aug be-Hab *'very red'

A-I 030 mauédante 02

(328b) *mauédante bacuë piu ic-quiv

(329a) béchun cuididi-mbo ne-e-c 'Capuchins are very naughty.'
 capuchin.monkey naughty.one-Aug be-Npast-Indic

A-IV 001 béchun 05

(329b) béchun cuididi ne-e-c 'Capuchins are naughty.'
 capuchin.monkey naughty.one be-Npast-Indic

This requirement is relaxed in negative predicate adjective clauses (330d), but note that although the negative enclitic -penquio is not synchronically segmentable (there is no productive form pen), it obviously contains the form -quio, and so in a sense, the adjective phrase in (330d) nevertheless ends in -mbo/-quio.

(330a) unun-quio ic-e-c
 wary-Aug be-Npast-Indic
 'It is wary.'

(330b) *unun ic-e-c

(330c) unun-quio-penquio ic-e-c
 wary-Aug-Neg be-Npast-Indic
 'It is not wary.'

(330d) unun-penquio ic-e-c
 wary-Neg be-Npast-Indic
 'It is not wary.'

The fifth difference between predicate adjective clauses and predicate nominal clauses is in the possible negation strategies. Predicate adjectives have two strategies, predicate nominals one. One predicate adjective negation strategy, illustrated above in (330c) and (330d), is identical to that used in predicate nominal clauses: the negative enclitic is inserted directly following the predicate noun/adjective phrase and is then linked to the subject noun phrase by a copula. The other strategy is to suffix one of the

negative non-finite verbal suffixes (-en or -a; §12.3.2) to the verb ic and attach any verbal morphology to the auxiliary verb, which is also ic (331).

- (331) piu ic-en-quo ic-o-sh ‘It didn’t become red.’
 red be-Neg-Aug Aux-Past-3 [better for when contradicting someone else]

This second type of negative construction is actually rare, and seems always to carry an inchoative reading. The other copular verb, ne, cannot take these negative suffixes at all, and ic cannot take them when it occurs as the copular verb in predicate nominal constructions.

At this point, I would like to point out that adjectives also occur in attribute-predicating clauses with the copula-like verb, and tsad ‘sit’ (322), but this is a complex issue, and I will reserve this discussion for section 11.7.7, where I will deal with copula-like verbs more thoroughly.

- (322) tapun chëshë-mbo-shë tsad-e-c ‘The roots are dark black.’
 palm.root black-Aug-Aug sit-Npast-Indic lit. ‘The roots sit very black.’
A-I 031 niste 08

It is interesting to compare Matses predicate nominal and predicate adjective clauses to their Spanish counterparts. We note that while Matses uses only one copula for predicate adjective clauses (ic), it uses two for predicate nominal clauses (ic and ne). By contrast, Spanish uses only one copula for predicate nominal clauses (*ser*) and two for predicate adjective clauses (*ser* and *estar*). Thus, Spanish can distinguish two meanings in attribute-predicating adjective clauses by just changing the copular verb, as in *Su cara está roja* ‘His face is (temporarily) red’ and *Su cara es roja* ‘His face is (characteristically) red.’ In Matses, this semantic distinction is possible in simple predicate nominal clauses, but not in simple predicate adjective clauses. To express a

difference parallel to that accomplished by switching between Spanish *ser* and *estar*, Matses can express a more permanent/enduring/intrinsic relationship by nominalizing the predicate adjective clause and equating it to the subject with the copula *ne*, thereby creating a predicate nominal clause with an embedded nominalized predicate adjective clause, as in (333a; nominalized clause in bold; note that the copula *ic* is usually contracted in these nominalized clauses).

(333a) uëdënquiocquid nebi ‘I am strong.’
 uëdën-quo ic-quid ne-e-bi lit. ‘I am one who is strong.’
 strong-Aug be-Agt.Nzr be-Npast-Indic

(333b) uëdën-quo ic-e-bi ‘I am strong (now).’/ ‘I feel strong.’
 strong-Aug be-Npast-Indic

Thus, the contrast between permanent and temporary attribution is achieved by using a complex (multi-clause) stative predicate clause to express more permanent attribution, as in (333a), and a simple predicate adjective clause to express more temporary attribution, as in (333b).

Another distinction that is effected using nominalized predicate adjective clauses occurs in noun-modification in noun phrases. When nouns are modified by a simple adjective in a noun phrase, the noun phrase must refer to a lexicalized term, be an attempt to coin a new term, or, semantics permitting, express a completely permanent attribution, as in (334a; §10.3.3). To create a noun phrase designating *ad hoc*, temporary attribution, a nominalized predicate adjective clause is used modifying the noun in a relative-clause-like fashion, as in (334b).

(334a) shupud iuë dedo-o-mbi
 bag heavy carry.on.back-Past-1A
 ‘I carried the heavy bag.’ (i.e., made of heavy material)

- (334b) shupud iuëmbocquid dedombi
shupud iuë-mbo ic-quid dedo-o-mbi
 bag heavy-Aug be-Agt-Nzr carry.on.back-Past-1A
 'I carried the heavy bag.' (i.e., filled with heavy contents)

Interestingly, the more transient attribution is coded by the construction containing the nominalized relative clause, the opposite from the pattern in (333). Thus, the “permanentness” in constructions like (333a) can be attributed to the copular verb ne, and not necessarily a meaning associated with nominalization or the suffix -quid.

It is a general observation that, unlike predicate nominal clauses, and especially unlike predicate nominal clauses with ne, predicate adjective clauses occur very often as non-finite clauses in many types of complex constructions. Sentences like (333a) and (334b) are just two examples. By attaching non-finite verbal morphology to ic, attribute-predicating clauses are often recruited to serve adverbial functions as clause-chaining subordinate clauses (335), etc. Another subordinate clause type is composed of an adjective followed by ic, which is action-nominalized and cliticized with a locative postposition, as in (336).

- (335) tanun-quo ic-nuc capu-en-quo senad ic-e-c
 dry-Aug be-while:Diff.Ref locomote-Neg-Aug deer Aux-Npast-Indic
 'Deer do not walk around when it is sunny.'

A-I 046 senad 26

- (336) bëda-pambo ic-ac-no poshto nadeque-quid
 good-Aug be-Act.Nzr-Loc woolly.monkey bound.through.tree-Hab
 'Woolly monkeys jump around where it [the land] is good.'

1-p56-B poshto 02

These construction types will be discussed in detail in sections 12.2.5 and 12.4.2.4.

11.7.3 Predicate adverbial clauses

There are two subtypes of predicate adverbial copular clauses in Matses: **attribute-predicating** adverbial clauses and predicate **locative** clauses. These two clause types have in common that in both, a noun phrase (the subject) is associated with an adverbial (i.e., an adverb, an adverb phrase or a postpositional phrase) by means of the copular verb *ic* (never *ne*), which together with the adverbial constituent forms the predicate. Adverbial clauses are also classed as adverbials, but do not occur as predicates in copular clauses. The clause type can be summarized as:

(NP) Advl *ic* (constituent order not fixed)

The main difference between the locative and the attribute-predicating adverbial clauses is the type of adverbials that they occur with. Attribute-predicating adverbial clauses occur with noun-modifying adverbs/adverb phrases (dimension adverbs, quantitative adverbs, and the adverb *utsi* ‘other’) and with noun-modifying postpositional phrases (headed by dimension or quantitative postpositions). Locative clauses occur with locative adverbs, locative adverb phrases, and locative postpositional phrases. Locative adverbs and locative postpositional phrases actually share many morpho-syntactic properties that locative adverbs and noun-modifying adverbs do not. Similarly, noun-modifying adverbs and noun-modifying postpositions share many grammatical properties that locative postpositional phrase and noun-modifying postpositional phrases do not. Accordingly, I choose to treat all adverbial clauses together, rather than describe those that involve postpositional phrases in a separate section. Rather, I will describe attribute and locative adverbial copular clauses separately in subsections of the present section.

11.7.3.1 Attribute-predicating adverbial clauses

It is not surprising that some attribute predicating copular clauses would involve adverbs, considering that dimension notions (e.g., ‘large,’ ‘short’) are expressed by adverb roots (337; adverb in **bold**), rather than as adjectives, as would be expected in a language with an open morphosyntactically-defined class of adjectives (Dixon 1982). Additionally, the copular clause type, NP Adverbial ic, is used with quantitative adverbs (338) and the other noun-modifying adverb, utsi ‘other’ (339). Other adverbs do not refer to notions that modify nouns, and, accordingly, do not occur in attribute-predicating copular phrases.

- (337) ania-tsēc dada ic-quid-bi-c ubuëshë-dapa **nua-mbo** ic-tsēc-quid
 small-Dim body be-Hab-Emph-Separ testicles-large large-Aug be-Dim-Hab
cacsi
 pygmy.squirrel
 ‘While their bodies are small, the little pygmy squirrels’ testicles are very large.’
 A-IV 007 cacsi 15

- (338) utsi-bo **daëdpatsēc** ic-quid
 other-Pl few be-Hab
 ‘Other herds [of white-lipped peccaries] are few in number.’
 A-I 044 shëctenamë 10

- (339) cuesban utsi utsi-ec ic-e-c
 bat (redup=Distr) other-Manr:Intr be-Npast-Indic
 ‘Bats are of different kinds.’
 A-I 051 cuesban 16

Attribute-predicating adverbial copular clauses are quite similar formally to predicate adjective clauses: they both occur with the copula ic, have the same word-order restrictions (copulas can’t be first in the sentence; adverbials must precede copulas), and have similar negation strategies. Negative attribute-predicating adverbial clauses are accomplished by inserting the negative enclitic -penquio after the adverbial, and before

the copula (340 & 341), or, less frequently, by attaching a negative suffix to the copular verb (342a).

- (340) nua-mbo-shë-penquio mencudu ic-e-c
 large-Aug-Aug-Neg naked.tailed.armadillo be-Npast-Indic
 ‘Naked-tailed armadillos are not real big.’

1-p50-B mencudu 01

- (341) shuinte-n mapi-bi-mbo-ec ic-quid-bi-c
 two.toed.sloth-Gen head-like-Aug-Manr:Intr be-Agt.Nzr-Emph-Separ
mëntsis daëd-penquio mëincanchush ic-e-c
 front.claws two-Neg three.toed.sloth be-Npast-Indic
 ‘It has a head like a two-toed sloth, but the three-toed sloth does not have only two front claws [on each hand].’

A-IV 023 mëincanchush 05

- (342a) nua ic-en-quio ic-e-c
 large be-Neg-Aug be-Npast-Indic
 ‘It isn’t big/won’t be big.’

- (342b) nua-penquio ic-e-c
 large Neg be-Npast-Indic
 ‘It isn’t big/won’t be big.’

Note that with predicate adjectives, negative constructions involving negative suffixes always seem to have an inchoative reading, but this is not so with predicate adverbial constructions—in fact, I’m not sure yet what the semantic difference is between clauses like (342a) and (342b).

Another difference between predicate adjective clauses and attribute-predicating adverbial clauses is that while predicate adjective constructions (at least non-negative ones) require the adjective to be cliticized with -mbo/-quio (or another adjective-modifying enclitic, e.g., -pambo ‘Augmentative’ etc., §6.6.2), there is no such requirement in predicate adverbial clauses (343, cf. 344).

- (343) mapiocosëmpi-n incuenta ënapen ic-quid ne-e-c
 mouse.opossum-Gen tail long be-Agt.Nzr be-Npast-Indic
 ‘Mouse opossums’s tails are long (lit. ones that are long).’

A-IV 021 mapiocosëmpi 03

- (344a) piush-n titado bacuë piu-mbo ic-quid ne-e-c
 tortoise-Gen peach.palm fruit red-Aug be-Agt.Nzr be-Npast-Indic
 ‘Piushën titado palm fruits are red (lit. ones that are red).’

A-I 010 piushën titado 01

- (344b) *piush-n titado bacuë piu ic-quid ne-e-c

11.7.3.2 Predicate locative clauses

Predicate locative clauses differ semantically from attribute-predicating adverbial copular clauses in that the adverbial in the predicate provides information about the location of an entity (the subject noun phrase), rather than modifying the entity (with respect to dimension, quantity, etc.). As with attribute-predicating adverbial copular clauses, the copular verb is ic, and never ne. The locative phrase can be a locative adverb (345), a locative adverbial phrase (346), or a locative postpositional phrase (347).

- (345) në-mbo-bi ënden tied ic-pa-onda-sh në-mbo-mbo-bi
 here-Aug-Emph before swidden be-Comment-Dist.Past-3 here-Aug-Aug-Emph
 ‘A long time ago our swiddens were right here, really right here [in Peru].’

+ K-XXII 001 chema 001

- (346) adecbidi mananuc chedo ic-quid pëdi ne-e-c
 likewise:Intr upland.forest:Loc too/etc be-Agt.Nzr palm.species be-Npast-Indic
 ‘Similarly, pëdi palms are also ones that are found on upland forest and other similar habitats.’

A-I 051 cuesban 18

- (347) cuëte shëcuë-n ic-e-c cuesban adashic mechodo shëcuë-n
 dicot.tree hole-Loc be-Npast-Indic bat then termite.nest hole-Loc
 ‘Bats are in hollow dicot trees; also, in hollow termite nests.’

1-p34-B pëdimpi 02

Temporal adverbs, which can be thought of as specifying a location in the temporal domain, occur in this same construction type:

- (348) ënden shauï ic-onda-sh ‘A long time ago there were blowguns.’
 long.ago blowgun be-Dist.Past-3

But perhaps this construction type is best considered an existential clause with an optional adverb in it.

One main difference between locative copular clauses and attribute-predicating adverbial copular clauses is in negation strategies. The verb nibēd ‘not be’ can be used as the copular verb in locative clauses (and existential clauses, next section), but not in attribute-predicating adverbial copular clauses (349).

- (349) actiacho-n-quo isan nibēd-e-c
 floodplain.forest-Loc-Aug palm.species **not.be**-Npast-Indic
 ‘In true floodplain forest, there are no isan palms.’

E-XI 001 isan 02

A minor difference between locative and attribute-predicating adverbial copular clauses is that word order is a bit less restricted with locative clauses: neither clause type can have the copula first in the sentences, but in locative clauses the adverbial can precede (350) or follow (351) the copula (although preceding the copula is preferred), while in attribute-predicating adverbial clauses, the adverbial must precede the copula (though not necessarily directly) (352).

- (350) mannan dada-n-quo bēshuicquid ic-quid
 hill **hilltop-Loc-Aug** saki.monkey be-Hab
 ‘Saki monkeys are found on hill tops [in upland forest].’

A-I 055 bēshuicquid 05

- (351) nidaid ushu-mbo ic-quid acte cuidi-mpi-n
 clay white-Aug be-Hab water **branch-small-Loc**
 ‘White clay is found in small streams.’

2-p60-L tēchu 02

- (352a) dada pictsēc ic-tsēc-e-c ‘The trunk is small.’
 trunk **small** be-Dim-Npast-Indic

A-I 018 toncate 05

(352b) *dada ic-tsēc-e-c pictśc

With this in mind, it is tempting to say that these locative clauses are simply existential clauses (next section) with an optional adverb associated with it. The sentence in (353) with two adverbs in a single copular clause, encourages this analysis.

(353) tanac dadpen ic-quid mannan-n
 palm.species many be-Hab hill -Loc
 'There are high densities of tanac palms on hills.'

2-p90-L tanac 04

11.7.4 Existential clauses

Existential clauses, both positive and negative ones, are constructed in the same way as predicate locative clauses, with the difference that in existential clauses, the location need not be specified (354 & 355).

(354) dunu nibēd-o-sh nēid ted ic-o-sh que-onda-sh
 man's.name not.be-Past-3 this.one as.many.as be-Past -3 say-Dist.Past-3
 "There isn't a Dunu (among my people), these (the following) are all there are,"
 he said.' [subsequently list the names]

+ K-XXII 005 chema 046

(355) tsēsio-bo ic-e-c 'There are old men present.' [historical present]
 old.man-Pl be-Npast-Indic

+ K-XXII 001 chema 010

There does not seem to be any formal difference between a locative copular clause and an existential one with a refinement of location (356). And semantically, locative clauses like (356b) can be very similar to existential clauses.

(356a) mayan ic-e-c 'Ghosts exist.'
 spirit be-Npast-Indic 'A ghost is present.'

(356b) mayan ic-e-c nē-mbo 'Ghosts exist here.'
 spirit be-Npast-Indic here-Aug 'A ghost is present here.'

However, the function of most locative copular clauses is decidedly different from that of existential clauses. One main function of existential clauses is to claim that some entity exists, with specification of location secondary (356b). A discourse function of existential clauses, as pointed out by Payne (1997), is to introduce a participant into the discourse stage. This seems to be what sentence (355) is doing. Locative clauses have different functions. In (357), it is already understood that nine-banded armadillos exist, and they have been the topic of the text in the preceding nine sentences. Instead, the function of this sentence is to predicate the location where the subject occurs.

- (357) adecbidi mannan dada-n-quo sedudi ic-e-c
 likewise:Intr hill hilltop-Loc-Aug nine.banded.armadillo be-Npast-Indic
 ‘Likewise, the nine-banded armadillo is found on hilltops.’

A-I 048 sedudi 10

Attribute-predicating adverbial copular clauses involving quantitative adverbs could similarly be considered existential clauses (358, 359, & 353).

- (358) dadpen-quo-shē cuesban ic-e-c ‘There are many (kinds of) bats.’
 many-Aug-Aug bat be-Npast-Indic

B-VII 035 cuesban 17

- (359) u nēid dēbiate-mi niste ushu dadpen ic-onda-sh
 far this.one headwaters-Loc palm.species white many be-Dist.Past-3
 ‘Far, around the headwaters of this one [the Gálvez River], there were many niste ushu palms.’

A-I 035 niste ushu 05

It is only in existential clauses that it is possible for the copulas ic and nibéd to occur as one-word sentences (ne never occurs alone, nor does it occur in existential clauses). Usually, they only occur alone as answers to questions (360 & 361). Less

frequently, and with emphatic intonation, copulas can also occur as sole words to contradict another person, e.g., (360b) could mean 'But, there was!'

(360a) ada pambid ic-o-sh
 Uncert meat be-Past-3
 'Was there any meat?'

(360b) ic-o-sh
 be-Past-3
 'There was.'

(361a) ada debi ic-e-c
 Uncert Davy be-Npast-Indic
 'Is Davy there?'

(361b) nibēd-e-c
 not.be-Npast-Indic
 'He is not (here/home).'

In all of the other copular clause types, the copulas cannot occur alone, even as answers to questions. It seems that the noun/adjective/adverbial phrase that forms part of the predicate is a necessary part of these predicates. With existential clauses, the copular verb alone is the predicate. Existential copular clauses can be represented as follows:

(NP) ic
 (NP) nibēd

Existential clauses can also be used to express possession (see next section).

11.7.5 Possessive clauses

The only unique simple possessive clause type in Matses is also the less common one. It is accomplished with the verb cho 'have' (which also means 'come').³¹ In my texts and my experience, it occurs most often in nominalized clauses (362a & 363) but is possible in finite clauses as well (362b).

³¹ The form cho also appears to occur in the synchronically unsegmentable particle chued '(place) characterized by *having* many/much of X' (§9.3.2), as in (i). See Fleck and Harder (2000) for many more habitat terms containing chued.

(i) mio chued 'forest habitat characterized by having many mio palms.'
 palm.species Charzr

- (362a) senad [pais cho-quad] ne-e-c 'Deer are ones that have antlers.'
 deer antler have-Agt.Nzr be -Npast-Indic
 A-I 046 senad 16
- (362b) senad pais cho-e-c 'Deer have antlers.'
 deer antler have-Npast-Indic
- (363) [chompian cho-esa] ne-e-bi
 shotgun have-Neg.S/A.Nzr be-Npast-1S
 'I don't have a shotgun.' (lit. 'I am one who does not have a shotgun.')

The more common way to express possession (already mentioned above) is with an existential construction using a possessive noun phrase (264, 365 & 366).

- (364) cun chompian ic-e-c 'I have a gun.'
 1Gen shotgun be-Npast-Indic lit. 'My gun exists.'
- (365) bēnē-n pais ic-quad 'The buck has antlers.'
 male-Gen antler be-Hab lit. 'The male's antlers exist'
 A-I 046 senad 31
- (366) chido pais nibēd-quad 'The doe does not have antlers.'
 female antler not.be-Hab lit. 'The female's antlers don't exist'
 A-I 046 senad 30

Possession can also be predicated using predicate nominal clauses with a possessive noun phrase (367a-c; §11.7.1).

- (367a) cun chompian ne-e-c 'It's my gun.'
 1Gen shotgun be-Npast-Indic
- (367b) aid chompian cun-a ne-e-c 'That shotgun is mine.'
 that.one shotgun 1Gen-3.Poss be-Npast-Indic
- (367c) debi-n chompian-penquo ne-e-c 'It's not Davy's shotgun.'
 Davy-Gen shotgun-Neg be-Npast-Indic

11.7.6 Comparison of copular clause types

The different stative predicate/copular clause types described above are summarized in Table 11.10. Table 11.11 compares these different stative predicate types to those in English and Spanish. Note that Spanish and Matses both use two copular verbs (equivalent to the English *be*) to formalize some semantic distinctions, but they distribute their copulas differently.

Table 10.10. Categories of copular constructions in Matses.

Copular clause type	Positive	Negative
predicate nominal	(NP) NP <u>ne</u>	(NP) NP- <u>penquio ne</u>
predicate adjective	(NP) NP <u>ic</u>	(NP) NP- <u>penquio ic</u>
	(NP) Adj <u>ic</u>	(NP) Adj- <u>penquio ic</u> (NP) Adj <u>ic-en/-a</u>
adverbial: attribute-predicating	(NP) Advl <u>ic</u>	(NP) Advl- <u>penquio ic</u> (NP) Advl <u>ic-en/-a</u>
	locative	(NP) Advl <u>ic</u> (NP) Advl <u>nibēd</u>
existential	(NP) <u>ic</u>	(NP) <u>nibēd</u>
possessive	(NP) NP <u>cho</u>	(NP) NP <u>cho-esa</u>

Note: Bare roots of the copular verbs are shown here: copular verbs must be inflected.

Note: Word order of copular clauses is somewhat flexible.

Table 11.11. Comparison of English, Spanish, and Matses positive copular clause types.

Semantic clause type	English	Spanish	Matses
equative/prop. incl.	NP <i>be</i> NP	(NP) <i>ser</i> NP	(NP) NP <u>ne</u> (NP) NP <u>ic</u>
attribute-predicating	NP <i>be</i> AP	(NP) <i>ser</i> AP, (NP) <i>estar</i> AP	(NP) NP <u>ne</u> , (NP) Adj <u>ic</u> , (NP) NP <u>ic</u> , (NP) Advl <u>ic</u>
locative	NP <i>be</i> PP	(NP) <i>estar</i> PP	(NP) Advl <u>ic</u>
existential	<i>There be</i> NP	<i>Haber</i> NP	(NP) <u>ic</u>
possession	NP <i>have</i> NP	(NP) <i>tener</i> NP	(NP) NP <u>cho</u> , (NP) <u>ic</u>

11.7.7 Copula-like verbs

There are several posture verbs in Matses that can also function as copular verbs in locative and (in one case) attribute-predicating clauses. When I say that they can function as copulas, I mean that they lose all posture semantics, and simply serve a predicative function. The interesting property of these posture-copular verbs is that they only function as copulas in some environments, depending on the copular clause type, plurality and (in one case) animacy. One interesting example is the verb tsad, which means ‘sit’ or ‘perch’ in non-copular clauses (368).

- (368) adecbidi shuinte tsad-ac-bi-mbo-ec tsad-quid
 likewise:Intr two.toed.sloth sit-Act.Nzr-like-Aug-Manr:Intr sit-Hab
 ‘Also, [three-toed sloths] sit in the same way that two-toed sloths sit.’

A-IV 023 mëincanchush 13

In locative adverbial clauses with singular subjects, tsad can retain its posture semantics (369), or it can act as a semantically empty copula (370). In clauses with a locative adverbial and a plural subject, posture semantics are always present (371).

- (369) aid itia tayun dayumenquid tsad-quid
 that.one swamp.palm at.the.base anaconda sit-Hab
 ‘Anancondas sit at the base of those swamp palms.’

A-I 029 itia 14

- (370) ado-ac aton utsi tsiuec cho-quid uanno tsad-quid
 do.like.that-when:O>S/A 3Gen brother last come-Hab apart sit-Agt.Nzr
 ‘Then, his brother comes last, the one that is/lives in the far part of the village.’

C-III 001 shëcten 26

- (371) debi u-mbo tsad-e-c
 Davy there/far-Aug sit-Npast-Indic
 ‘Davy is sitting over there.’
 ‘Davy is (living/working) far away.’
 ‘Davy and company are sitting over there.’
 *‘Davy and company are far away.’

singular S
 singular S
 plural S
 plural S

By contrast, in clauses with an adjective or an attribute-predicating adverb, tsad can lose its posture semantics with *plural* subjects (372 & 373), but not with singular subjects (374).

- (372) tapun chëshë-mbo-shë tsad-e-c
 palm.root black-Aug-Aug sit-Npast-Indic
 ‘The roots [of the niste palm] are dark black.’

A-I 031 niste 08

- (373) nua-mbo-shë tsad-quid shëctenamë ne-e-c
 large-Aug-Aug sit-Agt.Nzr white.lipped.peccary be-Npast-Indic
 ‘White lipped peccaries are very, very large.’

A-I 044 shëctenamë 13

- (374) debi piu-mbo tsad-e-c
 Davy red-Aug sit-Npast-Indic
 ‘Davy is sitting there all red (e.g., embarrassed).’ singular S
 *‘Davy is red.’ singular S
 ‘Davy and friends are sitting there all red (e.g., sunburnt).’ plural S
 ‘Davy’s people are red (i.e., always red-skinned).’ plural S

Interestingly, this particular distribution of copular meanings is unique to the verb tsad.

Two other posture verbs, tabad ‘sit/stand: Plural’ and samëd ‘lay: Plural’ can drop their posture semantics only in clauses with locative adverbs with plural subjects (375-377).

- (375) mapictsëc tabad-e-c ‘[Oninan siante palms] are/stand short.’
 short sit/stand:Pl -Npast -Indic

A-I 034 oninian siante 03

- (376) debi u-mbo tabad-e-c
 Davy there/far-Aug sit/stand:Pl-Npast-Indic
 ‘Davy and company are sitting/standing over there.’ plural S
 ‘Davy and company are (living/working) far away.’ plural S
 *‘Davy is sitting/standing over there.’ singular S
 *‘Davy is (living/working) far away.’ singular S

- (377) sedque-ac-no samëd-quid memupaid ne-e-c
 shine-Act.Nzr-Loc lie:PI-Agt.Nzr capybara be-Npast-Indic
 ‘Capybaras are ones that are found in open-canopied habitats [not always lying].’
 A-IV 009 memupaid 06

These two verbs cannot occur at all with singular subjects (376), and cannot have a copular function with adjective or attribute adverbs (378).

- (378) debi piu-mbo tabad-e-c
 Davy red-Aug sit/stand-Npast-Indic
 ‘Davy and company are sitting/standing there looking all red.’/ *‘...are red.’

These patterns are all summarized in Table 11.12.

Table 11.12. Verbs that can function as copulas.

Verb	Non-copular meaning	Locative		Attribute-predicating	
		Singular	Plural	Singular	Plural
<u>ic</u>	‘live, exist’	‘be, live, exist’	‘be, live, exist’	‘be’	‘be’
<u>nibëd</u>	‘not exist’	‘not be’	‘not be’	—	—
<u>tsad</u>	‘sit (or perch)’	‘sit, be’	‘sit’	‘sit’	‘sit, be’
<u>tabad</u>	‘stand/sit. Pl’	—	‘sit/stand, be’	—	‘sit/stand’
<u>samëd</u>	‘lie: Pl’	—	‘lie, be’	—	‘lie’
<u>ue</u>	‘lie (Sg)’	‘lie, be’	‘be’	‘lie’	—
<u>nid</u>	‘go, stand’	‘go/stand (anim.) ‘be (inanim.)’	‘go/stand’	‘go/stand’	‘go/stand’

Another interesting verb to point out is the singular counterpart of samëd, ue ‘lie: Singular.’ This verb can drop its posture semantics in locative clauses with singular subjects, and, while it cannot occur as a posture verb with plural subjects, it *must* lose its posture semantics when it occurs in a locative clause with a plural subject (Table 11.12).

The verb nid ‘go/stand’ loses its posture/movement semantics in a different way. The verb nid can mean ‘be’ in locative clauses that have inanimate subjects (379), but not in ones with animate subjects (380).

- (379) aduaquic cun chido pado ubi acte nantan-uësh
 then 1Gen woman deceased 1Abs stream on-Ev.Init.Intr
nes-tiapi-mbo ic-e-bi nē-bi cun acte nid -e-c
 bathe-Neg.Abil-Adjzr be-Npast-1S here-Emph 1Gen water stand-Npast-Indic
que-onda-sh
 say-Dist.Past-3
 ‘When they asked her that, my late wife responded, “I don’t want to bathe at the
 stream, my water is here”.’

+ K-XXII 009 chema 085

- (380) u u nid-quid bēdi-dapa u acte utsi-n
 far far go-Hab jaguar-large far river other-Loc
 ‘Far! Jaguars travel far, far, to another river.’

A-IV 036 bēdi dapa 27

For the sake of comparison, I have included in Table 11.12 the copular verb ic, which occurs so frequently in copular constructions. What we find is that ic can sometimes have semantics that are more than just equative (381) and that ic can be used interchangeably with posture-copular verbs even in a simple comparative sentence (382).

- (381) bēchun tsanca-bēd ic-quid ne-e-c
 capuchin.monkey squirrel.monkey-Com:S be-Agt.Nzr be-Npast-Indic
 ‘Capuchin monkeys are ones that **hang out** [i.e., occasionally live/eat/travel] with squirrel monkeys.’

A-IV 001 bēchun 11

- (382) nua-mbo cuesban ic-nuc-bi utsi-bo ania-tsēc
 large-Aug bat be-while:Diff.Ref-Emph other-Pl small-Dim
tsad-quid cuesban ne-e-c
 sit-Agt.Nzr bat be-Npast-Indic
 ‘Bats are ones that while some bats are large, others are small.’

A-I 051 cuesban 19

The reader may have noticed that I had to add “there all” and “there looking all” to sentences (374) and (378) to make them acceptable. The more literal translations (e.g., ‘...are sitting red’ and ‘...are standing red,’ are understandable but decidedly odd-sounding in English. Construction types like these, where an adjective seems to modify

the predicate, rather than just the noun, are what I refer to as “adverbial adjective constructions.” This will be the topic of the next section.

11.8 Adverbial adjective constructions

Bare adjectives only modify nouns (383 & 384; §10.3.3), and adjectives adverbialized with the adverbializers, *-ec* ‘Manner: Intransitive’ or *-en* ‘Manner: Transitive’ always modify verbs/predicates (385; §7.8.1).

- (383) cuesban piu aid intac chish-quid ne-e-c cuesban piu
 bat red that.one blood suck-Agt.Nzr be-Npast-Indic bat red
 ‘A red bat, that is one that sucks blood...a red bat.’

C-V 016 cuesban 17

- (384) cana piu-n pe-quid ‘Scarlet macaws eat them.’
 macaw red-Erg eat-Hab

A-I 012 budëd 09

- (385) bëda-mbo-en chësh-quid shë-pada-ua-quin
 good-Aug-Manr:Tr carve-Hab spearhead-flat-Vzr:make-while:S/A>A
 ‘They carve it [the spear] well, making the head flat [lit. making it flat-headed].’

A-XIII 033 tëdi 03

But the distinction between adjectival and (manner) adverbial functions of cliticized adjectives (i.e., with the enclitics *-mbo/-quio* ‘Augmentative,’ *-patsëc* ‘Diminutive,’ etc; §6.6.2) can become blurry. This is the topic of this section: the continuum that exists between the predicate adjective constructions (§11.7.2), where the adjective clearly modifies the noun and constructions where the adjective modifies the verb/predicate, a construction type that I term “adverbial adjective” construction following Ferris (1993).

The semantics of the verb in the clause seems to be the main factor determining whether an adjective (that is not part of a noun phrase) modifies the noun or the verb in the clause. In constructions with the verb *ic* ‘be, exist, live,’ as in (386), one could say

that *ic* is a copula and is therefore equating the properties of the adjective with an entity represented by the noun phrase.

- (386) [mauédante bacuê] piu-mbo ic-quiv 'Mauédante palm fruits are red.'
 palm.genus fruit red-Aug be-Hab

A-I 030 mauédante 02

Similarly, as described above in section 11.7.7, the posture verb *tsad* 'sit/perch' can function as a copula equating an adjective to plural subjects (387). In (387), it is possible to relate the copular clause (first interpretation) to the adverbial adjective construction (second interpretation), but more importantly, in both the interpretations, it is evident that the adjective is modifying the subject noun, not the way of sitting.

- (387) quidincu-bo ushu-mbo tsad-e-c 'Gringos are white.'
 gringo-Pl white-Aug sit-Npast-Indic 'The gringos are sitting there all white.'

With verbs of perception, like *nuad* 'smell,' *isad* 'appear/look' (as in "look good"), and *tantiad* 'seem,' it is not surprising to find adjectives rather than manner adverbs being used, because these verbs describe what is more of a state than a process (388 & 389). Although the adjectives are not part of a noun phrase (this is particularly evident in 390), perhaps one could argue that the main function of these verbs is to attribute a characteristic to a noun, and are thus allied with copular verbs, both semantically and syntactically.

- (388) bëui icsa-mbo nuad-quiv ne-e-c
 tamandua bad-Aug smell-Agt.Nzr be-Npast-Indic
 'Tamanduas are ones that smell bad.'

A-IV 026 bëui 30

- (389) mëincanchush bëdi bëdi-pambo isad-e-c
 three.toed.sloth (redup=Adjzr) spot-Aug appear-Npast-Indic
 '...the three-toed sloth looks [is] spotted.'

A-IV 023 mëincanchush 04

- (390) tanun tanun-quo tantiad-tsēc ic-quid bosen
 (redup=Deintens) **gray-Aug seem-Dim** be-Agt.Nzr Neotropical.otter
ne-e-c
 be-Npast-Indic
 ‘The Neotropical otter is one that seems grayish [it’s actually brown, but its wet fur reflects light].’

A-IV 032 bosen 25

However, verbs like sin ‘ripen’ (391; cf. 386), tuashque ‘bloom’ (392), and chënque ‘shine’ (393), which designate processes (particularly sin and tuashque, which describe dynamic processes), can hardly be construed as serving a copular function in these sentences. And here the adjective seems to modify the noun as well as the process.

- (391) bacuëpiu-mbo sin-tsēc-quid tanac ne-e-c
 fruit **red-Aug ripen-Dim-Agt.Nzr** palm.species be-Npast-Indic
 ‘Tanac palms are ones whose little fruits ripen red.’

A-I 027 tanac 04

- (392) aton bacuë ushu-mbo tuashque-e-c ‘Its flowers bloom white.’
 3Gen flower **white-Aug bloom-Npast -Indic**

1-p05-B catsuin 06

- (393) ado-ac padpide-ec ushu-mbo-shë chënque-do-quid
 do.like.that-when:O>S/A again-Manr:Intr **white-Aug-Augshine-Incep-Agt.Nzr**
tabote ne-e-c
 torch be-Npast-Indic
 ‘The copal torch is one that after they do that to it, it starts to shine very white again.’

A-XIII 004 tabote 18

We can even find this pattern with verbs involving locomotion (describing the path):

- (394) cue-mbobi pudun pudun-quid bëshuicquid ne-e-c
straight-Deintens jump (redup=Distr)-Agt.Nzr saki.monkey be-Npast-Indic
 ‘Saki monkeys are ones that jump straight through the trees.’

A-I 055 bëshuicquid 29

However, this construction does not work with transitive verbs, at least not for those where the adjective would be modifying the object or the end-product of the action (395 & 396; b sentences represent corrections offered by speakers to the rejected sentences).

- | | |
|--|---|
| (395a) * <u>piu-mbo</u> <u>dabiun-ta</u>
red-Aug coat-Imper
(‘Paint it red.’) | (395b) <u>piu-mbo ic-nuc</u> <u>dabiun-ta</u>
red-Aug be-while:Diff.Part coat-Imper
(‘Paint it (so it is) red.’) |
| (396a) * <u>ise-mbo</u> <u>nocoshca-ta</u>
smooth-Aug sand-Imper
(‘Sand it smooth.’) | (396b) <u>ise-mbo ic-nuc</u> <u>nocoshca-ta</u>
smooth-Aug be-while:Diff.Part sand-Imper
(‘Sand it (so it is) smooth.’) |

Thus, what we have is a case where adjectives, which describe properties that normally modify nouns, are here associated with the predicate. At the same time, the adjectives occur in adverb positions, but do not just modify the verb. What seems to be happening is that the adjectives describe subjects with respect to how they are affected by the action/process or perceived in the state coded by the verb.

In light of this, it is perhaps not so surprising after all that dimension notions are not adjectives in Matses, but adverbs. Dimension (and any) adverbs can occur in the same position as adjectives do in adverbial adjective constructions (397-400). Morphologically, adverbs differ in that they do not need to be cliticized (with -mbo/-quio, etc.) to occur in this slot (399 & 400).

- (397) shēcten-n shipidish-mpi bushcu-tsēc ic-tsēc-quid
collared.peccary-Gen tail-small short-Dim be-Dim-Hab
(‘The collared peccary’s little tail is very short.’)

A-I 043 shēcten 11

- (398) padnuen chēshēid utsi ania-tsēc-quio tsad-quid
by.contrast spider.monkey other small-Dim-Aug sit-Hab
(‘By contrast, the other spider monkeys are very small.’)

+ A-I 053 chēshēid 10

- (399) bacuë nua diad-quid ‘The fruit hangs large [from the pëdimpi palm].’
 fruit large hang-Hab
 A-I 033 pëdimpi 05
- (400) budëd ënapen cani-quid ne-e-c ‘The budëd palm grows tall.’
 palm.species long grow-Agt.Nzr be-Npast-Indic
 A-I 012 budëd 02

Interestingly, however, dimension adverbs, by contrast with adjectives, can describe nouns that represent the end-products of a transitive action (401).

- (401) ayash bushcu-mbo te-tan-quin matses-n
 vine.species short-Aug cut-go.do.&return-while:S/A>A Matses-Erg
shëcten tënësh-te-ua-quid
 collared.peccary strangle-Inst.Nzr-Vzr:make-Hab
 ‘After going to cut an ayash vine to a short length, Matses make a collared peccary strangling noose.’ /*‘After going to cut a short ayash vine...’
 A-XIII 010 shëcten tënështe 04

The sentences in (402) allow us to compare the noun-modifying function of adjectives in noun-adjective noun phrases (402a) and in predicate adjective copular clauses (402b), and the attribute predicating function of adverbialized adjectives (402c) with the intermediate function of (cliticized) adjectives in adverbial adjective constructions (402d). It is almost as if -mbo/-quio (and the other clitics) were “transitional class-changing enclitics” that can get adjectives halfway to being manner adverbs; -ec/-en then gets them the rest of the way there.

- (402a) chido bëda cho-o-sh ‘The good/good-looking woman came.’
 woman good come-Npast-Indic
- (402b) chido bëda-mbo ic-e-c
 woman good-Aug be-Npast-Indic
 ‘The woman is good/good-looking.’
 a possible literal interpretation: ‘The woman exists as good/good-looking.’

- (402c) chido bēda-mbo-ec isad-e-c
 woman good-Aug-Manr:Intr appear-Npast-Indic
 ‘The woman appears clearly [e.g., from a the distance]
 ‘The woman can be seen well [e.g., using binoculars].’
- (402d) chido bēda-mbo isad-e-c ‘The woman looks good/pretty.’
 woman good-Aug appear-Npast-Indic

11.9 Interrogative sentences

Four question types can be identified in Matses: i) *wh*-questions; ii) yes/no questions (including alternative questions); iii) tag questions; and iv) abbreviated questions. Each is described in turn in the subsections of the present section. The first two, the main question types in the language, are distinguished from other sentence types by interrogative intonation (a final rising intonation contour). Distinctive interrogative verbal inflectional morphology occurs in some person-tense-mode combinations: yes/no questions always take interrogative morphology in these situations, and *wh*-question almost always do (rhetorical *wh*-questions sometimes being an exception). Tag questions and abbreviated questions are not really full clauses, occurring with neither interrogative inflection nor declarative inflection. Tag questions might be considered combinations of clauses, but otherwise these can all occur as single-clause constructions. See section 12.6.3 on indirect questions for a complex clause type where a question appears to occur as a subordinate clause type. Subsection 11.9.5 briefly describes answers to questions.

11.9.1 *wh*-questions (information questions)

Wh-questions are those corresponding to those English questions that use the words, *who*, *what*, *when*, *where*, *why*, *which*, and *how*. In Matses, *wh*-question words are all proforms, syntactically either nouns or adverbs, and all end in (or at least contain) the formatives /da/ or /tsi/. The full inventory of *wh*-question words is listed in Table 7.10,

and their segmentability, morphological possibilities, semantics, and uses are described in the noun and adverb chapters (§§4.4.3, 7.3.10).

The most natural position for interrogative words is clause-initial (403a & 404a). But this is not a strict rule: the speaker may focus on a non-question word by placing it in front of the question word (403b, 404b, & 404c). Except sometimes for cases like (404c; see also §11.9.4), intonation patterns suggest that these all represent single clauses.

- | | |
|--|---|
| (403a) <u>mida-mbo</u> <u>debi</u> <u>ush-o-sh</u>
where-Aug Davy sleep-Past-3
'Where did Davy sleep?' | (403b) <u>debi</u> <u>mida-mbo</u> <u>ush-o-sh</u>
Davy where-Aug sleep-Past-3
'(And) where did Davy sleep?' |
| (404a) <u>atoda</u> <u>debi-n</u> <u>bë-ac-o-sh</u>
what Davy-Erg bring-Infer-Past-3
'What did Davy bring?' | (404b) <u>debi-n</u> <u>atoda</u> <u>bë-ac-o-sh</u>
Davy-Erg what bring-Infer-Past-3
'(And) what did Davy bring?' |
| (404c) <u>ma</u> <u>debi-n</u> <u>atoda</u> <u>bë-ac-o-sh</u>
how.about Davy-Erg what bring-Infer-Past-3
'And what did Davy bring?'/ 'How about Davy, what did <i>he</i> bring.' | |

Where there is a distinction between indicative and interrogative verbal inflection (see §5.6 for a description of the rather complex patterns in modal marking in verbal inflection), yes/no questions (next section) must always take the interrogative morphology for first and second person subjects, but *wh*-questions sometime use indicative morphology. Actually, real, directed questions seem to always use interrogative inflection (405b, 406), but if the question is to be understood as a rhetorical question, indicative mode inflection is used instead (405c), as in declarative sentences (405a). (Recall that inflections with third-person subject agreement are not distinctive for interrogative vs. declarative sentences).

- | | |
|---|---|
| (405a) <u>cun</u> <u>amicu</u> <u>mibi</u> <u>ne-e-c</u>
1Gen friend 2Abs be-Npast-Indic
'You are my friend.' | (405b) <u>tsuda</u> <u>mibi</u> <u>ne-e-Ø</u>
who:Abs 2Abs be-Npast-Interr:1/2
'Who are you?' |
|---|---|

- (405c) tsuda mibi ne-e-c 'Who do you think you are?'
 who:Abs 2Abs be-Npast-Indic
- (406) adnubien tsutsi ne-e-Ø tsutsi ne-e-Ø mimbi-ba
 then who be-Npast-Interr:1/2 who be-Npast-Interr:1/2 2Erg-first
chui-Ø mimbi-ba chui-Ø que-onda-sh tsutsi ne-e-Ø
 tell-Imper 2Erg-first tell-Imper say-Dist.Past-3 who be-Npast-Interr:1/2
 'Then, "Who are you? Who are you? You tell first! You tell first!" they (the
 Dēmushbo Indians) said. "Who are you?''

+ K-XXII 003 chema 029

As can be seen in (403) - (408), active (intransitive and transitive) and copular clauses can be questioned.

- (407) bēda-mbo-ec tabad-quin mitsi-mbo cues-o-Ø
 good-Aug-Advzr:Intr sit:Pl-while:S/A>A where-Aug kill-Past-Interr:1/2
que-tsēc-quio-ec tabad-quin nēishamē pe-quid
 say-Dim-Aug-while:S/A>S sit:Pl-while:S/A>A tapir eat-Hab
 'While sitting there happily, they ask, "Where did you kill it?" as they eat tapir.'

C-III 001 shēcten 42

- (408) tsundan-bi-en uncate cuēsh-pa-ampic
 who:Erg-Emph-Contr paddle remove.from.tree-Comment-Rem.Past:Infer
 'Who might have removed (a buttress root from this tree to make) a paddle.'

Looking at Table 7.10, the reader may have noted that there is not a Matses word for 'why.' *Why*-questions are formed with atoda/atosi 'what' and the quotative verb que 'say' in an adverbial clause. These adverbial clauses can be interpreted literally in some cases, as in (409), but in other cases, a literal interpretation is impossible. For example, a literal interpretation of (410) would require that talking fish had a meeting where they decided to increase their population.

- (409) ad-ash-bi-en atotsi que-ash
 do..that-after:S/A>S-Emph-Contr what say-after:S/A>S
nique-pa-ac atotsi que-o-sh min utsi que-onda-sh
 run.off-Comment-Infer what say-Past-3 2Gen brother say-Dist.Past-3
 ‘After that, he asked him, “Why did he run off? What did your brother say”.’
 + K-XXII 008 chema 074
- (410) atoda que-ash dadpen nuëquid ic-o-sh nëid dëbiate-mi
 what say-after:S/A>S many fish be-Past-3 this.one headwaters-Loc
 ‘Why are there so many fish in the headwaters of this one [the Gálvez River]?’
 lit. ‘After they_i said what, are there so many fish_i in the headwaters of this one?’

Similarly, there is no question word for ‘when’ in Matses. Instead, Matses make reference to the position of the sun to ask or talk about time (411 & 412). But this reference to the sun is not quite literal, at least nowadays, when a typical answer to (411) or (412) could be ‘two thirty’ (Peruvian Matses tell time in Spanish). To talk about days and months, Matses similarly refer to the sun or the moon (413).³²

- (411) mida-mbo ushë ic-e-c ‘What time is it?’
 where-Aug sun be-Npast-Indic lit. ‘Where is the sun?’
- (412) mida-mbo ushë ic-nuc cho-o-Ø
 where-Aug sun be-while:Diff.Ref come-Past-Interr:1/2
 ‘At what time did you get here?’ (lit. ‘Where was the sun when you arrived?’)
- (413) midacquid ushë-n ‘On what day/month?’
 which sun/moon-Loc

11.9.2 Yes/no questions

The most reliable feature for recognizing yes/no questions (= “nexus” or “polar” questions) is a final rising sentential intonation contour. If the subject is first or second person, interrogative verbal inflection (§5.6.5) is obligatory in those tense-modes that

³² The word ushë polysemously means ‘sun,’ ‘day,’ ‘moon,’ and ‘month.’ Traditionally, reference was to the lunar (28-day) month, but now it can refer to either a calendar or lunar month.

make this distinction (414b). Very frequently, yes/no questions are accompanied by the uncertainty enclitic, -da (§9.4.1), which follows the first constituent (unless it is a finite verb) in the sentence; (414c, 415). In slower, more careful speech, the interrogative particle ada is used at the beginning of the sentence instead of -da (414d & 416).

- (414a) min chido bed-o-c (414b) min chido bed-o-Ø
 2Gen woman take-Past-Indic:1/2 2Gen woman take-Past-Interr:1/2
 ‘You have taken a wife.’ ‘Did you take a wife yet?’
- (414c) min chido-da bed-o-Ø ‘Have you taken a wife?’
 2Gen woman-Uncert take-Past-Interr:1/2
- (414d) ada min chido bed-o-Ø ‘Have you taken a wife?’
 Uncert 2Gen woman take-Past-Interr:1/2
- (415) ano-bi-da diad-e-Ø papa ca-onda-sh
 there-Emph-Uncert hang-Npast-Interr:1/2 father say-Dist.Past-3
 ‘He asked him, “Are you hanging there (in your hammock), father?”.’
 + K-XXII 007 chema 066
- (416) ada min secte utsi ic-tsēc-e-c
 Uncert 2:Gen strainer other be-Dim-Npast-Indic
 “‘Do you have another strainer?...’”.

A-XIII 025 secte 14

But note that -da and ada do not themselves mark the question status of the sentences, as they can occur in declarative sentences, which do not have interrogative intonation (417).

- (417) shubu bacuë-bi-mbo-ec-da ic-pa-e-c-que
 house fruit-like-Aug-Advzr.Intr-Uncert be-Comment-Npast-Indic-so
 ‘Perhaps they might be like shubu palm [fruits].’

A-I 028 shubu quëdë 11

The enclitic -da and the particle ada both work in two different ways: they may simply mark the whole sentence as being questioned in a simple yes/no question, or they may mark the first constituent as the one being questioned in a focused yes/no question. The essential thing to keep in mind is that in Matses, SOV is the least-marked word order

and that sentence initial position is associated with focus. Therefore, yes/no questions with neutral word order could be interpreted either as non-focused questions or focused questions (418a), but with non-neutral word order, a focused interpretation is the only natural one (418b).

(418a) ada debi-n mibi cues-o-sh 'Did Davy hit you?'
 Uncert Davy-Erg 2Abs hit-Npast-3 'Is Davy the one that hit you?'

(418b) ada mibi debi-n cues-o-sh 'Are you the one Davy hit?'
 Uncert 2Abs Davy-Erg hit-Npast-3

In focused questions, the scope of the enclitic -da is everything to the left of it in the sentence. If a noun phrase consists of a noun followed by an adjective or an adverb, then the interrogative enclitic will follow the adjective (419) or the adverb (420), but it is the whole noun phrase that is being questioned, not just, for example, whether the new wife has red/blonde hair.

(419) min chido ma-piu-da bed-o-Ø
 2Gen woman head-red-Uncert grab-Past-Interr:1/2
 'Did you take a red-headed/blonde wife?'

(420) min bacuë utsi-da-bi ne-e-Ø que-onda-sh
 2Gen child other-Uncert-1S be-Npast-Interr:1/2 say-Dist.Past-3
 "'Do you think I'm your age-mate?" she said.'

+ K-XXII 015 chema 151

Similarly, in focused questions the scope of ada is the whole constituent that follows it. Thus, in addition to marking uncertainty associated with the question (although I suppose all non-rhetorical questions express some level of uncertainty), they help focus on the constituent that is being questioned in focus questions. It seems to be no coincidence that the positions that -da and ada occur in coincide with focus position in Matses.

As described in section 11.2.6, first-person pronominal enclitics substitute for person-agreement/mode suffixes (421), so the use of these enclitics would cause the contrast between interrogative and indicative inflection to be lost. Perhaps to avoid this ambiguity, the first-person enclitic is attached to ada or -da instead (420 & 422).

- | | |
|--|---|
| (421a) <u>ubi</u> <u>nid-e-c</u>
1Abs go-Npast-Indic
'I am going.' | (421b) <u>nid-e-bi</u>
go-Npast-1S
'I'm going.' |
| (422) <u>ada-bi</u> <u>nid-e-Ø</u>
Uncert-1S go-Npast-Interr:1/2 | 'Am I going?' |

Word order in yes/no questions with or without -da or ada is not different from word order in declarative sentences. The exception is that while verb initial word order is possible in declarative sentences, and since -da must have the questioned constituent at the beginning of the sentence, and since -da cannot follow finite verbs, one cannot form a focused yes/no question focusing on the only verb or the main verb in the question using -da. There are two ways to get around this restriction. One is to simply mark the finite verb as the questioned constituent using the particle ada instead of -da (423).

- (423) ada cues-o-Ø ca-ua-paid abi ëëë
 Uncert kill-Past-Interr:1/2 say-again-Hab there halloo
ca-sho aton utsi-n matses-n
 say-when:S/O>O 3Gen brother-Erg Matses-Erg
 'Matses ask their brother, 'Did you kill (game)?' when he hears him saying ëëë.'
 C-III 001 shëcten 27

The other option is to use a special complex construction where the questioned verb is followed by one of two non-finite adverbializing suffixes, -ec or -quin (424 & 425). (See section 12.4.2 for a description of these suffixes.) These are irregular uses of these adverbializing suffixes in that this non-relative-temporal future meaning is particular to

questions (424), and the participant tracking of -quin does not even work out (424b & 424c) (-quin generally occurs only with transitive matrix verbs). The normal pattern for same-subject adverbial phrases is for the transitivity of the matrix verb to condition which adverbializing suffix is used (i.e., the one that refers to the S vs. the A of the matrix verb). But in these constructions, it seems to be the subordinate verb that controls which of the two suffixes is used. Therefore, it seems that the verb ic (§11.7) in these sentences is not acting as a main verb meaning ‘be,’ but as an auxiliary verb (§12.4.4.5).

- (424a) cho-ec-da _____ ic-e-Ø ‘Will you come?’
 come-while:S/A>S-Uncert Aux-Npast-Interr:1/2
- (424b) cho-ec-da _____ ic-e-c ‘Will he come/Is he coming?’
 come-while:S/A>S-Uncert Aux-Npast-Interr:3
- (424c) se-quin-da-mbi _____ ic-e-Ø “‘Should I shoot them?’”
 pierce-while:S/A>A-Uncert-1A Aux-Npast-Interr:1/2

K-XXI 010 dēmushbo 29

- (425b) *se-quin ic-e-Ø (425c) *se-quin-mbi ic-e-c
- (426) cho-ec _____ ic-e-c ‘When he comes, he will have it.’
 come-while:S/A>S be-Npast-Indic

“Alternative questions,” such as the one in (427), which “provide a list from which, the speaker suggests, the right answer might be drawn” (Sadock and Zwicky 1985: 179), could be considered a subtype of yes/no questions.

- (427) piu-mbo-da _____ sin-e-c _____ o chëshë-mbo
 red-Aug-Uncert ripen-Npast-Interr:3 or black-Aug
 ‘Does it ripen red or black?’

Some categories of yes/no question never occur with the uncertainty particle/enclitic. Questions about whether one should do something fall into this category (428; spoken with interrogative intonation).³³

- (428) chui-nu ‘Should I tell [the story] now?’
tell-Intent:1 lit. ‘Am I going tell it now?’

G-XV 001 shēcten 01

11.9.3 Tag questions

The functional equivalent of tag questions in Matses is to simply follow a declarative sentence with the verb ca ‘tell’ as an imperative command (429-431).

- (429) bēda-mbo ic-e-c ca-Ø ‘It’s good, isn’t it?’ lit. ‘It’s good; tell!’
good-Aug be-Npast-Indic tell-Imper
- (430) mibi dacuēd-e-c ca-Ø ‘You’re scared, aren’t you?’
2Abs be.scared-Npast-Indic tell-Imper lit. ‘You’re scared; tell!’
- (431) debi cho-en-quio ic-o-sh ca-Ø
Davy come-Neg-Aug be-Past-3 tell-Imper
‘Davy didn’t come, did he?’ lit. ‘Davy didn’t come; tell!’

Tag questions are used when the speaker is fairly or completely certain of the truth value of the declarative sentence, and is just looking for confirmation, assurance or agreement from the hearer. Using the distinctions found in Sadock and Zwicky (1985), Matses tag questions could be described as positively biased (429), confirmative (430), or negatively biased (431). Yes/no questions with -da/ada contrast with tag questions in that yes/no questions express the speaker’s real uncertainty or lack of knowledge, and represent his desire to learn new information. See section 11.10 for more on imperatives.

³³ The literal translation is reflected in the Spanish speech of Matses people with intermediate proficiency in Spanish. For example, I was once asked by a Matses woman *Voy a tejer tu pulsera?* lit. ‘Am I going to weave your bracelet?’ = ‘Would you like me to weave bracelets for you?’

11.9.4 Abbreviated questions (with ma 'how about')

Among the different uses of ma (see §§9.4.3 & 12.5.3), is the formation of a question type where a noun phrase replaces the (understood) full question. The series of sentences from the text excerpt in (432) illustrates how it is used.

- (432a) ubi dësi ne-e-c que-onda-sh "I am Dësi," she told me.
 1Abs woman's.name be-Npast-Indic say-Dist.Past-3
 + K-XXII 006 chema 054
- (432b) ma min champi nëid
 how.about 2Gen daughter.this.one
 "How about your daughter, this one here?" (I asked).
 + K-XXII 006 chema 055
- (432c) cun champi tupa ne-e-c que-onda-sh
 1Gen daughter.woman's.name be-Npast-Indic say-Dist.Past-3
 "My daughter is Tupa," she said.
 + K-XXII 006 chema 056

The particle ma must occur at the beginning of the sentence (433b & 433c). Most frequently, ma is followed by just a noun or a noun phrase, but, if the speaker feels the hearer might not understand, a more specific question may be added, as in (433a). This following question will not repeat the noun phrase that follows ma, and is sometimes read with the intonation of a single sentence.

- (433a) ma debi-n atoda bë-ac-o-sh
 how.about Davy-Erg what bring-Infer-Past-3
 'How about Davy, what did *he* bring.'/'And what did *Davy* bring?'
- (433b) ma debi-n
 how about Davy-Erg
 'And Davy? (what did *he* bring?)
- (433c) ma debi-Ø
 how.about Davy-Abs
 'How about Davy?'(what did he bring, or what did he do)

When a lone noun phrase follows ma, it can be ergative case-marked (433b), in which case, the question is more specific than if the noun is in the absolutive case³⁴ (433c).

11.9.5 Answers to questions

I have not yet conducted a systematic study of answers to questions, but there are several particulars that can be pointed out at this point. One is that Matses has an agree/disagree system (rather than a yes/no system) for answering yes/no and tag questions. As distinguished by Sadock and Zwicky (1985:189-190), a yes/no system, like the one in English, has “a positive particle accompanying, or standing for, a positive answer, and a negative particle accompanying, or standing for, a negative answer,” while an agree/disagree system, like the one in Japanese, has “a positive particle used when the answer agrees with the question in polarity (positive vs. negative) and a negative particle used when the answer disagrees with the question in polarity.” The difference between Matses and English can be seen when the question is negative; i.e., the literal English translations will sound odd in the answers (434b & 434c) to the question in (434a).

(434a) cho-en-quo-da ic-e-Ø ‘Are you not coming?’
 come-Neg-Aug-Uncert Aux-Npast-Interr:1/2

(434b) ai cho-en-quo ic-e-bi
 yes come-Neg-Aug Aux-Npast-1S
 ‘Yes, I’m not coming.’

(434c) padenquo cho-e-bi
 no come-Npast-1S
 ‘No, I’m coming.’

Therefore, the particle ai in (434b) means something more like ‘right.’ And in sentences like (435b) and (436b), it is more like ‘okay,’ since it isn’t really answering a question but agreeing with a proposition (435a) or agreeing to follow an order (436a).

³⁴ Actually, it is hard to say whether the unmarked noun is in the absolutive case, contrasting with (433b), or whether it is just an independent noun phrase.

(435a) cuen-enda inchësh-n cuen-enda min shubu is-nu cun
 run.off-Neg.Imper dark-Loc run.off-Neg.Imper 2Gen house see-Intent:1 1Gen
champi mibi mene-nu ashic min champi umbi bed-e-c
 daughter2Abs give-Intent:1 then 2Gen daughter 1Erg grab-Npast-Indic
ca-onda-sh matses-n
 say-Dist.Past-3 Matses-Erg
 “Don’t run off! Don’t run off at night! I plan to see your house; I’m going to
 give you my daughter, and then I’m going to take your daughter,” the Matses told
 them.’

+ K-XXII 006 chema 062

(435b) ai ca-onda-sh “Okay,” they said.’
 yes say-Dist.Past-3

+ K-XXII 007 chema 063

(436a) cuen-enda cun tita que-onda-sh
 run.off-Neg.Imper 1Gen daughter.in.law say-Dist.Past-3
 “Don’t run off, daughter-in-law!” he told her.’

+ K-XXII 012 chema 118

(436b) ai cuen-en-quio ic-e-bi ‘Okay, I won’t run off...’
 yes run.off-Neg-Aug Aux-Npast-1S

+ K-XXII 012 chema 119

The semantics and uses of the particles ai and padenquio, along with other particles used to say ‘yes,’ ‘okay,’ ‘no,’ ‘I don’t know,’ etc. are described in the particle morphology chapter (§9.5.2).

The answer to a content question (*wh*-question) can be a full declarative sentence, a sentence fragment, or a single word or phrase instead of a full declarative sentence. If the answer is a full sentence, the information being asked most frequently occurs sentence initially, in focus position (437-439). When the answer to a content question is a single noun phrase, the noun phrase is generally case-marked (437-441).

(437a) tsundan debi-Ø cues-o-sh (437b) umbi (debi-Ø cues-o-c)
 who:Erg Davy-Abs kill-Past-3 1Erg Davy-Abs kill-Past-Indic:1/2
 ‘Who killed Davy?’ ‘I (killed Davy).’

- (438a) tsundan cues-o-sh
 who:Erg kill-Past-3
 'Who killed him?'
- (438b) debi-n (na-o-sh)/ (cues-o-sh)
 Davy-Erg do:Tr-Past-3 kill-Past-3
 'Davy (did)/(killed him).'
- (439a) tsuda cues-o-sh
 who:Abs kill-Past-3
 'Whom did he kill?'
- (439b) debi-Ø (cues-o-sh)
 Davy-Abs kill-Past-3
 '(He killed) Davy.'
- (440a) atontsin cues-o-sh
 what:Inst kill-Past-3
 'With what did he kill him?'
- (440b) chompian-n
 shotgun-Inst
 'With a shotgun.'
- (441a) tsundan chompian ne-o-sh
 whose shotgun be-Past-3
 'Whose shotgun was it?'
- (441b) debi-n
 Davy-Gen
 'Davy's'

Note in (441b) that this may be the only situation in which a genitive noun can occur without an overt possessee.

11.10 Imperative and hortative sentences

Imperative sentences are characterized by a lack of inflectional morphology (442 & 443a) or by special imperative-marking inflectional morphology: -ta 'Imperative; Excluding 1st Person' (442 & 443b), or -enda 'Negative Imperative' (= 'Prohibitive' = 'Vetative'; 442 & 443c). The semantic differences among the different imperatives are actually more subtle and/or complex than the above definitions and their corresponding examples convey. A more thorough discussion of their semantics can be found in the verb morphology chapter (§5.6.4).

- (442) bed-Ø cain-shun bed-Ø se-me-enda
 grab-Imper wait-after:S/A>A grab-Imper pierce-Caus-Neg.Imper
pia uidēnua-ta utsi-n
 arrow hold-Imper other-Erg
 "Grab them, grab them after waiting, don't let them shoot you, another of you grab (his) arrows".'

- (443a) cun shubu-no nid-Ø (443b) cun shubu-no nid-ta
 1Gen house-Loc go-Imper 1Gen house-Loc go-Imper
 ‘Go to my house!’ ‘Go to my house!’
 (speaker might be going there too) (speaker won’t accompany hearer)
- (443c) cun shubu-no nid-enda ‘Don’t go to my house!’
 1Gen house-Loc go-Neg.Imper

Besides the lack of or special verbal inflectional morphology, another morphological characteristic that distinguishes imperatives and the other sentence types (declarative and interrogative) is that imperative verbs occur with fewer derivational (optional) verbal suffixes. As one might expect, such suffixes as -chit ‘Uncertainty,’ -tsen ‘almost’ and -pa ‘Comment’ do not occur on imperative verbs. Imperative verbs can take most of the other verbal derivational suffixes, e.g., -me ‘Causative’ (442), -ban ‘Continuative: Distributive’ (444) or -quio ‘Emphatic’ (445).

- (444) chui-ban-Ø (445) is-quio-Ø
 tell-Iter-Imper see-Emph-Imper
 ‘Tell everyone!’ ‘Look well!’ (= ‘See? I told you so!’)

Similarly, it is unsurprising that there are no passive imperative sentences. Another expected structural property that distinguishes imperative sentences from other sentence types is that imperative sentences cannot have first or third person subjects (i.e., the subject is always the addressee). And unlike declarative sentences (but similarly to interrogative sentences) the addressee (= second person subject) may occur covertly. In fact, (as with interrogative sentences) overt second person subjects are generally only used for emphasis, similarly to English:

- (446a) uëdëshca-Ø ‘Dig.’ (446b) mimbi uëdëshca-Ø ‘You dig.’
 dig-Imper 2Erg dig-Imper

There is no imperative construction that specifically marks politeness, but if one wishes to be polite about a request, an indirect question like the one in (452) would be used.

- (452) ada uēdēshca-tsia-Ø 'Would you (please/be willing to) dig?'
 Uncert dig-Npast.Cond-Interr:1/2

Hortative constructions like the ones (453) and (454) might be considered a subtype of the imperative sentence type.

- (453) padenquio bed-Ø tsid-nu na-Ø que-onda-sh
 no grab-Imper gather-Intent:1 do-Imper say-Dist.Past-3
 '(Other Matses said) "No! Capture them. Let's join up with them".'
 (lit. '...I'm going to join them; do it!')

+ K-XXII 002 chema 013

- (454) nid-nu nid-Ø 'Let's go!' (lit. 'I'm going; go!')
 go-Intent:1 go-Imper

Another special type of hortative construction (which is not imperative-like) is the one in (455). This construction type uses the abilitative/desiderative suffix -tiad, which otherwise only occurs in subordinate adjectivized clauses (§12.3.1)

- | | |
|--|---|
| <p>(455) <u>nuqui nid-tiad</u>
 1+2 go-Abil
 'Let's go!'</p> | <p>(456) <u>nuqui nid-e-c</u>
 1+2 go-Npast-Indic
 'Let's go!' or, 'We're outta here!'
 (Lit., 'We are going.')</p> |
|--|---|

Another option for performing a hortative function is to simply use a declarative sentence in the future tense using the first-person inclusive pronoun, as in (456).

See section 12.5.2 for the description of a causative use of quoted imperative commands and section 11.9.3 for the use of imperatives as tag questions.

11.11 Inventory of negative constructions

The different negative constructions have been described in this chapter and in various different parts of this grammar. In this section, I wish to simply put in one place all of the different strategies the language uses for expressing negation, referring to the reader to sections where the descriptions are to be found. Table 11.14 lists all the negative morphemes in the language and the sections where constructions formed with these can be found.

Table 11.14. List of negative morphemes in Matses.

Morpheme	Gloss	Morpheme Type	Section
<u>nibəd</u>	'not be'	copular verb	11.7.4
<u>-enda</u>	'Negative Imperative'	inflectional verbal suffix	5.6.4
<u>-esa</u>	'Negative Habitual'	inflectional verbal suffix	5.6.2.3
<u>-en</u>	'Negative'	non-finite verbal suffix	12.3.2
<u>-a</u>	'Negative: Perfect'	non-finite verbal suffix	12.3.2
<u>-tiapi</u>	'Negative Abilitative/Desiderative'	non-finite verbal suffix	12.3.1
<u>-esa</u>	'Negative S/A Nominalizer'	verb nominalizing suffix	4.7.3
<u>-temaid</u>	'Negative O/Instrument Nominalizer'	verb nominalizing suffix	4.7.3
<u>-acmaid</u>	'Negative O/Inst Nominalizer: Perfect'	verb nominalizing suffix	4.7.3
<u>-acma</u>	'Negative Action Nominalizer.'	verb nominalizing suffix	4.7.5
<u>-tema</u>	'Negative Action Nominalizer: Perfect'	verb nominalizing suffix	4.7.5
<u>-penquio</u>	'Negative' (constituent negation)	enclitic/particle	9.3.3
<u>padi</u>	'no'	lexical particle	9.5.2.2
<u>padenquio</u>	'no, no way'	lexical particle	9.5.2.2
<u>padambo</u>	'not yet'	lexical particle	9.5.2.2
<u>padabi</u>	'not quite yet'	lexical particle	9.5.2.2
<u>ma</u>	'Negative'	formative	5.3.3
<u>pen</u>	'Negative'	possible formative	7.5.1

The primary standard sentential negation device in Matses involves the most complex negation construction (see Payne 1985b for definitions of standard negation and

sentential negation). This is the construction involving the negative verbal suffixes -en 'Negative' and -a 'Negative: Perfect,' which occur in adjectivalized non-finite clauses that must occur with the auxiliary verb ic 'be,' which carries the regular verbal inflection (457; §12.3.2):

- | | |
|---|--|
| (457a) <u>nid-en-qui</u> <u>ic-e-c</u>
go-Neg-Adjzr Aux-Npast-Indic
'He isn't going.' | (457b) <u>nid-a-mbo</u> <u>ic-e-c</u>
go-Neg:Perf-Adjzr Aux-Npast-Indic
'He did not go yet.' |
|---|--|

The construction is similar in many ways to the English negative construction in the translation of (457a), the difference being that the negative suffix in Matses occurs on the non-finite verb, and in English on the auxiliary verb. If English were like Matses, the translation would be: '*He is gon'ting*' or '*He is go-not-ing*.' Another version of this negative construction involves the non-finite, verbal suffix -tiapi 'Negative Abilitative' (458; §12.3.1)

- | | |
|--|---|
| (458) <u>nid-tiapi-mbo</u> <u>ic-e-c</u>
go-Neg.Abil-Adjzr be-Npast-Indic | 'He cannot/does not want to go.'
lit. 'He is not-wanting-going.' |
|--|---|

The syntactic model for these sentences is the predicate adjective copular construction, but the construction in (457; but not the one in 458), seems to have been reanalyzed as a simplex clause and has assimilated to some simplex clause syntax.

Other standard sentential negation devices are the finite inflectional suffixes -esa 'Negative Habitual' and -enda 'Negative Imperative,' but these are restricted to minor sentence types (§5.6.4). The other form of standard sentential negation is with the inherently negative verb nibəd 'not be,' but this verb only occurs in negative existential (§11.7.4) and negative locative constructions (§11.7.3.2).

Constituent negation is accomplished using the negative enclitic -penquio (§9.3.3), which follows noun phrases (§10.3.6), adjective phrases (§10.6), adverb phrases (§10.5), and postpositional phrases (§10.4.5), creating a negative phrase (459). However, the use of -penquio seems to be restricted to copular clauses.

- (459a) capa-penquio ne-e-c (459b) umu-penquio capa ic-e-c
 squirrel-Neg be-Npast-Indic grue-Neg squirrel be-Npast-Indic
 ‘It is not a squirrel.’ ‘Squirrels are not green/blue.’

There are several nominalizing suffixes that specify negative semantics, including -esa ‘Negative S/A Nominalizer’ (460a) and -temaid ‘Negative O/Instrument Nominalizer’ (460). See sections 4.7.3 and 4.7.5.

- (460a) [shaë pe]-esa ne-e-c
 giant.anteater eat-Neg.S/A.Nzr be-Npast-Indic
 ‘He is one that does not eat giant anteater.’
- (460b) shaë pe-temaid ne-e-c
 giant.anteater eat-Neg.O:Nzr be-Npast-Indic
 ‘The giant anteater is an inedible one.’

Section 9.5.2.2 describes several different particles for answering ‘no’ to yes/no questions. And finally, there are the forms ma and pen recognized as formatives in the language that may have been a productive morpheme historically (§§5.3.3, 7.5.1). I have not found any cases of inherently negative quantifiers or adverbs, or of quantifier negation.

11.12 Word order

The most important thing I can say about constituent order in Matses is that it is governed more by discourse factors, namely topic and focus, than by grammatical factors

like grammatical relation identification. In fact, word order is of no use for distinguishing the arguments or obliques from each other.

Preferred word order is verb-final. Both SV and VS word orders are attested for intransitive verbs, and all six logical orders are attested for transitive clauses: SOV and OSV are least marked, and verb-initial orders are most marked. The notion of “basic word order” is a trivial one for the Matses language. SOV appears to be more natural in elicitation, but this may be a reflection of usual word order in Spanish. In fact, translation of Spanish sentences in elicitation reflects the order of the constituents in the Spanish sentence. A more worth-while pursuit than trying to decide which word order is “basic,” is trying to understand the factors that motivate the different optional word orders, a task that I have barely begun. A preliminary assessment of texts and grammatical patterns suggest that focus position is first and old material tends to go last, if it is not zero-pronominalized. Two enclitics associated with focus, -en ‘Contrast’ and -shenda ‘Mirative’ require that the entity they are attached to appear first in the clause (461; §4.6.10).

(461a) debi-n cun chështe ampe-o-sh (461b) cun chështe debi-n ampe-o-sh
 Davy-Erg 1Gen machete steal-Past-3 ‘Davy stole my machete’
 ‘Davy stole my machete.’

(461c) debi-n-shenda cun chështe ampe-o-sh
 Davy-Erg-Mirat 1Gen machete steal-Past-3
 ‘So it was Davy who stole my machete!’

(461d) *cun chështe debi-n-shenda ampe-o-sh

(461e) cun chështe-shenda debi-n ampe-o-sh
 1Gen machete-Mirat Davy-Erg machete steal-Past-3
 ‘So it was my machete that Davy stole!’

(461f) *debi-n cun chështe-shenda ampe-o-sh

In content questions, question words ('who,' 'what,' etc.) generally come first (§11.9.1), and in yes/no questions, the questioned constituent likewise tends to come first (§11.9.2). Similarly, if a question is answered with a full sentence, the constituent that answers the questions come first in the sentence (§11.9.5). This all points to initial position as the focus position. Older information is more likely to occur after the focused constituent, before or after the verbs. Older information is actually most frequently zero-pronominalized, so a confounding factor for the study of word order is that clauses with a zero-pronominalized argument are more common than one with all the arguments stated overtly.

Active clauses have the most free word order, it is a bit more limited in copular clauses. Non-finite clauses are all verb-final.

CHAPTER 12

SYNTAX PART III: COMPLEX (MULTI-CLAUSE) SENTENCES

12.1 Introduction

The overall role of complex sentences in the Matses language is associated with two grammatical properties of the language: Matses is an agglutinating and clause-chaining language. The first property has the effect that many functions that are accomplished in more analytic languages by complex sentences, such as causation (§11.5.1) and serial verb constructions (§5.5.3) are accomplished in Matses principally by verbal morphology. The second property means that the clause coordinating functions accomplished in other languages by coordinating conjunctions such as 'and' are accomplished in Matses by subordinating suffixes. As such, we find that coordination is extremely restricted in Matses, while subordination is quite common. There is only one type of coordination, with only one coordinating morpheme, and it can only occur with special clause types, all involving imperative or first-person intention inflection. By contrast, subordination is a prominent feature of the language, and there are several types of subordinate clauses and 54 different subordinating suffixes. A third clause combination type, quotation, is difficult to classify as either subordination or coordination. Quotation is more common and varied than coordination, but much less so than subordination: there are two types of quotation, and three different quotative verbs.

The bulk of this chapter (§§12.2-12.4) treats the different types of subordination. The basis of subordination in Matses is the expansion of noun, adjective, and adverb syntactic slots by creating subordinate clauses via morphological class-changing of verbs: nominalization, adjectivalization, and adverbialization. These class-changing processes function essentially the same as for deriving non-verb words from verbs, as described in

the morphology chapters, but in Matses, whole clauses can be nominalized, adjectivalized, or adverbialized; i.e., when a verb's class is changed, any arguments and obliques/adverbials associated with it become part of a subordinate clause with sentence-like (= main clause-like) syntax. Infinitive clauses represent the only subordinate clause type that does not involve class-changing (though it clearly originates historically from a nominalization). The internal structure of these clauses remains essentially unchanged regardless of their function or the environment in which they are embedded. Thus, a formal classification of subordinate clauses is easy, it would include only four clause types: i) nominalized clauses; ii) adjectivalized clauses; iii) adverbialized clauses; and iv) infinitive clauses. Infinitive clauses are discussed together with nominalized clauses due to their similarity. Nominalized and adverbialized clauses are extremely common in the language, and fulfill many functions, while adjectivalized clauses fulfill only a few functions and are created less productively. The infinitive occurs in only one construction (as the object complement in desiderative constructions involving the verb bun 'want').

Thompson and Longacre (1985:172) provide a functional classification of subordinate clauses:

We can distinguish three types of subordinate clauses: those which function as noun phrases (called complements), those which function as modifiers of nouns (called relative clauses), and those which function as modifiers of verb phrases or entire propositions (called adverbial clauses).

I find this classification very useful for describing the functions of subordinate clauses in Matses; however, I find that these categories do not quite match up with any morpho-syntactic patterns associated with subordinate clauses. For example, nominalized clauses can function as relative clauses (§12.2.1), as some types of

complements (§§12.2.4, 12.2.5), and as some types of adverbial clauses, such as substitutive clauses and additive clauses (§12.2.3). Adjectivalized clauses form abilitative clauses, including a type of functional passive (§12.3.1), and negative circumstantial clauses (a type of adverbial clause; §12.3.3). Adverbialized clauses fulfill most (but not all) adverbial functions (§12.4.2), and also ‘start’ and ‘finish’ constructions (usually accomplished by object complementation; §12.4.4.1) and mark progressive aspect (§12.4.4.4). Clause chaining, one of the most prominent features of Matsigenka discourse, can be described as being made up of mostly adverbialized clauses, but nominalized and adjectivalized clauses also participate in clause chaining (§12.4.3.5). Despite their varied functions, derived clauses are treated grammatically essentially the same as a root of the respective lexical class. The infinitive and negative verb phrases are the only exceptions: the infinitive cannot be synchronically analyzed as a nominalization, but it is evident that it came historically from an action nominalization and shares many properties with nominalizations (§12.2.6); and negative verb phrases, involving a non-finite verb and an auxiliary verb, are clearly derived historically from copular constructions involving verb adjectivalization, but were evidently reanalyzed as complex verb phrases (rather than complex clauses), and have taken on some simple clause grammar, such as ergative case-marking on the erstwhile (intransitive) subject of the copula (§12.3.2). Thus, for the most part, at least formally, subordination in the language can still be identified as cases of verbal class-changing derivation, and so the sections on subordination will be organized with respect to the lexical class that the verb is derived into: nominalized clauses (§12.2), adjectivalized clauses (§12.3), and adverbialized clauses (§12.4). Then, I will discuss quotation (§12.5), before finally discussing coordination (§12.6). The functional terms “complement clause,” “relative clause,” and

“adverbial clause” are recognized as a valid, secondary, overlapping classification, and will be used throughout as descriptive tools.

12.1.1 Subordination vs. coordination; finite vs. dependent

The distinction between subordination and coordination can sometimes be very subtle, particularly in languages with clause-chaining constructions. Therefore, here I make explicit the criteria I use to distinguish subordination from coordination, not so much as a theoretical dissection, but for the purpose of providing a clear framework for describing the different inter-clausal relations in Matses.

At the core of the subordination vs. coordination distinction is the status of the head verb in the clause as inflected vs. uninflected, finite vs. non-finite, and independent vs. dependent. As described in the chapter on verb morphology, there is a verbal suffix position class that is obligatory for all verbs (§5.6). One set of suffixes in this position class I call the **finite** verbal inflectional suffixes: they mark tense and sometimes also evidentiality, aspect, mode, and person subject agreement, but most importantly, these suffixes do not change the lexical class of the verb stem. The other set of suffixes occurs in place of the inflectional suffixes, and derive noun, adjective, or adverb stems, or derive a noun-like verbal form: the infinitive. In these class-changed and infinitive verbs, all the inflectional categories are either lost or considerably reduced, and they must occur embedded in another clause: these are all **non-finite** forms. We could call all the suffixes in this position class “inflections,” and distinguish “finite inflection” vs. “non-finite inflection.” The problem with this characterization is that class-changing morphology is usually considered “derivational,” so I will reserve the term **inflection** for the finite suffixes and the infinitive, and call the rest uninflected, class-changed verbs. All verbs that head clauses that cannot occur alone in speech are considered **dependent** verbs. Non-finite verb forms by definition head dependent clauses because they must be

embedded in another clause. Finite verbs are independent unless the coordinating suffix *-que* 'so' is added after the verbal inflection, making the clause dependent (in a similar way that adding the word *and* to a finite clause in English would make it dependent; i.e., they require a second clause, but are not embedded in it). Additionally, quotative verbs can be inflected and finite, but cannot occur without the quoted speech, and are therefore always head dependent clauses. Likewise, quoted speech, (almost) always direct quotation, is inflected and finite, but cannot be incorporated into discourse without a quotative verb, and is therefore also dependent. Thus, we can categorize verbs as in Tables 12.1 and 12.2 (both tables represent the same classification, but presented in different ways).

Table 12.1. Verb classification and corresponding clause types.

Verb classification	Corresponding clause types
inflected	
finite	
independent	main clauses
dependent	<i>-que</i> coordinated clauses, quotative clauses
non-finite	infinitive subordinate clauses
uninflected (all non-finite, all dependent)	class-changed subordinate clauses

Table 12.2. Alternate presentation of the classification in Table 12.1

Verb classification	Corresponding clause types
finite (all inflected)	
independent	main clauses
dependent	<i>-que</i> coordinated clauses, quotative clauses
non-finite (all dependent)	
inflected	infinitive subordinate clause
uninflected	class-changed subordinate clause

Based on this categorization, we can distinguish subordination and coordination:

subordination involves a finite clause (the main clause) and at least one non-finite clause; **coordination** involves two finite clauses, one of which is dependent.

Subordination involves embedding, coordination does not.

(Direct) quotation is the trickiest to categorize because it is tempting to refer to it as some sort of subordination because the quoted speech resembles an embedded sentence-like complement of the quotative verb. But, in fact, quotation does not involve any non-finite verbs, and is therefore more similar to coordination. Additionally, having two dependent clauses is an anomaly: the quotative verbs ca and que (always used with direct quotation) cannot occur in discourse in the absence of the quoted speech (or an interrogative noun meaning ‘what’), and are therefore grammatically dependent; and the quoted clause may be headed by a grammatically independent verb, but it cannot be easily incorporated into discourse without the quotative clause (although it sometimes is, for rhetorical effect). Further complicating matters is that quotation with the third quotative verb dan ‘suppose incorrectly saying’ behaves like ca and que when it is used with direct quotation, but sometimes occurs with indirect quotations that function like embedded object complements. If I had to categorize quotation as subordination or coordination, I would have to categorize some instances of quotation with dan as subordination and all other instances as a special type of coordination. Instead, I will just consider it a third category of clause combination and refer to it simply as **quotation**, and treat it in a separate section (§12.5).

This being said, we can make some generalizations about coordination and subordination in Matses. First, coordination is extremely limited in Matses; it only occurs with one coordinating suffix -que, which can only be used when the main verb is an imperative or inflected with the first-person intention suffix -nu (§12.6.1). There is

one marginal case of coordination by juxtaposition (§12.6.3). Subordination, then, is left to accomplish almost all other clause combinations (except quotation), and subordination will be the topic of most of this chapter. Clause-chaining, for example, is clearly accomplished grammatically by subordination, although its function is more like that of coordination.

12.1.2 Subordinate, matrix, and main clauses; some definitions

A few terms should be defined here before discussing the different complex constructions in Matsigenka. **Sentences** are combinations of one or more clauses. All sentences have at least one **main clause**: main clauses contain an independent verb with finite inflection and have the same grammatical properties as simplex sentences. In simplex sentences, there is one main clause, and no other clauses. **Complex sentences** are of three basic types: i) those involving subordination (= embedding); ii) those involving coordination; and iii) those involving quotation. Additionally, a complex sentence may contain a combination of two or all three of these basic sentence types, though only combinations of (i) and (iii) are common. For clauses involving subordination, it is necessary to talk about two other clause types in addition to main clauses. In those involving subordination (and no quotation or coordination), there is one and only one main clause and at least one **subordinate clause**. Subordinate clauses have non-finite verbal morphology, slightly different clause-internal grammatical properties (see next section), and may have restricted distribution as compared to main clauses. All subordinate clauses are subordinate to one and only one **matrix clause**, and all matrix clauses are associated with one or more subordinate clauses. The matrix clause can itself be a subordinate clause subordinate to another matrix verb, or it can be the main clause of the sentence. A subordinate clause can be a matrix clause of another subordinate clause,

but it cannot be a main clause. The schematic representation of a three-clause sentences involving subordination is illustrated in Figure 12.1.

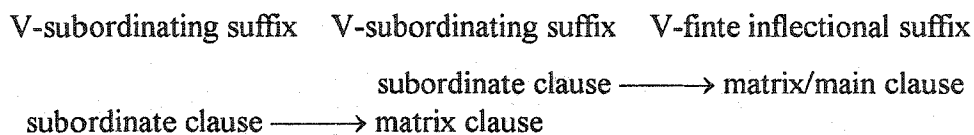


Figure 12.1. Relationships among subordinate, matrix, and main clauses in a three-clause sentence.

Subordinate clauses can occur before, after or inside their matrix clauses. There is a tendency for the main clause to appear sentence-finally, particularly with some types of subordination (e.g., infinitives), but few sentence types strictly dictate relative ordering of clauses. Some matrix clauses are directly or indirectly associated with three or more subordinate clauses. These very complex, many-clause sentence types will be illustrated near the end of this chapter in the section on clause chaining (§12.4.3).

12.1.3 General properties of subordinate clauses

The bulk of this chapter deals with the different types of subordinate clauses in the language, nominalized clauses (§12.2), including infinitive clauses (§12.2.6), adjectivalized clauses (§12.3), and adverbialized clauses (§12.4). These clause types all have their own idiosyncratic properties, but overall they are strikingly similar in their internal structure. Therefore, to reduce repetition, before describing the individual clause types, I will mention the clause-internal grammatical properties that subordinate clauses share.

Subordinate clauses are non-finite in that they take class-changing suffixes in place of the finite verbal inflectional suffixes. Inflectional suffixes code tense and sometimes also tense, mode, evidentiality, and/or person subject agreement, so these

categories are lost or reduced in most subordinate clause types. Past nominalizations retain tense and evidentiality information in the nominalizing suffixes. Adverbialized clauses lose absolute tense, but mark relative tense (see Comrie 1985 for these terms), such as 'after,' 'while,' etc. Some negative adjectivalized and nominalized clauses mark perfect aspect. For the most part, then, inflectional information is lost.

All subordinate clauses pretty much retain main clause syntax: case-marking is the same; obliques/adverbials can be associated with subordinated verbs; relative ordering of noun phrases and obliques is relatively free; zero-pronominalization of third-person arguments is possible; etc. The few differences that exist between main clause and subordinate clause syntax are idiosyncrasies associated with the requirements of the subordinate clauses, rather than assimilation to other syntactic properties in the language, such as noun phrase syntax in nominalized clauses, for example. The differences between subordinate clause internal structure and main clause syntax are the following four:

- 1) Word order. The subordinate status of a subordinate clause is always marked overtly, and it is only on the verb that the subordinating suffix can be attached. This suffixed verb must be the final (right-most) element in the subordinate clause; this contrasts with main clauses, where the verb does not have to be last. But the relative order of the other elements of the subordinate clauses (arguments and obliques/adverbials) is free, as in main clauses. It is noteworthy that the least-marked orders in main clauses/simplex sentences are AOV, OAV, and SV (§11.12), so this clause-final restriction on the verb does not result in a marked word order.
- 2) Equi-deletion. Some arguments in subordinate clauses do not occur, where these would be required to appear overtly in main clauses. Infinitive, adjectivalized, and

adverbialized subordinate clauses require or optionally allow equi-deletion of core arguments under co-reference with the matrix clause subject or object. This allows first- and second-person participants to occur covertly in subordinate clauses, unlike in (most) main clauses. In participant nominalizations, the referent of the nominalization (the Agent, Instrument, etc.) cannot occur overtly in the nominalized clause. This can result in the absence of the otherwise required first- or second-person arguments, and Instrument nominalizations contrasts with main clauses in that if there is an Instrument associated with the verb, it must occur overtly in a main clause, but can't occur in an instrument nominalization. Thus, generally speaking, subordinate clauses have fewer overt arguments than main clauses.

3) First-person pronouns. In main clauses, the most common and natural way to refer to first-person arguments is using pronominal enclitics as part of the inflection of finite verbs (§§5.6.5, 11.2.6). These first-person pronominal enclitics cannot occur on non-finite verbs, and therefore reference to first-person arguments must be with full pronouns, with covert co-referential (i.e., "equi-deleted") pronouns, or, less frequently, with the pronominal enclitics attached to an element preceding the clause.

4) Use of fourth-person pronouns. While in main clauses pronominalization of third-person arguments is accomplished only by zero-pronominalization (unless a noun-phrase enclitic occurs; §11.2.4), in subordinate clauses, the fourth-person pronouns, abi '4th Person Absolutive' and ambi '4th Person Ergative/Instrumental,' may occur optionally, or obligatorily in special cases of co-reference with an argument in the matrix clause (§§4.4.1, 11.2.4).

In light of the nature of these minor differences, it seems possible to say that retention of main clause syntax is essentially complete for Matses subordinate clauses. The description of individual subordinate clause types in each section of this chapter will provide illustration of this pattern and justification for this analysis.

12.2 Nominalized clauses

Nominalization was described in the noun morphology chapter (§4.7), so here I will present only a brief outline of some aspects of nominalization that are relevant to complex constructions. Verbs are nominalized by attaching one of 27 different nominalizing suffixes (Table 4.26) to the verb stem in place of the inflectional morphology. These suffixes can nominalize a verb creating a noun word (= "verbal noun"), or they can nominalize whole clauses, including the verb's core arguments and any obliques/adverbials. In other words, the whole "nominalized clause" is equivalent to a single noun word while retaining main-clause-like internal syntax (see below). As described in section 4.7, nominalized words can become lexicalized nouns (i.e., their meaning can no longer be predicted from the combination of the original verb root plus the nominalizing suffixes).¹ The few distinctions that the language makes between "real nouns" and nominalizations are drawn with monomorphemic noun roots and lexicalized noun words on one hand, and non-lexicalized nominalized words and multi-word nominalized clauses on the other. In other words, the essential factor is lexical status, not whether it is a one-word nominalization vs. a multi-word nominalization.

¹ The issue of lexicalization is a complex one, and was discussed in detail in section 3.2.6. Here it is relevant to note that unlexicalized nominalizations cannot always be distinguished from lexicalized ones by whether they refer to a generic event or a particular event, since many nominalizations (specifically, all but those formed with past nominalizers) can be used to refer to generic ad-hoc categorizations, as well as nominalizations referring to a particular event.

Two main classes of nominalizations occur, **action nominalization**, where the nominal element refers to an event, state, or activity, and **participant nominalization**, where the nominal element refers to some entity that was involved in the event or state. Participant nominalizations, be they nominalized words or nominalized clauses, can be substituted into any noun syntactic position, and can take all nominal morphology (with a few qualifications to be described below). Participant nominalizations are nouns, as far as Matses syntax is concerned, and as such have syntactic freedom to fulfill many different functions such as argument and oblique slots in sentences. Participant nominalizations occurring in apposition to other nouns in the matrix clause are the functional equivalent of relative clauses. This will be the topic of section 12.2.1. Participant nominalizations also occur in predicate nominal copular clauses, where the function of the copular clause is more predication than equation (§12.2.2). Also, substitutive clauses are not accomplished in Matses by adverbial clauses, but by nominalized abilitative clauses, a type of participant nominalization (§12.2.3). Action nominalizations, by contrast, have a comparatively very limited distribution: they can only occur in two noun syntactic slots, as subjects of predicate adjective copular clauses (arguably as a type of subject complement; §12.2.4), and as postpositional objects (§12.2.5). (Participant nominalizations can also occur in these last two syntactic positions.) Action nominalizations are never lexicalized, while most non-past participant nominalizers are commonly used to create new lexemes.

The internal structure of the nominalized clause itself does not vary for the different functions or syntactic positions that nominalized clauses occur in. So, before turning to the different individual functions of nominalized clauses in the following subsections, I will describe here the structure of nominalized clauses, to avoid repetition. Nominalization of a clause is accomplished via the same process whereby a simple verb

is nominalized: one of the 27 different nominalizing suffixes occurs on the verb stem in the place of the inflectional morphology. I say “nominalization of clauses” because the process could be described as the whole clause being nominalized, rather than the verb being nominalized and the arguments and peripheral participants assuming different relationships to the predicate. This is because sentence/main clause syntax is essentially retained in nominalized clauses, as it generally is in subordinate clauses. The retention of main clause syntax is particularly evident in action nominalizations, where all of the arguments of verb may appear in the clause (1; in this section, all multi-word nominalized clauses, save the nominalizer, will appear in square brackets).

- (1a) chido-n dada-Ø cues-onda-sh
 woman-Erg man-Abs hit-Dist.Past:Dir.Exper-3
 ‘The woman hit the man (a long time ago, witnessed directly).’
- (1b) [chido-n dada-Ø cues]-ondac icsa-mbo ic-e-c
 woman-Erg man-Abs hit-Dist.Past.Act.Nzr bad-Aug be-Npast-Indic
 ‘It is bad that the woman hit the man (a long time ago).’

Nominalizations that refer to participants, by contrast, cannot overtly include the participant that the nominalization itself refers to (2); however, in relative-clause-like constructions, the referent of the participant nominalized clause may occur apposed to the nominalization (e.g., matses in 2a).

- (2a) [cuesban-n pe]-aid matses cuesban-n pe-ac intac
 bat-Erg eat-Pat.Nzr people bat-Erg eat-when:O>S/A blood
bēdan-en-quo ic-quid
 heal-Neg-Aug Aux-Hab
 ‘People who are bitten by bats, after the bat bites them, their blood doesn’t heal.’
 E-XI 049 cuesban 08
- (2b) *[cuesban-n matses-Ø pe]-aid

In light of the common pattern in the world's languages of verbal nouns' arguments assuming associative (genitival) relationships with the predicate (Noonan 1985) or otherwise assimilating to noun phrase syntax (Comrie and Thompson 1985), one may suspect that the -n in action nominalized clauses like those in (1b) and (2a) is the genitive marker rather than the ergative marker. However, while the genitive and ergative enclitics are formally identical, genitive and ergative pronouns are not, allowing us to resolve this issue easily (3; see also 12 below).

- (3a) [umbi mibi-Ø cues]-ac icsa-mbo ic-o-sh 'It was bad that I hit you.'
 1Erg 2Abs hit-Act.Nzr bad-Aug be-Past-3
- (3b) *cun [mibi-Ø cues]-ac icsa-mbo ic-o-sh
 1Gen 2Abs hit-Act.Nzr bad-Aug be-Past-3

Even without substituting first- or second-person pronouns, it is evident that the -n is not the genitive marker because in Matses the possessor noun/noun phrase must *directly* precede the possessed noun/noun phrase (§10.3.1). In (1b) and (4a), the intervening absolutive participant and adverb, respectively, show that these cannot be interpreted as genitive noun phrases. Additionally, while ergative arguments can be zero-pronominalized, genitive nouns cannot be. So the absence of -n-marked participants in nominalizations like (4b) suggests that -n-marked noun phrases are not genitive.

- (4a) [debi-n enden anseme]-ac bēda-mbo ic-e-c
 Davy-Erg early hook.fish-Act.Nzr good-Aug be-Npast-Indic
 'It is good that Davy went fishing early.'
- (4b) [Ø dadpen nuēcquid-Ø anseme]-ac bēda-mbo ic-e-c
 3Erg many fish-Abs hook.fish-Act.Nzr good-Aug be-Npast-Indic
 'It is good that he caught many fish.'

Another potential source of confusion in the analysis of these types of phrases is that the ergative participant might be interpreted as a genitive participant *outside* of the nominalization, actually possessing the noun phrase. This creates a possible ambiguity (5) or dual analysis (6 & 7) of some noun phrases containing nominalizations, where one might not be sure whether the *-n*-marked noun is in the genitive case, possessing the nominalization, or in the ergative case forming part of the nominalization:

(5) debi-n sica-aid ne-e-c ‘It is what Davy strained.’
Davy-Erg/Gen strain-Pat.Nzr be-Npast-Indic ‘It is Davy’s strained beverage.’

(6) bēdi-n pe-aid-quo shaë ne-e-c
jaguar-Erg/Gen eat-Pat.Nzr-Aug giant.anteater be-Npast-Indic
‘The giant anteater is truly one that is eaten by the jaguar.’
?‘The giant anteater is truly the jaguar’s thing that gets eaten.’

A-IV 027 shaë 31

(7) matses-n che-tequid itia ne-e-c
Matses-Erg/Gen eat.unchewed-Pot.Pat.Nzr swamp.palm be-Npast-Indic
‘The swamp palm is one that is for eating by Matses.’
?‘The swamp palm is Matses’ thing for eating.’

A-I 029 itia 02

However, sentences like (5) are really only ambiguous because of the coexisting lexicalized and analyzable usages of some words like *sicaid*, which in its lexicalized usage refers to a type of strained beverage that the Matses make.² If there is no corresponding lexicalized nominalization, then there is no ambiguity. So (6) and (7) are really not really ambiguous, since it is evident that the genitive marker is only used where there is real semantic possession (including ownership, part-whole relations, and interpersonal relations).

² So we could have the sentence in (5’), but only with the possessive reading.

(5’) aton sicaid ne-e-c ‘It is his strained beverage.’
3Gen strain-Pat.Nzr be-Npast-Indic *‘It is what he strained.’

Adverbials occur quite freely inside any type of nominalized clause, and are marked in the same way as adverbials associated with main clauses. There are no restrictions on the number of adverbials that can occur in nominalizations: the clause in (8) contains two locative postpositional phrases.

- (8) [sedque-aid nantan itia tayun tabad]-quid mocodi
shine-Pat.Nzr on swamp.palm at.the.base sit:Pl-Agt.Nzr plant.species
chido-n ësh-chic-quid dadpen
 woman-Erg seed-pull.off-Hab many
 ‘Women pick many seeds from mocodi plants that are found at the foot of swamp palm trees in open canopy forest (i.e., where the sun shines through).’

A-XIII 013 mocodi 05

More verbal categories are retained in some nominalizations than in other types of subordinate clauses. Verbal inflection codes tense, and sometimes also evidentiality, subject person agreement, and mode (interrogative vs. indicative). Since the nominalizing suffixes go in place of the inflectional suffixes, these categories may be lost. Subject person agreement and mode distinctions are actually always lost, but as can be seen in Table 4.26, tense and evidentiality distinctions are maintained for all of the past nominalizers (1). And a few nominalizers code aspect distinctions that do not occur on finite verbal inflections (e.g., -acmaid ‘Negative O/Instrument Nominalizer: Perfect’). Derivational suffixes, which go on the verb before the inflectional suffixes, can occur on any finite or nominalized verb (semantics permitting).

Some nominalizers point to a particular participant/argument of the nominalized event (9 & 10).

- (9) [titado-Ø pe]-quid cho-sho
 peach.palm-Abs eat-Agt.Nzr come-when:A/S/O>O
cuesunne-shun-bidan-e-c
 kill-Appl-go.do.go.Tr-Npast-Indic
 “‘As the ones eating peach palm fruits are coming, we kill them and then keep on
 going’.” [historical present]
 + K-XXII 014 chema 137
- (10) poshto-n incuente ic-e-c [cuête cuidi uidénua]-te
 woolly.monkey-Gen tail be-Npast-Indic dicot.tree branch hold-Inst.Nzr
 ‘The woolly monkey has a prehensile tail, (lit. ‘The woolly monkeys has a tail,
 one that is used for holding onto tree branches’).
 A-I 052 poshto 04

This resolves the “case recoverability problem” (Payne 1997:330). But other nominalizers simply specify that the nominalization refers to the action itself or that the nominalization refers to *any* participant associated in any way with the event (these nominalizers are more specific in terms of evidentiality and tense). Action nominalizations do not refer to participants, so case-recoverability is not an issue, but with the “general participant nominalizers,” case recoverability can only be resolved by context. The semantic relationship of the nominalization to the event is narrowed down by the fact that the referred-to participant is missing from the nominalized clause, and by the case marking on any other arguments in the clause, but since all arguments and participants are optional in the nominalization, this alone cannot resolve the problem of case recoverability. For example, the nominalizing suffix -boed specifies only recent past tense, experiential evidentiality, and that the nominalization refers to some participant associated with the event, which could be the A/Agent, the O/Patient, an Instrument or a peripheral participant (11). All that the syntax tells us is that the referent of the nominalization cannot be the referent of one of the overt noun phrases in the nominalized clauses.

- | | | | |
|-------|--|-------|--|
| (11a) | [<u>umbi cues</u>]-boed
1Erg hit-Past.Nzr
'the one I hit'
'what I hit him with'
'his broken nose from my hitting him'
*‘the hitter’ | (11b) | [<u>ubi cues</u>]-boed
1Abs hit-Past.Nzr
'the one who hit me'
'what he hit me with'
'my broken nose from him hitting me.'
*‘the hit person’ |
|-------|--|-------|--|

In (12), the presence of mimbi in the nominalized clause tells us that the nominalization does not refer to the ergative participant, but it is hard to tell from the form of the nominalized clause alone, whether the nominalization refers to the person who was told to do the weaving (the absolute argument), an Instrument (e.g., a loom or weaving pins), or, what the nominalization really refers to, the thing that the quoted person was asked to weave, a carrying strap. In this case, the apposed “head noun,” tote ‘woven carrying strap,’ reveals the semantic relation of the referent of the nominalization in this relative-clause-like construction. But without the apposed noun, we would be relying completely on context.

- (12) nē [mimbi daēdca-ta ca]-boed tote
 here 2Erg weave-Imper say-Past.Nzr woven.carrying.strap
que -quin tote mene -quid
 say -while:S/A>A woven.carrying.strap give -Hab
 ‘Saying, “Here! The woven carrying strap that you asked (me) to weave,” they [women] give the woven carrying strap [to their brother, boyfriend, or husband].’
 A-XIII 042 tote 15

There is no equi-deletion, raising, or other connections between the arguments of the nominalization and the arguments in the main clause. The next subsection reveals more details on participant nominalizations and subsection 12.2.4 contains more information on action nominalizations. Otherwise, the subsections of the present section focus on the syntactic slots that nominalizations occur in. Subsection 12.2.6 describes the only construction where an infinitive clause is found.

12.2.1 *Relative clause-like function of nominalizations*

As mentioned in the chapter on phrases, it is possible for participant nominalizations (never action nominalizations) to fill the modifying noun slot in N N noun phrases (§10.8). When the nominalization is a nominalized clause, the effect is that of a noun being modified by a subordinate clause—a relative clause function. This is not an undocumented or inconceivable function of nominalization (Comrie and Thompson 1985). There is no typical relative clause construction in Matses, nor is there any other way to accomplish the relative clause function, so this construction type is encountered frequently in the language.

It is possible to describe nominalized clauses in their noun-modifying function in the same way that one would describe restrictive relative clauses (e.g., as those described in Keenan 1985b or Payne 1997). The **relativizer** would be one of the 17 participant nominalizing suffixes (Table 4.7.6), and the **restrictive/restricting clause** would be the nominalized clause itself. Often, the nominalized clause occurs together with another noun (or noun phrase) in the same nominal syntactic slot, with which the nominalized clause is co-referential, and which the nominalized clause modifies. This other noun could be considered the **head noun** (Payne 1997)/domain noun (Keenan 1985b). The distributional possibilities of the nominalized clause in relation to the head noun are as follows: i) prenominal (with the nominalized clause preceding a head noun; 13 & 14, see also 12); and ii) postnominal (with the nominalized clause following the head noun; 15 & 16), and, arguably, iii) headless (without a head noun; 17-19³). (Head nouns in **bold** in this section, nominalizations, excluding nominalizers, in square brackets.)

³ Whether these last three examples actually represent headless noun phrases or simply nominalizations in nominal slots seems to be a moot point. Examples (17) - (19) could just as well be translated by replacing the bold noun in brackets with “ones” or “the ones,” and there is no grammatical motivation to call these headless constructions. But I will do so here for the sake of comparison to typical relative clauses in other languages.

- (13) [di pinchuc-n diad]-quid-bi bacun che-quid
palm.species palm.species-Loc hang-Agt.Nzr-Emph bee.hive eat.unchewed-Hab
'[Matses] eat honey/bee hives that hang on di pinchuc palms.'
A-I 005 di pinchuc 07
- (14) tambisbiecquid chedo-n-bi yuca pe-e-c [matses-n
pacarana etc-Erg-Emph manioc eat-Npast-Indic Matses-Erg
nidtsin]-aid yuca
plant-Pat.Nzr manioc
'Pacaranas and other large rodents eat manioc, manioc planted by Matses.'
A-IV 011 tambisbiecquid 06
- (15) isitodo [cue-mbo ic]-quid-n bud-ash abuc maca
liana straight-Aug be-Agt.Nzr-Loc descend-after:S/A>S high rat
'After climbing down a vine that is straight, the spiny tree rat...'
A-IV 016 abuc maca 09
- (16) matses-n shui-shun pe-e-c tambisëmpi [ambi
Matses-Erg roast-after:S/A>A eat-Npast-Indic spiny.rat 4Erg
cues-me]-aid
kill-Caus-Pat.Nzr
'Matses roast them and then eat the spiny rats that they themselves killed.'
A-IV 014 tambisëmpi 11
- (17) [incuenta cho-tsëc-ec ic]-quid mani
tail have-Adjzr:Dim-Advzr:Intr be-Agt.Nzr plantain
che-e-c que-shun cues-quid cuesban
eat.unchewed-Npast-Indic say-after:S/A>A kill-Hab bat
'After saying, "[The bats] that have a tiny tail eat plantains," they kill the bats.'
D-X 057 cuesban 08
- (18) nëbi [chotac ic-ac-no cuëdëd]-quid-n nëbi pisin
now non-Indian be-Act.Nzr-Loc live:Pl-Agt.Nzr-Erg now penis.string
tsiu-en-quio ic-e-c
wear.on.waist-Neg-Aug Aux-Npast-Indic
'Now, [those Matses] that have been where the non-Indians are, don't wear penis
strings, now.'
A-XIII 016 pisin 14
- (19) [acte në-shuebud-tsëc]-aid-n tsad-quid tsipud-mpi
river water-lean-Dim-Pat.Nzr-Loc sit-Hab pygmy.anteater-small
'The little pygmy anteater sits in [trees] that are leaning into the river.'
A-IV 025 tsipud 06

The **relativized noun phrase** (NP_{rel}) can be identified as the referent of the nominalized clause, and is itself never mentioned overtly within the nominalized clause (see §12.2 for case recoverability strategies for all nominalized clauses). Thus we have a three-way co-reference/identity in this construction type: the relativized noun phrase, the nominalized clause, and the “head noun” all refer to the same referent. The positions that can be relativized can be seen by looking at the list of different nominalizers in Table 4.26; they include: the S, A, O, Instrument, and obliques (actually, what I call “affected peripheral participant; §4.7.1.2). There is no particular nominalizer that refers to a genitive participant. This has to do with the fact that the genitive case is specified by a noun phrase type, not by a verb (recall that nominalizers only nominalize verbs).

We could loosen the definition of restrictive relative clause a bit and say that in this function nominalizers *are* relativizers, and that nominalized clauses can be a type of restrictive clause, and just call these Matses constructions “relative clauses.” However, there are two significant properties of these Matses relative-clause-like constructions that make me hesitate to call them real relative clauses. The basic distinction is that the “head noun” and the nominalized clause do not seem to be necessarily related to each other by subordination⁴ or even compose a single noun phrase. In some cases, it can be shown that the “head noun” and the nominalized clause are not related syntactically other than by occurring in the same syntactic slot and having the same semantic referent. Surprisingly, the “head noun” and the nominalized clause do not have to be adjacent (20, cf. 13; 21, cf. 14; 22).⁵

⁴ While the nominalization may not be subordinate to the “head noun” it is nevertheless subordinate in that it is embedded in the matrix clause and cannot occur alone as a finite sentence.

⁵ Recall from chapter 10, that this non-adjacent modification is also possible with quantitative adverbs, but not with noun modifiers, adjectives, or attribute adverbs. Also, recall that conjoined noun phrases are also related by “apposition” and do not have to occur adjacently.

- (20) [aid-bi di pinchuc-n diad]-quid-bi
 that.one-Emph palm.species palm.species-Loc hang-Agt.Nzr-Emph
matses-n bacun che-quid
 Matses-Erg **bee.hive** eat.unchewed-Hab
 ‘Matses eat honey/bee hives that hang in those same di pinchuc palms.’
 A-I 005 di pinchuc 06
- (21) batachued-n mani che-quid [matses-n chococa]-aid
 tayra-Erg plantain eat.unchewed-Hab Matses-Erg bury-Pat.Nzr
 ‘Tayras eat bananas that were planted by Matses.’
 A-IV 033 batachued 04
- (22) poshto-n incuente ic-e-c [cuëte cuidi uidënuu]-te
 woolly.monkey-Gen tail be-Npast-Indic dicot.tree branch hold-Inst.Nzr
 ‘The woolly monkey has a prehensile tail (lit., a tail that is used for holding onto
 branches).’
 A-I 052 poshto 04

This freedom to occur separately is accompanied by the option of case-marking both the
 “head noun” and the nominalized clause (23).

- (23) [ad]-quid-n-bi cachina-Ø pe-e-c
 like.that-Agt.Nzr-Erg-Emph chicken-Abs eat-Npast-Indic
mapiocos-n
 common.opossum-Erg
 ‘That same one, the common opossum, eats chickens.’
 A-IV 045 mapiocos 05

Note that in (20) - (22), (24), (25) or in any case where the two co-referential noun
 phrases are absolutive arguments, there is no way to tell if they are “double case-marked”
 or not.

- (24) iui chuda [nua uibën ic]-quid istuid-shun matses-n
 tree rift large buttress.root be-Agt.Nzr find-after:S/A>A Matses-Erg
uncate chësh-quid moco-n cuësh-tanquin
 paddle carve-Hab ax-Inst cut.with.grain-after:S/A>A
 ‘When they find an iui chuda tree (fig species) that has a large buttress root,
 Matses carve a paddle, after going and cutting it out from the tree with an ax.’
 A-XIII 028 uncate 04

- (25) ado-ac aton utsi [tsiuec cho]-quid uanno tsad-quid
 do.thus-after:O>S/A 3Gen brother last come-Agt.Nzr apart sit-Hab
 ‘Then, the brother that comes last sits apart (in the corner of the house).’

C-III 001 shēcten 26

The elicited examples in (26) - (29) illustrate the possible alternatives (other word-order possibilities exist, e.g., both noun phrases could follow the verb in highly-marked sentences); all the sentences in (26) - (29) have essentially the same meaning.

- (26a) chido-n cues-o-sh-i [umbi muaua]-boed-n
 woman-Erg hit-Past-3-1O 1Erg lie.to/about-Past.Nzr-Erg
 ‘The woman that I lied to hit me.’/‘The woman, the one I lied to, hit me.’
- (26b) *chido cues-o-sh-i [umbi muaua]-boed-n
 (26c) *chido-n cues-o-sh-i [umbi muaua]-boed
- (27a) [umbi muaua]-boed-n cues-o-sh-i chido-n
 (27b) *[umbi muaua]-boed cues-o-sh-i chido-n
 (27c) *[umbi muaua]-boed-n cues-o-sh-i chido
- (28a) chido-n [umbi muaua]-boed-n cues-o-sh-i
 (28b) chido [umbi muaua]-boed-n cues-o-sh-i
 (28c) *chido-n [umbi muaua]-boed cues-o-sh-i
 (28d) *chido [umbi muaua]-boed cues-o-sh-i
- (29a) [umbi muaua]-boed-n chido-n cues-o-sh-i
 (29b) [umbi muaua]-boed chido-n cues-o-sh-i
 (29c) *[umbi muaua]-boed-n chido cues-o-sh-i

Basically, it’s like this: when the two (non-absolutive) noun phrases occur in non-adjacent positions in the sentence, they must *both* carry case marking (26 & 27).

When they are adjacent, there is an option: either both noun phrases can be case-marked, or only the second (but never only the first) of the two may be case-marked (28 & 29).

The relative order of the “head noun” and the nominalized clause is not restricted and does not affect these patterns, nor is the status of a noun phrase as “head noun” relevant.

If one wishes to hold on to the idea that there are relative clauses in Matses, one would

have to suggest that the sentences in (26) - (29) represent two different constructions: double case-marked co-referential noun phrases representing two separate (i.e., non-constituent-forming) noun phrases with no subordination relation (“apposed” is a funny word to use here, considering that they two noun phrases do not always occur adjacently, but it would capture their relation in comparison to English); and single case-marked relative clause-like constructions representing a single constituent where the nominalized clause is subordinate to the “head noun.” The tricky part, of course, is determining which construction type is represented when the co-referential clauses are absolutive and adjacent. The other issue is that it is difficult to determine what meaning difference, if any, exists between the two proposed construction types. Or what pragmatic factors motivate double-case marking of adjacent co-referential noun phrases. The only pattern I have discovered so far in the data is that when the two co-referential noun phrases are adjacent, “double case-marking” is more likely to occur when the “head noun” itself is also a long (i.e., multi-word) noun phrase (30 & 31).

- (30) në-uësh-bi pudun-quin cun papa pado-n
 here-Ev.Init:Intr-Emph jump-while:S/A>A 1Gen father deceased-Erg
[cun tita bed]-quid chedo-n uidënu-a-onda-sh
 1Gen mother grab-Agt.Nzr etc-Erg hold-Dist.Past-3
 ‘Jumping out from very near (to where the first Dëmushbo Indian was passing by), my late father who captured my mother, and his group, grabbed him.’
 + K-XXII 003 chema 023

- (31) cuesban utsi-n-bi-c [incuenta cho]-quid-n adembidi
 bat other-Erg-Emph-Emph tail have-Agt.Nzr-Erg likewise:Tr
pe-quid
 eat-Hab
 ‘Another bat, the one that has a tail, also eats like that.’
 B-VII 035 cuesban 04

Another hitch is that both co-referential noun phrases can be nominalized clauses (32).

One could venture the account that this relative clause-like construction is a headless

clause (the head would be ‘sapling’ in 32) with two subordinate restricting clauses associated with it.

- (32) [cuidi cho]-quid [bēda-mbo ic]-quid is-shun quēuēte
 branch have-Agt.Nzr good-Aug be-Agt.Nzr see-after:S/A>A hook
te-e-c matses-n
 cut-Npast-Indic Matses-Erg
 ‘After finding a branched one [a sapling], a good one, Matses cut it into a hook.’
 A-XIII 008 quēuēte 03

As a final note on these constructions, it should be pointed out that in N N noun phrases, the order of the head noun and the modifying noun is restricted: while the head noun can come first or second in the N N noun phrase, word order is determined by the semantic relation between the two nouns (§10.3.5; Table 10.2). By contrast, the construction types described in this section, whether single or double case-marked, or whether adjacent or not, can occur freely in either order. Linear ordering, separability, domain of enclitics: some of these relative-clause-like constructions fail all tests for constituency structure presented in section 10.2. So here is one example where the syntax treats lexical nouns a bit differently from nominalizations.

My interpretation is that all these constructions are of a single basic type, exhibiting the options of single or double case-marking and of occurring adjacently or separately. Double case-marking seems to be motivated by a desire to avoid confusion, being obligatory when the co-referential noun phrases occur apart, and being favored when the noun phrases are both long/complex. Note that although absolutive arguments are not overtly marked, the fact that ergative and all non-core participants must be double-case marked when separated allows the absolutive participants to be recognized by default, even when disjunct. While some of these constructions take on the properties of single-constituent noun phrases, this construction type does not require its elements to

behave as a single constituent.⁶ Syntactically, these constructions are not good examples of relative clauses, but they fulfill the basic function of relative clauses: to modify a noun with a sentence-like clause.

12.2.2 Predication function of nominalized clauses

A pattern that we see in Matses participant nominalizations is that they are frequently embedded in predicate nominal clauses (see §11.7.1 for this clause type) that, focusing on the form of the sentence, would be translated into English as equative constructions. If we focus on their semantics, function, and high frequency, they would be translated as habitual active sentences (33 & 34).

- (33) budëd [ënapen cani]-quid ne-e-c
 palm.species long grow-Agt.Nzr be-Npast-Indic
 'The budëd palm is a tall grower.' / 'The budëd palm grows tall.'

A-I 012 budëd 02

- (34) [chido-n daëdca]-aid secte ne-e-c
 woman-Erg plait-Pat.Nzr strainer be-Npast-Indic
 'Strainers are things that are woven by women.' / 'Women weave strainers.'

A-XIII 025 secte 11

It is evident that this construction type is used to convey a more permanent trait or characteristic habit associated with the copular clause subject. But there also seem to be pragmatic motivations associated with these copular clauses vs. regular active clauses. The pragmatic function of this construction type may be to maintain topic continuity by keeping the topic as the sentence subject (S/A). At least in their most frequent use (these occur almost as frequently as active sentences in natural history texts, for example), the function of these constructions is *not* to create entities from events, the usual function of participant nominalizations. Comparison of the active sentence in (35) with the copular

⁶ Note the similar pattern for conjoined noun phrases discussed in section 10.9.1.

sentences in (36) and (37) illustrates the topic continuity hypothesis: (35) is from a text about howler monkeys, but (35) marks a shift from characterizing howler monkeys to talking about which age-classes of Matses should and should not eat howler monkeys, how many Matses are no longer obeying the food taboos, etc. (36) and (37), by contrast are from texts about tamarins (squirrel-like primates) and coatis (raccoon-like mammals), respectively, and do not represent a change in topic, but a continuation of the discussion of the characteristics, habits, and uses of the animals in question.

- (35) adembidi matses-n achu pe-e-c
 likewise:Tr Matses-Erg howler.monkey eat-Npast-Indic
 ‘Also, Matses eat howler monkeys.’

A-I 054 achu 23

- (36) [capishto chedo pe]-quid sipi ne-e-c
 cricket too/etc eat-Agt.Nzr tamarin be-Npast-Indic
 ‘Tamarins are ones that eat crickets and things like that.’

A-IV 005 sipi 09

- (37) tsise [chotac chedo-n pe]-aid ne-e-c
 coati non-Indian too/etc-Ergeat-Pat.Nzr be-Npast-Indic
 ‘Coatis are ones that are also eaten by non-Matses.’

A-IV 028 tsise 17

Unfortunately, my topic continuity hypothesis fails to predict with precision when these constructions are used. Most likely it is only one of several factors motivating its use. Whatever that main factor may be, we can speculate that one or more of these functional motivations account for the high frequency of this construction in some text genres. This high frequency then suggests that the construction has been reanalyzed as a habitual and/or topicalization construction equivalent to an active clause. However, despite the obvious predication function of these sentence types, I have not yet found any morpho-syntactic patterns showing that simplex clause syntax has been extended to these complex sentences. For example, the Agents in (36) and (38) do not take ergative

marking, showing that they are the subjects of the (intransitive) copular verb ne, not of the transitive nominalized verbs.

- (38) incuente-n bed-esa bēshuicquid ne-e-c
 tail-Inst grab-Neg.S/A.Nzr saki.monkey be-Npast-Indic
 ‘Saki monkeys are ones that cannot grasp with their tail.’
 i.e., saki monkey do not have prehensile tails.

A-I 055 bēshuicquid 28

The sentence in (39) may represent a possible exception: one of the conjoined arguments of the nominalized verb appears *outside* of the nominalized clause (recall that arguments must precede the verb in subordinate clauses), suggesting reanalysis as a single clause construction. However, the sentence intonation suggests that this might best be thought of as an afterthought.

- (39) [senad chedo pe]-quid bēdi-dapa ne-e-c shēcten chedo
 deer too/etc eat-Agt.Nzrjaguar-large be-Npast-Indic **collared.peccary too/etc**
 ‘Jaguars are ones that eat deer and animals like that, collared peccaries, too.’

A-IV 036 bēdi dapa 09

So, we can speculate that **reanalysis** has occurred, that is, a change in the underlying cognitive representation of the constructions. But we have yet to see any extension/analogy, that is, overt “borrowing” of morpho-syntax from an analogous construction in the language (see Gildea 1998 chapter 3 for this terminology). See sections 12.2.6 and 12.3.2 for similar situations where extension/analogy evidently *has* occurred in infinitive and negative constructions..

12.2.3 Nominalizations as adverbial clauses

Substitutive clauses are defined in Thompson and Longacre (1985:199) as a type of *adverbial* clause where the subordinating marker signals “the replacing of an expected event by an unexpected one.” In Matses, substitutive clauses are accomplished not by

adverbialized clauses (see §12.4 for definitions of adverbial vs. adverbialized clauses), but by nominalized abilitative clauses (40-42; see §12.3.1 for abilitative constructions).

- (40) [bata-mbo ic-tiad]-quid-bi muca-mbo ic-o-sh
 sweet-Aug be-**Abil-Agt.Nzr-Emph** bitter-Aug be-Past-3
 ‘Instead of being sweet, it was bitter.’
 Lit. ‘The one that could/should be sweet was bitter.’
- (41a) [pambid pe-tiad]-quid-bi nuëcquid che-o-sh
 meat eat-**Abil-Agt.Nzr-Emph** fish eat.unchewed-Past-3
 ‘Instead of eating meat, he ate fish.’
 Lit. ‘The one that could have eaten meat ate fish instead.’
- (41b) [pambid pe-tiad]-quid-bi-c nuëcquid che-o-sh
 meat eat-**Abil-Agt.Nzr-Emph-Separ** fish eat.unchewed-Past-3
 ‘He should have eaten meat, but he ate fish instead.’
- (42a) cues-nan-tiad-quid-bi cuen-o-sh
 hit-Recip-**Abil-Agt.Nzr-Emph** run.off-Past-3
 ‘Instead of fighting, he ran off.’
- (42b) cues-nan-tiad-quid-bi-c cuen-o-sh
 hit-Recip-**Abil-Agt.Nzr-Emph-Separ** run.off-Past-3
 ‘He would have fought, but he had to run off.’

Substitutive clauses are accomplished with the enclitic *-bi*, which marks emphasis or contrast. And the enclitic *-c* ‘Separate’ can be added to *-bi* to express a sense of obligation and/or higher level of expectation that the event coded in the subordinate clause should happen. It makes the substitution “less casual,” emphasizing the contrast between what was expected the and very different event that actually happened. For example, (42a) suggests that the subject simply changed his mind, or that he unsurprisingly did not do what he should have because he is a coward. But in (42b), it is implied that the fight definitely was going to take place and almost did, but for some sudden, unforeseen reason (e.g., the cops came), the subject was not able to do as he would have. In (41a), the speaker might have guessed that the subject would have

preferred meat, but the subject happened to choose the fish. In (42b), the subject is being criticized for not eating meat: maybe there was a lot of meat but little fish, and the fish was being reserved for guests.

Substitutive clauses are accomplished exclusively by nominalization. Many other semantic categories of adverbial clauses are accomplished by both adverbialized and nominalized (and sometimes adjectivalized) clauses, including ‘when’ clauses (§12.4.2.3), additive clauses (§12.4.2.13), and absolute clauses (§12.4.2.15). But note from the literal translations in (40) and (41a), that while these constructions accomplish an adverbial clause function, the nominalized clauses occur in nominal slots, rather than in adverb slots.

12.2.4 Action nominalizations as complements

Action nominalizations can occur as complements, but only to a limited extent. The only syntactic positions that action nominalizations can occur in is that of subject complements of copular clauses (43 & 44), and as postpositional objects (next section). They cannot occur at all as subject or object complements (see Noonan 1985 for this terminology) of verbs in active clauses (45 & 46).

- | | |
|--|--|
| <p>(43) <u>mua-ac</u> <u>icsa-mbo</u> <u>ic-e-c</u>
 lie-Act.Nzr bad-Aug be-Npast-Indic
 ‘Lying is bad.’</p> | <p>(44) <u>nid-boc</u> <u>bēda-mbo</u> <u>ic-o-sh</u>
 go-Past.Act.Nzr good-Aug be-Past-3
 ‘It’s good that he left.’</p> |
| <p>(45) *<u>mua-ac-n</u> <u>nēish-me-e-c</u>
 lie-Act.Nzr-Erg get.mad-Caus-Npast-Indic
 (‘Lying/his lying makes her mad.’)</p> | <p>(46) *<u>nid-boc</u> <u>is-o-mbi</u>
 go-Past.Act.Nzr see-Past-1A
 (‘I saw his leaving.’)</p> |

This type of complementation is so infrequent, that to my knowledge it only occurs in predicate adjective copular clauses (§11.7.2) using one of the two value adjectives, bēda ‘good’ and icsa ‘bad.’ I have not found these sentence types in texts, but I have

occasionally overheard them. Action nominalizations are commonly found as postpositional objects (next section).

Either “activity or state nominalizations” (action nominalizations referring to a generic state or event type; 43) or “nominalized propositions” (action nominalizations referring to a specific event; 44) can occur as subject complements of copular clauses (see Noonan 1985:108 for this terminology). This distinction is useful, however, in describing the participants that can occur in an action-nominalized clause. Activity or state nominalizations can occur without any implied participants at all (47a). Sometimes an object and/or subject may be specified (47b-47d), but this still refers to a generic action type, albeit less general.

- (47a) cues-ac icsa-mbo ic-e-c
hit-Act.Nzr bad-Aug be-Npast-Indic
'It is bad to hit.'
'It is bad that he hit him.'
- activity nominalization
nominalized proposition
- (47b) [chido-Ø cues]-ac icsa-mbo ic-e-c
woman-Abs hit-Act.Nzr bad-Aug be-Npast-Indic
'It is bad to hit women/wife-beating is bad.'
'It is bad that he hit the woman.'
- activity nominalization
nominalized proposition
- (47c) [chido-n cues]-ac icsa-mbo ic-e-c
woman-Erg hit-Act.Nzr bad-Aug be-Npast-Indic
'It is bad for women to hit.'
'It is bad that the woman hit him.'
- activity nominalization
nominalized proposition
- (47d) [chido-n dada-Ø cues]-ac icsa-mbo ic-e-c
woman-Erg man-Abs hit-Act.Nzr bad-Aug be-Npast-Indic
'It is bad for women to hit men.'
'It is bad that the woman hit the man.'
- activity nominalization
nominalized proposition

Nominalized propositions, by contrast, always contain the core arguments, whether these are mentioned overtly or covertly (47, second interpretations).

Aspect, path, plurality, and other information that is coded by derivational verbal suffixes can also easily be coded on the derived verb, but the inflectional morphology itself (which codes tense and, for some tenses, evidentiality, certainty, and/or person) is replaced by the nominalizing suffixes. (All of the 10 action nominalizers are listed in Table 4.23 and described in section 4.7.5.) Nevertheless, as can be seen in Table 4.23, the proposition nominalizers vary for tense and evidentiality, coding the same set of tense and evidentiality combinations available for finite *past* tense inflection (there is no proposition nominalization for present or future tenses), as can be seen in the proposition nominalization in (48).

- (48) [umbi is]-ondac bēda-mbo ic-onda-sh
 1Erg see-Dist.Past.Act.Nzr good-Aug be-Dist.Past-3
 ‘As I saw it (a long time ago), it was good.’ (lit. ‘What I saw was good.’)

The activity and state nominalizer (i.e., the general event nominalizer), *-ac* (in one of its polysemous senses), however, is neutral in terms of tense and evidentiality, and so these inflectional categories are lost in this clause type. As a final note, participant nominalizations can occur in these constructions, too (49).

- (49) [umbi is]-ondaid bēda-mbo ic-onda-sh
 1Erg see-Dist.Past.Pat.Nzr good-Aug be-Dist.Past-3
 ‘The one I saw (a long time ago) was good.’

12.2.5 Nominalized clauses as postpositional objects

There are no nominalizers that refer to location or manner associated with the event. There are also no adverbializers that create locative or manner clauses, like there are for temporal adverbial clauses (§12.4.2). In Matses, action nominalizations occurring as postpositional objects are the functional equivalents of locative and manner adverbial clauses.

Locative clauses:

- (50) podqued-n capu-ash [podqued nibēd]-ac-no
 path-Loc locomote-after:S/A>S path not.be-Act.Nzr-Loc
capu-quiv bēdi-dapa ne-e-c
 locomote-Agt.Nzr jaguar-large be-Npast-Indic
 ‘Jaguars are ones that walk on paths and then walk where there are no paths.’
 A-IV 036 bēdi dapa 16
- (51) nibēn-quin nuēcquid bed-ash-bi [ambi
 search-while:S/A>A fish grab-after:S/A>S-Emph 4Erg
besca]-boc-no cho cho-quiv bed-tanec abitedi
 sweep-Rec.Past.Act.Nzr-Loc (redup=Distr)come-Hab grab-after:S/A>S all
 ‘After catching fish by searching for them, [the giant otters]; all come to where
 they; had cleared an area, after catching [the fish].’
 A-IV 031 onina 07
- (52) matses is-anec aocbidi cuen-onda-sh [aton chido
 Matses see-after:S/A>S back.again run.off-Dist.Past-3 3Genwoman
ic]-ac-mi
 be-Act.Nzr-Loc
 ‘When he saw the Matses, he ran off to the place where his wife was.’
 + K-XXII 003 chema 026
- (53) uadē [sedque-tsēc]-ac-no-uēsh cuēdēn-quiv ne-e-c
 titi.monkey shine-Dim-Act.Nzr-Loc-Ev.Init:Intr call-Agt.Nzr be-Npast-Indic
 ‘Titi monkeys are ones that sing from small habitats with open canopies’ [lit.
 ‘from where the sun shines through’]
 A-IV 031 onina 04

Comparative clauses:

- (54) chishme-quiv poshto-n [matses-n
 suckle-Hab woolly.monkey-Erg Matses-Erg
chishme]-ac-bi-mbo-en
 suckle-Act.Nzr-like-Aug-Manr:Tr
 ‘Woolly monkeys suckle their young like Matses do.’
 A-I 052 poshto 21

- (55) [ambi pisid daëdca]-ac pad-en-bi-di shuccate
 4Erg woven.mat plait-Act.Nzr same.as-Manr:Tr-Emph-Same fan
chido-n daëdca-e-c
 woman-Erg plait-Npast-Indic
 ‘In the same way that; they plait woven mats, women; plait fans.’
 A-XIII 018 shuccate 20
- (56) cuen-enda [min bënë utsi cuen]-ac pad-ec
 run.off-Neg.Imper 2Gen husband other run.off-Past.Act.Nzr like-Manr:Intr
ca-onda-mbi
 say-Dist.Past-1A
 ‘‘Don’t run off like your brother-in-law [lit ‘other husband’] did,’’ I told her.’
 + K-XXII 011 chema 107

Note that like any manner adverb or manner postpositional phrase, comparative clauses must agree with the transitivity of the verb (-en in 54 & 55; -ec in 56), and that locative clauses can occur with event initiation transitivity agreement suffixes (e.g., -uësh in 53). More details about these postpositions were discussed in the postposition morphology chapter.

Participant nominalizations can also occur as the objects of locative postpositions, with the minor difference that the locative phrase then refers to the location of a participant involved in the event, rather than the location of the event itself (57).

- (57) badiad-nuc adecbidi abuc ushte-ua-aid-no
 dawn-while:Diff.Ref likewise:Intr high nest-Vzr:make-Pat.Nzr-Loc
ue-ec nid-e-c ush-ec
 lie-Purp:S/A>S go-Npast-Indic sleep-Purp:S/A>S
 ‘...at dawn [the spiny tree rat] similarly goes up to lie in the nest that it made up to sleep.’
 IV 044 abuc checa 12

12.2.6 The infinitive: object complement of bun ‘want’

One way to express the notion of wanting to do something is to use a desiderative complement clause as the object of the verb bun ‘want.’ (The other complex desiderative construction, involving an adjectivalized clause and the verbal suffixes -tiad

‘Desiderative’ or -tiapi ‘Negative Abilitative/Desiderative’ is discussed below in §12.3.1; the desiderative verbal inflection, -pashun ‘Nonpast: Desiderative: 2/3,’ is described in §5.6.2.5.) The object complement of bun is the only place where an infinitive occurs in Matses. The verb bun can take a noun (58), a nominalization (59) or a relative-clause-like noun phrase (60) as its object; or it can take a clause marked with the infinitive suffix -te as an object complement (61).

- (58) natia mani bun-quid ‘They [bats] strongly desire plantains.’
strongly plantain want-Hab
H-XVII 039 cuesban 14
- (59) [piu-mbo ic]-quid bun-e-bi ‘I want the red one.’
red-Aug be-Agt.Nzr want-Npast-1S
- (60) mani sin-aid bun-quid cuesban ‘Bats want ripened plantains.’
plantain ripe-Pat.Nzr want-Hab bat
E-XI 049 cuesban 13
- (61) cuesban [matses pe]-te bun-quid ‘Bats want to bite Matses.’
bat Matses bite-Infin want-Hab
E-XI 049 cuesban 07

The verb bun is irregular in that it takes two arguments that are both marked as absolutive (it is a “double-absolutive” verb; §11.4.3); i.e., the more agentive core argument, the “wanter,” is not ergatively-marked. This can result in confusion when the wanted thing is coded by a pronoun, noun, noun phrase, or nominalization, particularly when subject person agreement does not disambiguate the participants (62),⁷ but there is never confusion with the -te-marked clauses because they always represent the desired action (and an action is nevertheless semantically unlikely to be a “wanter”).

⁷ Speakers may mark the “wanter” with the ergative marker -n to resolve or avoid ambiguity, only when both arguments are humans. They acknowledge that it is not the regular way to say it, but no one seem to consider it wrong. With infinitives, the subject is never marked with -n.

- (62) debi mibi bun-e-c ‘You want/like Davy.’/
 Davy 2Abs want-Npast-Indic ‘Davy wants/likes you.’

As described in section 11.4.3, despite the confusing case marking on double-absolutive clauses, it is still possible to identify a subject by such means as subject person agreement and inter-clausal argument tracking. And with bun, the “wanter” is always the subject. As such, it is possible to say that -te-marked clauses function only as “object complements,” never as subject complements.

The internal structure of the complement is as follows. The nominal subject (i.e., the A or S argument of the complement verb) does not occur overtly and it must be the same as the subject of bun, the main verb; i.e., the notional subject of the complement clause must be co-referential with the main clause subject and is obligatorily “equi-deleted.” Accordingly, this construction does not work for someone wanting somebody else to do something (63) (the verbal inflection -pashun is used for expressing that the speaker wishes for someone else to do something; §5.6.2.5).

- (63) *[mibi cho]-te bun-e-bi (‘I want you to come.’)
 2Abs come-Infin want-Npast-1S

While the nominal subject cannot occur overtly, the object of a transitive complement verb can. It could also occur as a covert third-person pronoun, but if it occurs overtly, it must always occur within the complement clause, preceding the dependent verb (64), as in any subordinate clause. Because the complement subject and the matrix subject must be co-referential, the situation never arises where the complement object could be co-referential with the matrix subject, so there is no situation where object equi-deletion could occur. The relation of the complement object to the complement verb is the same as in main clauses (i.e., it takes absolutive marking), with the difference that in active

clauses, the object can occur preceding or following the main verb. The examples in (64) illustrate syntactic properties of infinitive constructions:

(64a) debi [mibi padpide-en cues]-te bun-e-c
 Davy 2Abs again-Manr:Tr hit-Infin want-Npast-Indic
 ‘Davy wants to hit you again.’ (implies Davy already hit you once)

(64b) padpide-ec debi [mibi cues]-te bun-e-c
 again-Manr:Intr Davy 2Abs hit-Infin want-Npast-Indic
 ‘Again, Davy wants to hit you.’

First, the noun debi is the overt subject of the main clause verb (bun) and is co-referential with the nominal subject of the transitive verb cues ‘hit.’ The fact that debi is not ergative-marked shows that it is the complement verb subject that is missing, not the subject of bun. Second, the fact that mibi can be separated from the infinitive verb by the adverb padpide-en, shows that mibi, cannot be in a possessive relation to that verb, because even in possessive noun phrases where the possessor is not overtly genitive-marked, the genitive noun must *directly* precede the possessed entity (§10.3.1). Note as well that the transitivity agreement on the adverb treats the complement verb as transitive when it occurs as part of the complement clause (64a), but it is associated with bun when it occurs outside the complement clause (64b).⁸

In addition to adverbs, subordinate adverbial clauses can occur within the infinitive clause (65a) or outside of it (65b)

(65a) [nes-shun _____ pe]-te bun-o-bi ‘I wanted to bathe and then eat.’
 bathe-after:S/A>A eat-Infin want-Past-1S

(65b) nes-ash _____ [pe]-te bun-o-bi ‘After bathing, I got hungry.’
 bathe-after:S/A>S eat-Infin want-Past-1S

⁸ Recall from section 11.4.3 that double-absolutive clauses are grammatically intransitive (despite having two arguments), as evidenced by transitivity agreement and other morpho-syntactic cues.

Note the differences in meaning and in argument tracking (pe 'eat' has a transitive subject [A], bun has an intransitive subject [S]). Example (65a) is a case of embedding of subordinate clauses to two levels, (65b) is a case of a matrix clause directly associated with two subordinate clauses.

The complementizer, -te, occurs instead of and in place of any inflectional suffixes, rather than in addition to them. Thus, complements in Matses have no inflectional possibilities, which eliminates any subject agreement person-marking, pronominal suffixes, tense, evidentiality, mode, and some aspect possibilities. Most derivational verbal suffixes can occur on the complement verb, including some that mark aspectual information, and thus some aspect distinctions can be made (66); also, aspect can be marked on the complement verb via reduplication (66b). It should be noted, however, that speakers reject the majority of attempts to mark aspect on the complement verb.

- (66a) dēd-cuen-te bun-e-c
 fell.trees-**Incho**-Infin want-Npast-Indic
 'He wants to start felling trees now (which he never did before).'
- (66b) [nid-an nid-an]-te bun-e-c 'They want to leave (one-by-one).'
- (redup=Distr) go-**Incep**-Infin want-Npast-Indic

We can characterize the external syntax of the complement as it relates to the main clause as follows. The complement must precede the verb bun (67b-c), though not necessarily directly (67d-e), an object distribution constraint that does not apply to bun when it takes nominal objects (68).

- (67a) debi nid-te bun-e-c
 Davy go-**Infin** want-Npast-Indic
 'Davy wants to go.'
- (67b) *debi bun-e-c nid-te
- (67c) *bun-e-c nid-te

- (67d) nid-te debi bun-e-c (67e) nid-te-uid-quo bun-e-c
 go-Infin Davy want-Npast-Indic go-Infin-only-Aug want-Npast-Indic
 ‘Davy wants to go.’ ‘He is always wanting to leave.’
- (68) debi bun-e-c nuēcquid ‘Davy wants fish.’
 Davy want-Npast-Indic fish

The subject of bun (i.e., the main clause-subject) is free to move around, but does not naturally occur within the complement (69). The subject of bun may be covert as a third-person zero pronoun, in which case no overt subject at all appears in the construction (70).

- (69a) [pambid pe]-te bun-e-c debi ‘Davy wants to eat meat.’
 meat eat-Infin want-Npast-Indic Davy
- (69b) ?[pambid debi pe]-te bun-e-c ‘The meat wants to eat Davy.’
 meat Davy eat-Infin want-Npast-Indic
- (70) ush-te bun-e-c
 sleep-Infin want-Npast-Indic
 ‘He wants to sleep.’/*‘He_i wants him_j to sleep.’/*‘I/You/We want to sleep’

If the desiderative clause itself is to be a subordinate clause, as in a clause-chaining construction, bun will take the non-finite suffix, and the complement will not change at all (71).

- (71) [shubu pe]-te bun-ec shēa cho-quad
 house eat-Infin want-while:S/A>S pygmy.rice.rat come-Hab
 ‘Pygmy rice rats come wanting to eat the house (thatch).’

A-IV 019 shēa 15

This complement type can be labeled as an **infinitive**, as defined by Noonan (1985:57): i) the subject of the -te complement type does not take case marking of any type (because it never occurs explicitly, i.e., it is always “equi-deleted”); ii) no

inflectional morphology occurs on the complement verb, so the subject cannot condition verb agreement on the complement verb; and iii) the relation of the complement verb to its object is the same as in main clauses. Since the desiderative meaning can be isolated in the verb bun, the suffix -te can be considered a semantically neutral infinitive marker (and a complementizer). But nevertheless, the suffix -te functions to mark complementation only in constructions with the verb bun, so -te is not a general complementizer that can occur with multiple complement-taking verbs.

The inclusion of this description of the infinitive in the section on nominalized clauses is no accident. There are two phonetically identical nominalizing suffixes, the very common suffix -te 'Instrument Nominalizer/Nonpast Patient Nominalizer' (§4.7.1.3), and the more restricted -te 'Future: Action Nominalizer' (§4.7.5). The action nominalizer is the one that is closest to the infinitive semantically, and surely they share a common origin. In light of this, one might hope to analyze the desiderative complement clauses as nominalizations, thus simplifying the general description of subordination in Matsigenka. It would make sense, considering that the verb bun can take nouns and nominalizations as objects. And, in fact, we find that the verb bun can take a verb or a clause nominalized with -te as its object, but only as a participant nominalizer (72 & 73).

- (72) is-te _____ bun-e-bi
 see-Inst.Nzr/Npast.Pat.Nzr/Infin want-Npast-1S
 'I want binoculars/a thing to look with.' (instrument nominalization)
 'I want a television/something for looking at.' (patient nominalization)
 'I want to see.' (desiderative complement clause)
- (73) [cuesban cues]-te _____ bun-e-bi
 bat kill-Inst.Nzr/Infin want-Npast-1S
 'I want bat killers (22 cal. "dust shot" shells).' (instrument nominalization)
 'I want to shoot (a/the) bat(s).' (desiderative complement clause)

We find that bun cannot take action nominalization as complements (action nominalizations in general have a limited distribution, especially -te).

(74) *nid-ac bun-o-bi
go-Act.Nzr want-Past-1S

But more importantly, we note that action nominalizations (75), including those with -te (76a) do not exhibit co-reference with matrix clause arguments or have equi-deletion requirements, as the infinitive does (76b).

(75) [mimbi cuesban cues]-ac icsa-mbo ic-e-c
2Erg bat kill-Act.Nzr bad-Aug be-Npast-Indic
'It is bad that you kill bats.'

(76a) [debi-n cuëte dëd]-te-no cun shubu-ua-e-mbi
Davy-Erg tree fell-Fut:Act.Nzr 1Gen house-Vzr:make-Npast-1A
'I'm going to make my house where Davy is going to fell trees.'

(76b) *[debi-n cuëte dëd]-te bun-e-bi

Thus, if it were not for the obligatory subject co-reference and equi-deletion, infinitive clauses could readily be called nominalizations. But it is clear that these constructions have been reanalyzed by speakers and have taken on a different grammar (actually more similar to that of clause-chaining). So synchronically, the nominalizer -te and the infinitive -te must be considered at best polysemous morphemes, that form different types of subordinate clauses.

Negative desiderative complement constructions are generally accomplished by attaching one of the negative verbal suffixes and adding the auxiliary verb ic (77a), in the way that verbs are typically negated (§12.3.2).

(77a) is-te bun-en-quio ic-e-bi 'I don't want to look.'
see-Infin want-Neg-Aug Aux-Npast-1S

But with non-human objects and complement objects, the meaning is always just ‘want.’ There is no lexeme in Matses for ‘like,’ often when asked to translate phrases from Spanish such as, *me gusta pescado* ‘I like fish’ or *me gusta pescar* ‘I like to fish’ Matses speakers give the translations in (80) as the closest matches.

- | | | | |
|-------|---|-------|--|
| (80a) | <u>nuēcquid bun-e-bi</u>
fish want-Npast-1S
‘I want fish.’/*‘I like fish.’ | (80b) | <u>anseme-te bun-e-bi</u>
hook.fish-Infin want-Npast-1S
‘I want to fish.’/*‘I like to fish.’ |
|-------|---|-------|--|

However, (80a) always implies that the speaker would like some fish in the immediate future or as soon as possible; it is not something one would say after having his fill of fish, lest he be served more fish. Similarly, (80b) implies a present desire to fish in the near future, not a habitual condition like ‘I’m always wanting to fish.’ This is a semantic characteristic of all bun complement constructions: the desired action is to occur after the act of wanting, rather than during or prior to the wanting. Following Comrie (1985), we could describe the construction’s tense as follows: the dependent verb always carries “relative future time reference” and the main verb is specified for “absolute time reference” (nonpast, recent past, distant past, etc.) by its finite inflection. In Noonan’s (1985:92) terminology, this construction type has “determined time reference.”

Contrast the restricted meaning of bun with the extended meanings of -tiad, which can mean ‘want,’ ‘can,’ or ‘might,’ and -tiapi, which can mean ‘not want,’ ‘cannot,’ ‘unlikely,’ as described in section 12.3.1. The verb bun, however, can be used for desiring people, animals or things, while -tiad and -tiapi can only be suffixed to verbs, and thus only apply to actions.

12.2.7 General notes on complementation

In this section, I try to assess the role of complementation in Matses. Sentential complementation is defined by Noonan (1985:42) as “the syntactic situation that arises when a notional sentence or predication is an argument of a predicate.” By this definition, the complement clause must function as the object or subject (S, A, or O) of the predicate in which it occurs. This then excludes adverbialized clauses, which are always non-core components of a predication, and adjectivalized clauses, which do not occur in argument positions. Complementation, then, is accomplished using infinitive and nominalized complement clauses. And marginally by quotation using the quotative verb *dan* ‘suppose incorrectly,’ which takes the quoted material as a sort of object complement, but the quoted “complement” has no overt complementizer (§12.5.4). One issue that has some bearing on what we can say about the overall role of complementation in Matses is whether participant nominalizations should be considered complement clauses when they occur in the argument slots of their matrix clauses. By Noonan’s definition, participant nominalization could be considered “notional sentences” in that they can be readily restated as active sentences, despite the fact that they notionally refer to an entity rather than an event or state. By more functional definitions, complements are clauses that “function as noun phrases” (Thompson and Longacre 1985:172), or, more specifically, “clauses which function as noun phrases... as sentential expansions of subject/object slots” (Longacre 1985:238).

Participant nominalizations seem to fit all of these definitions, but there is an alternate analysis that participant nominalizations in argument slots are actually headless relative clauses. At this point, I’m not sure how to argue for one analysis over the other. If we say that complementation does not include participant nominalization, then we can state that the role of complementation in Matses is extremely limited, with infinitive and

action nominalizations being the only types of complement clauses, the infinitive suffix -te and the ten action nominalizers being the only complementizers in the language, and bun 'want' and ic 'be' (and arguably dan 'suppose incorrectly') being the only complement-taking verbs. By contrast, if we consider participant nominalizations to be complement clauses, then complementation can be said to be widespread in the language.

Regardless of whether we analyze participant nominalizations as complements or not, it is still apparent that most of the notions that are commonly coded in other languages using complementation are not coded in Matses by complementation or participant nominalizations, but by other grammar. For example, Noonan (1985:110-133) describes 14 semantic classes of complement-taking verbs, of which only 2 of these notions are coded in Matses grammar by complementation. Below, I list all of these 14 semantic classes and briefly point out how Matses conveys the same notions (English examples also from Noonan 1985):

1. Utterance predicates, e.g., *Zeke said that Norm left*. In Matses, this is accomplished principally by direct quotation (§12.5.1), which is not a type of subordination. Quotation using the quotative verb dan 'suppose incorrectly' approximates complementation (§12.5.4).
2. Propositional attitude predicates, e.g., *It's possible that Perry will lose, Olaf thinks the Mets will win*. Epistemic modality is coded in Matses by the verbal uncertainty suffix -chit (§5.5.10), the dubitative particle ba (§9.4.2), the uncertainty particle/enclitic ada/-da (§9.4.1), and several verbal inflections that code uncertainty (§§5.6.2.4, 5.6.3.2). The verb tantia 'think/believe/understand/listen' is the only one that fits this semantic characterization, but it occurs as a matrix verb of a quotative verb in an adverbialized clauses instead of with complement clauses (§12.4.4.2).

3. Pretence predicates, e.g., *I pretended that Ivan came*. There is no simple construction to code this notion, it would require more than two clauses and/or quotation.
4. Commentative predicates (factives), e.g., *Nelson regrets that Perry got the nod*. Again, there is no straightforward way to express this notion in Matses.
5. Predicates of knowledge and acquisition of knowledge, e.g., *I saw that Floyd left*. This would be expressed with the adverbializing suffix *-sho*, literally meaning 'I saw Floyd leaving' (§12.4.2.2).
6. Predicates of fearing, e.g., *He's afraid that Floyd came*. This construction in Matses involves a combination of clause chaining and quotation, literally meaning 'I'm afraid after thinking, "He might hit me"' (§12.4.4.2).
7. Desiderative predicates, e.g., *I hope to go*. One desiderative construction type, described in the preceding section, is a good example of object complementation. Another desiderative construction type involves adjectivalized clauses (§12.3.1). There is also the finite verbal suffix *-pashun* 'Nonpast: Desiderative: 2/3' (§5.6.2.5).
8. Manipulative predicates, e.g., *Zeke forced Floyd to hit Roscoe*. Causation (and enablement) is expressed primarily morphologically, using the verbal derivational causative suffix *-me* (§11.5.1). Secondly, it is expressed using direct quotation of imperatives (§12.5.2).
9. Modal predicates, e.g., *Vladimir can eat a whole pizza*. Abilitative constructions are accomplished by adjectivalized clauses (§12.3.1).

10. Achievement predicates, e.g., *Zeke tried eating spinach*. Once more, these are accomplished with adverbialized subordinate clauses, specifically ‘while’ clauses subordinate to main clauses with verbs like tan ‘try’ (§12.4.4.2).

11. Phrasal predicates (aspectuals), e.g., using verbs such as, *begin, start, continue, keep on, finish, stop, and cease*. Notions like ‘stop’ and ‘cease’ are accomplished using ‘while’ adverbial clauses subordinate to main clauses with verbs like nain ‘finish,’ ta ‘begin (intransitive),’ and taua ‘begin (transitive)’ (§12.4.4.1). Progressive aspect is coded by a construction derived from an adverbialized clause construction (§12.4.4.4). Notions like continuation and iteration are coded principally by verbal derivational suffixes and verb reduplication (§§5.5.2, 5.5.4, 5.9).

12. Immediate perception predicates, e.g., *The woman saw the man stealing the chicken*. This would be expressed with the adverbializing suffix -sho, just as with its “predicate of knowledge” use, but here the literal meaning applies (§12.4.2.3).

13. Negative predicates, e.g., *He won’t go*. Sentential negation is expressed in Matses primarily by a complex verb phrase involving a main verb suffixed by a negative suffix followed by an auxiliary verb; this negative construction is evidently historically derived from an adjectivalization construction (§12.3.2). There is also negative verbal inflection for present habitual tense-aspect (§5.6.2.3). See section 11.11 for an inventory of all ways to express negation in Matses.

14. Conjunctive predicates. e.g., *I ate meat and then I drank water*. This sort of notion is commonly expressed using adverbial/clause-chaining constructions (§12.4).

In sum, we see these notions being coded by a variety of morphological and syntactic means other than complementation or nominalization (none by participant nominalizations), and most frequently by adverbialized clauses (§§12.4.4.1-12.4.4.3 describe semantically complement-like constructions using adverbialized clauses).

12.3 Adjectivalized clauses

Adjectivalization of verbs was introduced in the adjective chapter in section 6.8.2. Briefly, verbs can be turned into adjectives by adding one of the adjective-modifying enclitics (-mbo/-quio ‘Augmentative,’ -pambo ‘Augmentative/large,’ -tsēcquio ‘Derogatory,’ etc.; §6.6.2) to the verb in place of inflection morphology. These can be considered class-changing suffixes in this context,¹⁰ and these adjectivalized verbs can then occur in most adjective slots. The verb is then no longer finite, and cannot occur without a copula or other main verb in the sentence. Specifically, adjectivalized verbs can occur in predicate adjective copular clauses (81b; §11.7.2) and adverbial adjective constructions (82b: §11.8), but not in noun-adjective noun phrases (83b-c; §10.3.3). The (a) examples of (81) - (83) provide similar constructions using the adjective root bēda ‘good’ for comparison.

(81a) bēda-pambo ic-e-c
 good-Aug be-Npast-Indic
 ‘It is (big and) good.’

(81b) chonoad-pambo ic-e-c
 work-Adjzr:Aug be-Npast-Indic
 ‘It’s a lot of work.’ lit. ‘It is workfull.’

¹⁰ These forms function at the phrasal level with nouns and postpositions, but they function at word level with verbs (since there are no multi-word verb phrase). Thus they are properly described as enclitics, but with verbs they function as suffixes. Recall that from section 3.2.3 that enclitics and suffixes do not contrast in Matses so for the description of Matses grammar it does not matter what we call them. I use make the distinction here for the sake of comparison to other languages.

- (82a) bēda-pambo isad-e-c
good-Aug appear-Npast-Indic
'It looks (big and) good.'
- (82b) chonoad-pambo isad-e-c
work-Adjzr:Aug appear-Npast-Indic
'It looks like a lot of work.'
- (83a) tied bēda dēd-o-mbi
swidden good fell-Past-1A
'I made a good swidden.'
- (83b) *tied chonoad-pambo dēd-o-mbi
- (83c) *tied chonoad dēd-o-mbi

As with simple adjectives (84a-b), predicate adjective clauses with adjectivalized verbs (84c) function to associate an attribute to the subject of the copular clause. Compare the similar functions of the predicate adjective clauses in (84b) and (84c), which contain the adjective root uinsad 'frightening' and the verb root dacuēd 'be frightened' (see §6.2 for distinguishing verb and adjective roots):

- (84a) aid aton mēntsis-dapa uinsad-pambo-shē ic-e-c
that.one 3Gen claw-large frightening-Aug-Aug be-Npast-Indic
nua-mbo-shē
large-Aug-Aug
'That one, its big front claw is very frightening, very, very big.'
- A-I 049 tsauesamē 09
- (84b) tsausamē-n mēntsis-dapa uinsad-pambo ic-e-c
giant-armadillo-Gen claws-large **frightening**-Aug be-Npast-Indic
'The giant armadillo's big front claw is frightening.'
- (84c) tsausamē-n mēntsis-dapa **dacuēd-an-pambo** ic-e-c
giant-armadillo-Gen claws-large **be.frightened**-Incep-Aug be-Npast-Indic
'The giant armadillo's big front claw is frightening.'

Adverbial adjective constructions, where the adjectives modify subjects or paths as independent constituents in non-copular clauses (§11.8), are not common with simple adjectivalized verbs, but occur commonly with negative adjectivalized verbs (§12.3.3). Only adverbial adjective constructions like (82b) and (85), which use a perception verb in an almost equative fashion seem to be possible with simple adjectivalized clauses.

- (85) nibəd-quoio tantiad-e-c 'It seems like there's none.'/
not.be-Adjzr seem-Npast-Indic 'I appears that he's/it's not here.'

Actually, simple (non-negative) adverbial adjective constructions with adjectivalized verbs are altogether uncommon (I have no text examples), but adjectivalized verbs commonly modify verbs after being further class-changed into manner adverbs with one of the adverbializing enclitics, -en 'Adverbializer: Transitive Agreement' (86) or -ec 'Adverbializer: Intransitive Agreement' (87).

- (86) tanca-mbo-en shēcten-n pe-quid
make.crushing.noise-Adjzr-Advzr:Tr collared.peccary-Erg eat-Hab
'Collared peccaries eat noisily.'

A-I 043 shēcten 19

- (87) ues-quimbo-ec capu-tsēc-quid ne-e-c
finish.off-Adjzr:Aug-Advzr:Intr locomote-Dim-Agt.Nzr be-Npast-Indic
'It is one that walks around everywhere.' [lit. 'It walks around finishing off (all the places it could go/all the different habitat types)']

A-IV 037 bēdi piu 09

Frequently, adjectivalization involves whole clauses, in which case we can consider them a type of subordinate clause. Any arguments or obliques/adverbials associated with the verb may occur within the adjectivalized clause. For example, in (88) pinchuc is the intransitive subject of the adjectivalized verb.

- (88) [pinchuc-Ø nibəd]-quoio shuinte mapi ic-e-c
thorn-Abs not.be-Adjzr two.toed.sloth head be-Npast-Indic
'Shuinte mapi palms don't have any thorns at all.'
more literally: 'Shuinte mapi palms are very thornless.'

A-I 015 shuinte mapi 09

As with nominalized clauses, the only word-order restriction is that the verb must be the last element in the clause. These adjectivalized clauses cannot be considered complements, since they fill the adjective slot in the predicate adjective clause, not the

subject slot. Similarly, in adverbial adjective constructions, adverbializations occur in an adjective/adverb slot, not in a noun slot.

Adverbialized adjektivizations can similarly include material in addition to the verb, as in (89)

- (89) [incuente-Ø shucque]-pambo-ec capu-quid ne-e-c
 tail-Abs fan-Adjzr:Aug-Advzr:Intr locomote-Agt.Nzr be-Npast-Indic
 ‘It [the giant anteater] is one that walks with its big tail swaying back and forth.’
 A-IV 027 shaë 04

Adverbialized adjectivalized clauses of this type will be discussed in section 12.4.1. In the present section, I will concentrate on unadverbialized clauses.

Note that the simpler way to express the notion in (88) is with a copular clause, as in (90) or (91).

- (90) sentā-n incuente nibēd-e-c
 red.uakari.monkey-Gen tail not.be-Npast-Indic
 ‘Uakari monkeys don’t have tails.’
 A-I 057 sentā 04

- (91) chido pais nibēd-quid ‘The female does not have antlers.’
 woman antler not.be-Hab
 A-I 046 senad 30

The construction in (88) is a stylistic variant that seems to be motivated by the wish to express augmentation (‘very’), which is not expressible with the construction type in (90) or (91); the similar notion of emphasis (‘truly/really’) can be expressed on finite verbs, but ‘very’ can’t. The longer an adverbialized clause is, the more sentence-like it is, particularly when embedded in a clause headed by a (semantically barren) copular verb. Accordingly, then, in contrast to the single-word adjectivalizations, complex sentences like (89) begin to function more like event predication than static equative attribution. Nevertheless, it seems like multi-word adjectivalized clauses like the ones in (88) and

(89) are going out of style (or never were in style) for state and generic event predication function, since, except for adjectivalization of the verb nibèd 'not be,' this construction type is quite rare in texts and overheard speech. However, two somewhat more complex versions of this construction type are very common in the language:

abilitative/desiderative constructions and negative constructions.

Abilitative/desiderative clauses are formed by suffixing the verb with -tiad 'Abilitative' or -tiapi 'Negative Abilitative' preceding the adjectivalizing enclitic. Negative verbs are formed similarly by suffixing the verb with -en 'Negative' or -a 'Negative: Perfect' preceding the adjectivalizing enclitic. The abilitative/desiderative constructions are perfectly modeled after the predicate adjective copular construction, yet they can be used to code specific events and so often only their literal translation sounds like a copular clause. Nevertheless, there is no concrete formal evidence that these abilitative/desiderative constructions have been reanalyzed as active clauses. The situation is different for the sentential negation constructions, which are obviously based on predicate adjective clauses, but morpho-syntactic extension of case marking patterns and other grammar from simplex active clauses suggests that these were reanalyzed as active clauses with complex verb phrases. Negative adverbialized clauses that occur as circumstantial adverbial clauses, however, have no overt morpho-syntax that suggests that these have been analyzed as something other than subordinate clauses. Each of these subtypes of adjectivalized clause constructions is described in some detail in the subsections of the present section.

As a final general note on adjectivalized clauses, it should be shown that these are different from the nominalized clauses described in the preceding section. The internal structure of adjectivalized and nominalized clauses is the same, but they differ dramatically with regard to the different slots in which they can occur in the main/matrix

clauses. Nominalizations can be equated to other nominal elements with the copular verb ne (and, less frequently with ic), but adjectivalizations, like any adjective, only occur with the copula ic. Second, while nominalizations can occur in noun phrases as noun modifiers (their relative-clause-like function §12.2.1), adjectivalized clauses (or adjectivalized words) cannot occur as parts of noun phrases (despite this being a property of non-derived adjectives). Third, adjectivalizations can occur in adverbial adjective constructions, while nouns cannot. Fourth, nominalizations can occur in S, A, and O slots and as postpositional objects, while adjectivalized clauses cannot. And numerous other grammatical properties that distinguish noun and verb roots also distinguish nominalized and adjectivalized clauses.

12.3.1 Abilitative/desiderative constructions

Here, I introduce a construction type that expresses ability or desire to perform an action, or the lack of ability or desire to perform an action. The basic structure of this construction type is as follows: a verb representing the possible/desired or impossible/undesired action is suffixed with -tiad ‘Abilitative’ or -tiapi ‘Negative Abilitative’ and then directly followed by one of the adjectivalizing enclitics, (-mbo/-quio, -pambo, etc.). The class-changed verb then does not take any verbal inflection. The adjectivalized verb then must occur in the adjective slot of the predicate adjective clause (its matrix clause) headed by the copular verb ic ‘be.’ As in any predicate adjective clause, ic must follow the adjective/adjectivalization, but not necessarily directly (92).¹¹

¹¹ Since in my analysis these constructions are basically (or at least based on) predicate adjective constructions, their literal translations, like those provided for (92) involve a copular verb and an adjective-like derivation. However, because this construction type seems to function more for predication of events rather equation of properties to nouns, and because the English literal translations tend to sound odd, I will desist from providing literal translations in the rest of this section.

(92a) nid-tiad-quo ic-e-bi
 go-Abil-Adjzr be-Npast-1S
 'I can/plan to/want to go.'
 lit. 'I am go-wanting' /
 'I am go-able/go-willing.'

(92b) nid-tiapi-mbo ic-e-bi
 go-Neg.Abil-Adjzr be-Npast-1S
 'I can't/won't/don't want to go.'
 lit. 'I am non-go-wanting.' /
 'I am non-go-able/go-unwilling.'

The verb ic will always have an intransitive subject associated with it (which may occur overtly or covertly), and potentially obliques/adverbials as well. Similarly, the subordinate verb will be associated with its arguments and optionally obliques/adverbials as well. What makes abilitative/desiderative constructions different from simple adverbialization constructions is that there is always co-reference and obligatory equi-deletion between the subject (S) of ic and one of the core arguments of the subordinate verb. When transitive verbs are involved, this property is also the source of ambiguity, passive-like constructions, and much confusion (at least for me, initially). Therefore I will start with intransitives, which are easier to understand.

Abilitative/desiderative constructions with -tiad or -tiapi cannot have different subjects for the subordinate *intransitive* verb and for the copular verb (93). In fact, the notional subject of the of the subordinate verb can never occur explicitly and must be understood as co-referential with the subject of the copula (i.e., we can say it is obligatorily "equi-deleted" to use a term with much currency in linguistics, but I use the term to describe the pattern, not to suggest there is a process where a pre-existing noun phrase was eliminated somehow).

(93) *mibi cho-tiad-quo ic-e-bi ('I want you to come.)/
 2Abs come-Abil-Adjzr be-Npast-1S (*'I can you come.')

The possibility of lack of subject co-reference might be expected for a desiderative construction, in light of the grammatical English translation of (93), but less expected for the abilitative reading, in light of the ungrammatical English translation.¹²

(94a) debi cho-tiad-quo ic-e-c 'Davy wants to/can come.'
Davy come-Abil-Adjzr be-Npast-Indic

(94b) *debi debi cho-tiad-quo ic-e-c

Note that (94b) would be ungrammatical even if there were two people named Davy, since this would involve non-coreferential subjects. An additional detail is that it is perfectly normal for the subject of *ic* to be zero-pronominalized if third person, in which case, no overt argument appears in the sentence:

(95) cho-tiad-quo ic-e-c 'He wants to/can come.'
come-Abil-Adjzr be-Npast-Indic

Now let us move on to abilitative/desiderative constructions with transitive subordinate verbs. What we find is that the S of the copular verb can be co-referential with *either* the A or the O of the subordinate verb, and that the co-referential A or O cannot occur explicitly. The examples in (96) contrast these two co-reference possibilities for transitive subordinate verbs:

(96a) S_{matrix} $O_{subordinate}$
debi-Ø [uesnid-Ø cues]-tiapi-mbo ic-o-sh $S_{matrix} = A_{subordinate}$
Davy-Abs curassow-Abs hit-Neg.Abil-Adjzr be-Past-3
'Davy could not/did not want to shoot the curassow.'

(96b) S_{matrix} $A_{subordinate}$
uesnid-Ø [debi-n cues]-tiapi-mbo ic-o-sh $S_{matrix} = O_{subordinate}$
curassow-Abs Davy-Erg hit-Neg.Abil-Adjzr be-Past-3
'The curassow did not let itself/could not be shot by Davy.'

¹² The other Matses desiderative construction (the one with *bun* 'want' §12.2.6) similarly requires subject co-reference and equi-deletion.

Constructions like the one in (96b), where the subordinate verb object essentially becomes the subject of the matrix clause, have a passive reading (97 & 98)

- (97) [bacuë-bo-n chud]-tiapi-mbo ic-e-bi que-onda-sh
 child-Pl-Erg copulate.with-Neg.Abil-Aug be-Npast-1S say-Dist.Past-3
 ‘I won’t let children have sex with me,’ she said.’
 lit. ‘I won’t be screwed by children,’ she said.’

+ K-XXII 010 chema 093

- (98) ush-en-quo ic-e-bi [chido-n cuesunne]-tiapi-mbo
 sleep-Neg-Aug Aux-Npast-1S woman-Erg kill-Neg.Abil-Adjzr
ic-e-bi ush-en-quo ic-e-bi ca-onda-mbi
 be-Npast-1S sleep-Neg-Aug Aux-Npast-1S say-Dist.Past-1A
 ‘I’m not going to sleep, I will not be killed by the woman, I won’t sleep,’ I told him.’

+ K-XXII 011 chema 102

The three possible co-reference/equi-deletion patterns are summarized in Table 12.3.

Table 12.3. Different types of argument co-reference in abilitative constructions.

<u>[Ø_S V]-tiad-quo</u>	S-Ø <u>ic</u>	S _{matrix} = S _{subordinate} ; S equi-deleted
<u>[Ø_A O-Ø V]-tiad-quo</u>	S-Ø <u>ic</u>	S _{matrix} = A _{subordinate} ; A equi-deleted
<u>[A-n Ø_O V]-tiad-quo</u>	S-Ø <u>ic</u>	S _{matrix} = O _{subordinate} ; O equi-deleted (functional passive)

Note that the -n-marked participant in (96b) - (98) gives away that it is the O that is equi-deleted, tipping off the hearer that the sentence has a passive reading. It becomes evident that this -n is the ergative marker rather than the genitive marker when a first- or second-person pronoun is the A (99) (the 2nd person genitive pronoun is min)

- (99) mimbi cues-tiapi-mbo ic-e-bi ‘I won’t let you hit me.’/
 2Erg hit-Neg.Abil-Adjzr ic-Npast-Indic ‘It is impossible that you will hit me.’

Similarly, since two instrumental-marked participants cannot occur in the same clause, the example in (100) discourages the interpretation of the -n-marked on the agentive participant as the instrumental case marker.

- (100) debi-n cuate-n cues-tiapi-mbo ic-e-bi
 Davy-Erg **stick-Inst** hit-Neg.Abil-Adjzr be-Npast-Indic
 ‘I won’t let Davy hit me with a stick.’ / ‘There’s no way Davy will hit me with...’

Just as the presence of an -n-marked participant reveals that there is S-O co-reference, so does the presence of two zero-marked noun phrases reveal that there is S-A co-reference (96a). However, ambiguity often results due to zero-pronominalization. In addition to the matrix S, the non-coreferential argument of the transitive subordinate verb can also be zero-pronominalized (if third person). As a result, active and passive abilitative sentences can be superficially identical when one or more argument is zero-pronominalized (101 & 110).

- (101) uesnid-Ø pe-tiapi-mbo ic-e-c
 curassow-Abs eat-Neg.Abil-Adjzr be-Npast-Indic
 ‘(He) cannot/does not want to eat curassow.’ uesnid = O; S/A covert
 ‘The curassow cannot/does not want to eat (it/anything).’ uesnid = S/A; O covert
 ‘The curassow can’t be/won’t let itself be eaten.’ uesnid = S/O; A covert
- (102) pe-tiad-quoio ic-e-c
 eat-Abil-Adjzr be-Npast-Indic
 ‘(He) wants/can eat (it/something).’ S/A & O covert
 ‘(It) can be eaten (by him).’ S/O & A covert

What makes me want to call the S = O version of this construction a “passive” is that the effect is to essentially make the Object of the semantically rich verb the subject of the sentence. Abilitative passives might even be interpreted as a type of analytic passive. However, this construction lacks many important properties of passives. We can compare it to the most syntactically prototypical passive construction, the reflexive

passive (§11.6.1.1). In reflexive passives, the Agent is always implied, but not always mentionable overtly, and if mentioned overtly, it occurs as a peripheral participant (in the instrumental case); with the abilitative passive, by contrast, the Agent is always mentionable and always occurs as a core argument (of the subordinate verb). While the reflexive passive is always an intransitive clause, the abilitative passive does not involve detransitivization of the adjectivalized verb (but it does occur in an intransitive main clause). Another difference is that while the reflexive passive is marked overtly by the suffix *-ad*, the abilitative passive carries no special marker—it is the co-reference relationship that creates it. One property that both passive types share is that the Agent is always implied, and this Agent can have either a specific referent, or an impersonal one. For example, in (103) and (104), no particular person is implied.

- (103) [ambo ush-e-c ca]-tiapi-mbo ic-quid cuesban ne-e-c
 there sleep-Npast-Indic say-Neg.Abil-Adjzr be-Agt.Nzr bat be-Npast-Indic
 ‘Bats are ones that one can’t say about them, “They sleep there”.’ (i.e., bats can’t have all their different roost types enumerated by anyone)

C-V 016 cuesban 23

- (104) tsauesamē-Ø cues-tiapi-mbo ic-quid
 giant.armadillo-Abs kill-Neg.Abil-Adjzr be-Hab
 ‘The giant armadillo cannot/does not let itself be killed.’ (i.e., people should not kill the giant armadillo [because it enchants people])

Both seem to convey that the Patient has at least partial control over the situation, but the abilitative does not usually function to defocus the Agent, unlike more prototypical passives in other languages (Shibatani 1985).

Abilitative passives can be divided into two subtypes: (positive) abilitative passives, those involving the suffix *-tiad* ‘Abilitative’ (105a), and negative abilitative passives, those involving the suffix *-tiapi* ‘Negative Abilitative’ (105b).

- (105a) [nisi-n pe]-tiad-quo ic-e-bi 'I could be bit by a snake.'
 snake-Erg bite-Abil-Adjzr be-Npast-1S
- (105b) [nisi-n pe]-tiapi-mbo ic-e-bi
 snake-Erg bite-Neg.Abil-Adjzr be-Npast-1S
 'I could not be/let myself be bit by a snake.'

Negative abilitative passives seem to be more common in the language, and their semantics differ somewhat from positive abilitative passives, and from non-passive abilitative constructions. While *-tiad* and *-tiapi* can refer to desire in active clauses, in passive clauses there is never desiderative semantics; positive abilitative passives express ability/possibility, and negative abilitative passives can express inability/impossibility or reflexive enablement.¹³

The passive sentence (106b) actually looks superficially more like a regular active transitive clause than does the non-passive version (106a), due to the lack of ergative marking on the Agentive participant in (106a). The person subject agreement on the copular verb is evidence that these are a multi-clause constructions rather than active ones (with complex verb phrases).

- (106a) debi-Ø [ubi cues]-tiapi-mbo ic-o-sh
 Davy-Abs 1Abs hit-Neg.Abil-Adjzr be-Past-3
 'Davy did not want to/could not have hit me.'
- (106b) ubi [debi-n cues]-tiapi-mbo ic-o-c passive
 1Abs Davy-Erg hit-Neg.Abil-Adjzr be-Past-1/2
 'I could not have been/did not let myself be hit by Davy.'

About now, the reader may be wondering which is the basic meaning of these constructions, desiderative or abilitative, at least for the non-passive constructions. My glosses reveal my interpretation. One piece of evidence suggesting the abilitative is basic

¹³ In contrast, the reflexive passive codes only reflexive enablement (§11.6.1.1); i.e., allowing oneself to be/get V-ed.

is that inanimate participants, like rain, can be subjects (107). Inanimate entities could be capable of desire only metaphorically.

(107a) ue cho-tiad-pambo ic-e-c 'It looks like there will be a big rain.'
rain come-Abil-Adjzr:Aug be-Npast-Indic lit. 'Rain is come-able.'

(107b) ue cho-tiapi-mbo ic-e-c 'It looks like it won't rain.'
rain come-Neg.Abil-Adjzr be-Npast-Indic lit. 'Rain is un-come-able.'

In many cases, both desiderative and abilitative interpretations are possible, and it is hard to separate the two meanings. But in some cases, only an abilitative reading is possible. In (108), the meaning of -tiapi is essentially that, although the story happened a long time ago and it is hard for the speaker to remember how old exactly he was, it is nevertheless *impossible* that he could have been any more than just an adolescent. It is hard to imagine any desiderative semantics associated with this use of -tiapi in (108).

(108) tsësio-bud-tiapi-mbo ubi-mbo ic-onda-c ambo
old.man-Dur-Neg.Abil-Adjzr 1Abs-Aug be-Dist.Past-Indic then
'Back then, I hadn't even begun to become old.'

K-XXI 009 dëmushbo 23

It is instructive to contrast these constructions with desiderative constructions using bun 'want' (§12.2.6). The bun constructions express pure desire. The subject simply wants (109a) or does not want (110a) to perform the action indicated in the subject complement; it can be for some good reason, or the subject might just simply feel inclined or disinclined to perform the action for no reason at all. For -tiad (109b) and -tiapi (110b) constructions, among the possible interpretations given by speakers is a desiderative reading; but with -tiapi, the subject must have some justification for not going; with -tiad it is possible that it is pure desire.

in the language, without an adjective-modifying/adjectivalizing enclitic, and in these cases they do not change the class of the verb. Examples are hortative-like constructions (112 & 113; §11.10) and questions with an inclusive first-person plural subject about a potential immediate future action (114), where -tiad is used without the copular verb and without an enclitic (and without verbal inflection, but note that -Ø is an imperative verbal inflection, and could be argued to exist in these imperative-like constructions).

- (112a) nuqui nid-tiad (112b) nid-tiad (113) ëquëduc-quo uëdëshca-tiad
 1+2 go-Abil go-Abil inside-Aug dig-Abil
 ‘Let’s go!’ ‘Let’s go!’ ‘Let’s dig very deep.’
- (114) cuesunne-quin-da ic-tiad “‘Should we kill them?’”
 kill-while:S/A>A-Uncert be-Desid

K-XXI 009 dëmushbo 26

And in older people’s speech, -tiapi optionally occurs without ic, without an adjective-modifying enclitic (115a; cf. 97 which occurs in the same text and has the same exact meaning). This appears to be a possible alternant only in the present tense and for first person subjects. With short comments (115b), and especially brusque short responses (115c), even young speakers sometimes use -tiapi without the auxiliary when the statement is in the present tense and has a first-person subject.

- (115a) [bacuë-bo-n chud]-tiapi-bi que-onda-sh
 child-Pl-Erg copulate.with-Neg.Abil-1S say-Dist.Past-3
 “‘I won’t let children have sex with me,” she told me.’

+ K-XXII 010 chema 092

- (115b) nid-tiapi-bi (115c) nid-tiapi
 go-Neg.Abil-1S go-Neg.Abil
 ‘I won’t/don’t want to go.’ ‘I won’t/don’t want to go.’

Compare (112b) and (115c). In the absence of an overt subject noun, pronoun, pronominal suffix or person agreement inflection, -tiad implies an inclusive first person

plural subject (in the hortative), while *-tiapi* implies a first person *singular* subject (in the simple nonpast tense). A final example is substitutive clauses, described above (§12.2.3), which occur with *-tiad* (followed by the nominalizer *-quid* ‘Agent Nominalizer,’ followed by the emphatic enclitic ‘*-bi*’), but with neither an adjectivalizing enclitic or the copular verb *ic*. Thus, despite the varied uses of *-tiapi* and *-tiad*, we can identify the following correlation: without *-mbo/-quio*, *-pambo*, etc., the verb will not occur with the copular verb *ic*, suggesting that without the adjectivalizing suffix, the verb will not occur in predicate adjective copular clauses or otherwise behave syntactically as an adjective.

12.3.2 Negative verb phrases

Here I deal with a construction where negation of the predication is expressed as a single, complex verb phrase. A verb representing the predication to be negated is suffixed with one of two negative suffixes, *-en* ‘Negative’ or *-a* ‘Negative: Perfect’ (in place of the inflectional morphology), further followed by an adjective-modifying enclitic (*-mbo/-quio* ‘Augmentative,’ *-pabi* ‘De-intensifier,’ *-patséc* ‘Diminutive,’ etc.) or the emphatic enclitic, *-bi*. This verb form is non-finite and must occur with the auxiliary verb *ic*, which carries all the TAM and person-marking inflection (116).

(116) *nid-en-quio ic-e-c* ‘They [the bats] don’t go away.’
 go-Neg-Aug Aux-Npast-Indic

D-X 057 cuesban 05

Depending on the enclitic following the negative suffix, negative clauses have different syntactic (and semantic) properties: for example, simple, active clauses are created by using *-mbo/-quio* ‘Augmentative’ or *-bi* ‘Emphatic’; the use of *-pabi* requires an inceptive marker on the auxiliary verb; *-pambo* and *-patséc* apparently only occur when the negative verb phrase is part of a subordinate clause; etc. I will first describe the syntax of

this construction type using simple active sentences with -mbo/-quio, which are semantically empty in these constructions; then I will elaborate on the syntactic, semantic, and tense-aspect differences among the suffix combinations.

This negative construction is superficially similar to the abilitative constructions described in the preceding section, and most certainly is historically based on predicate adjective copular constructions with a derived verb in the adjective slot. In fact, intransitive abilitative and intransitive negative constructions show no overt signs of being different in kind (117).

- | | |
|---|---|
| <p>(117a) <u>nid-a-mbo</u> <u>ic-e-bi</u>
 go-Neg:Perf-Aug Aux-Npast-1S
 'I have not gone.'</p> | <p>(117b) <u>nid-en-quio</u> <u>ic-e-bi</u>
 go-Neg-Aug Aux-Npast-1S
 'I am not going.'</p> |
| <p>(117b) <u>nid-tiapi-mbo</u> <u>ic-e-bi</u>
 go-Neg.Abil-Adjzr be-Npast-1S</p> | <p>'I can't/won't/don't want to go.'
 lit. 'I am non-go-wanting.'
 or lit. 'I am non-go-able/go-unwilling.'</p> |

And comparison of the negative clauses in (118a) with the predicate adjective copular clause in (118b) reveals a strong formal and semantic similarity. We could even come up with adjectivalized-sounding translations for (117a), (117b), and (118a): 'I am un-gone,' 'I am non-going,' and 'Davy is non-working.'

- | | |
|---|--|
| <p>(118a) <u>debi</u> <u>chonoad-en-quio</u> <u>ic-e-c</u>
 Davy work-Neg-Aug Aux-Npast-Indic</p> | <p>'Davy does not work.'
 'Davy is not working.'</p> |
| <p>(118b) <u>debi</u> <u>dayac-quio</u> <u>ic-e-c</u>
 Davy hard.working-Aug be-Npast-Indic</p> | <p>'Davy is hard-working.'</p> |

It becomes evident that these negative constructions have been reanalyzed as one-clause sentences when transitive verbs are involved. The most obvious sign is that in negative constructions, ic can take the first-person pronominal suffix -mbi '1A,' which otherwise

only occurs only on transitive verbs (119 & 120a), while in abilitative constructions, *ic* can only occur with *-bi* '1S' whether the non-finite verb is transitive or intransitive (120b).¹⁴

(119) bacuë is-a-mbo ic-e-mbi 'I have not seen its fruits.'
fruit see-Neg:Perf-Aug Aux-Npast-1A

A-I 022 shubu tanun 06

(120a) pe-en-quo ic-e-mbi (120b) pe-tiapi-mbo ic-e-bi
eat-Neg-Aug Aux-Npast-1A eat-Neg.Abil-Adjzr be-Npast-1S
'I won't eat/am not eating.' 'I cannot/don't want to eat.'

Negative constructions with transitive non-finite verbs follow a simple transitive case-marking pattern (121 & 122a), unlike abilitative constructions, which either appear to have two absolutive-marked participants (122b) or, if there is an ergative-marked participant in the sentence, it must have a passive reading (122c).

(121) [aid bacuë]-Ø matses-n pe-en-quo ic-e-c
that.onefruit-Abs Matses-Erg eat-Neg-Aug Aux-Npast-Indic
'Matses don't eat those one's fruits.'

A-I 010 piushën titado 10

(122a) debi-n bëchun-Ø pe-en-quo ic-e-c
Davy-Erg capuchin.monkey-Abs eat-Neg-Aug Aux-Npast-Indic
'Davy won't eat/is not eating capuchin monkey.'

(122b) debi-Ø [bëchun-Ø pe]-tiapi-mbo ic-e-c
Davy-Abs capuchin.monkey-Abs eat-Neg.Abil-Adjzr be-Npast-Indic
'Davy won't/cannot/doesn't want to eat capuchin monkey.'

(122c) bëchun-Ø [debi-n pe]-tiapi-mbo ic-e-c
capuchin.monkey-Abs Davy-Erg eat-Neg.Abil-Adjzr be-Npast-Indic
'The capuchin monkey cannot/won't let itself be eaten by Davy.'

¹⁴ Although speakers identify this as the "correct" pattern, I have occasionally heard speakers use *-mbi* '1A' here instead, which in elicitation speakers reject. Be this performance errors or inter- and intra- speaker sociolinguistic variation, it still suggests reanalysis of this construction has occurred, and this pattern may become fully actualized in the future. This variation does not seem to exist for negative constructions.

In negative constructions, the ergative-marked participant will control the person subject agreement on *ic* (123a); not so in abilitative constructions (123b).

(123a) debi-Ø mimbi cues-en-quo ic-o-c 'You didn't hit Davy.'
 Davy-Abs 2Erg hit-Neg-Aug Aux-Past-Indic:1/2

(123b) debi-Ø [mimbi cues]-tiapi-mbo ic-o-sh
 Davy-Abs 2Erg hit-Neg.Abil-Adjzr be-Past-3
 'Davy didn't allow himself to/couldn't be hit by you.'

Abilitative constructions, being composed of two clauses, can have an adverbial clause with either the subordinate (124a) or the main clause (124b) as its matrix clause.

Negative constructions, by contrast, can only have adverbial clauses associated with the non-finite verb (125 & 126).

(124a) [acte paë ac-shun mibi cues]-tiapi-mbo ic-e-bi
 water strong drink-after:S/A>A 2Abs hit-Neg.Abil-Adjzr be-Npast-1S
 'I won't /won't want to hit you after drinking liquor.'

(124b) acte paë ac-ash [mibi cues]-tiapi-mbo ic-e-bi
 water strong drink-after:S/A>S 2Abs hit-Neg.Abil-Adjzr be-Npast-1S
 'Now that I am drunk, I won't/don't want to hit you.'

(125a) acte paë ac-shun mibi cues-en-quo ic-e-bi
 water strong drink-after:S/A>A 2Abs hit-Neg-Aug Aux-Npast-1S
 'I won't hit you after drinking liquor.' / 'Now that I'm drunk, I won't hit you.'

(125b) *acte paë ac-ash mibi cues-en-quo ic-e-bi

(126) aid matses-n shubu-ua-en-quo ic-e-c
 that.one Matses-Erg house-Vzr:make-Neg-Aug Aux-Npast-Indic
baded-quo bidique-an-ne-quid que-shun
 quickly-Aug twist-Incep-Distr-Hab say-after:S/A>A
 'Matses; don't make roofs out of those [dapais palms] because they; say (lit. 'after saying') that it starts to twist up very quickly.'

This suggests that despite their superficial similarity, these negative and abilitative/desiderative constructions have the fundamental difference that in the negative constructions, the non-finite verb governs all case marking, subject person agreement, and adverbial material, while in abilitative/desiderative constructions, it is the copular verb that governs person subject agreement, and both the non-finite and the copular verb have arguments and adverbial material associated with them. As such, I feel justified in calling ic an auxiliary in these sentential negation constructions and the combination of the non-finite verb and ic a complex verb phrase, rather than a multi-clause construction; therefore, neither the enclitics -en and -a nor -mbo/-quio function in these constructions as class-changing or subordinating morphemes.

There is a word-order constraint that applies to negative verb phrases: the non-finite verb must precede the auxiliary verb (127), but not necessarily directly precede it (128). This is the same word-order constraint that is found in predicate adjective copular clauses (§§10.2, 11.7.2) and abilitative constructions (preceding section).

(127a) cho-en-quio ic-e-bi
 come-Neg-Aug Aux-Npast-1S
 ‘I don’t/won’t come.’

(127b) *ic-e-bi cho-en-quio

(128) matses-n mish-en-quio shēcmaucudanmēs ic-e-c
 Matses-Erg touch-Neg-Aug palm.species Aux-Npast-Indic
 ‘Matses do not touch the shēcmaucudanmēs palm.’

1-p17-B shēcmaucudanmēs 03

Now let us look into the meanings of the different suffix and enclitic combinations. The suffix -en contrasts with -a in that -en is in general in terms of aspect (i.e., it can code perfective or imperfective aspect; 129), while -a refers to states that are asserted to be true only up to a temporal reference point that is specified by the tense marked on the auxiliary verb (i.e., perfect aspect; 130 & 131).

- (129a) cho-en-quio ic-e-c (129b) cho-en-quio ic-o-sh
 come-Neg-Aug Aux-Npast-Indic come-Neg-Aug Aux-Past-3
 'He does not/will not come/is not coming.' 'He did not come/was not coming.'
- (130a) cho-a-mbo ic-e-c (130b) cho-a-mbo ic-o-sh
 come-Neg:Perf-Aug Aux-Npast-Indic come-Neg:Perf-Aug Aux-Past-3
 'He has not come.' 'He had not come.'
- (131a) cho-a-bi ic-e-c (131b) cho-a-bi ic-o-sh
 come-Neg:Perf-Emph Aux-Npast-Indic come-Neg:Perf-Emph Aux-Past-3
 'He has not come yet.' 'He had not yet come.' / 'He had not
 come, even though I expected him.'

Either one of the adjective-modifying enclitics or the emphatic enclitic -bi is obligatory following -en or -a in these constructions. And, again, as in predicate adjective copular clauses, the otherwise augmentative enclitic -mbo/-quio is semantically empty in negative verb phrases. All of the adjective-modifying enclitics, but not -bi, can occur after -en, but only -bi and -mbo/-quio (and -shë) can occur after -a. The difference between -a-mbo and -a-bi is that there is a higher degree of expectation that the negated action/state will occur/be true after (usually shortly after) the temporal reference point indicated by the tense marker on the auxiliary. All of the of the (a) examples in (129) - (131) could be good answers to the question: "Has the president of Peru visited this village?" The speaker would use (129a) to assert that the president has never come and there is no reason to believe he ever will; (130a) asserts that the president has never come, but there is always a chance that he will; (131a) would be adequate if the speaker knew that the president was on his way upstream to the village, or if the president had made a public statement that he would visit every Indian village in Peru during his term. In the present tense, the high level of expectation associated with -a-bi can generally be captured in the English translation by adding *yet* (131a), but in the past tense (e.g., *He had not come yet*),

the English *yet* would imply that the action did eventually occur, while *-a-bi* does not entail that the action has occurred as of the time of the speech act (131b).

The enclitics *-quimbo* ‘Augmentative’ and *-tsēcquio* ‘Derogatory’ modify the predication true to their meanings with adjectives (§§6.6.2.2, 6.6.2.6), as indicated in their glosses (132).

- (132a) chonoad-en-quimbo ic-e-c ‘He does not work *at all*.’
work-Neg-Aug Aux-Npast-Indic
- (132b) chonoad-en-tsēcquio ic-e-c ‘He doesn’t work fully
work-Neg-Derog Aux-Npast-Indic (i.e., lazily, doing a half-assed job).’

The enclitic *-pabi*, introduced in section 6.6.2.4 as an adjective-modifying suffix having a de-intensifying meaning, in combination with the negative suffix *-en*, can be translated into English as *not very often* (133a); i.e., it de-intensifies the “negativeness” (rather than the predication itself, as do *-quimbo* and *-tsēcquio*; 132), so that, unlike with *-en-quio* (133b), complete negation is not conveyed. For some reason, this enclitic only occurs in negative verb phrases when the copular verb has the inceptive suffix *-an* on it (133a).

- (133a) nid-en-pabi ic-an-o-bi ‘I no longer go there all that often.’
go-Neg-Deintens Aux-Incep-Past-1S
- (133b) nid-en-quio ic-an-o-bi ‘I no longer go there.’
go-Neg-Aug Aux-Incep-Past-1S

As with adjectives, all augmentative enclitics can be further augmented with the enclitic *-shě* ‘Augmentative’ (134).

- (134a) chonoad-a-mbo-shě ic-e-c ‘He has not worked at all.’
work-Neg:Perf-Aug-Aug Aux-Npast-Indic

- (134b) chonoad-en-quio-shē ic-e-c ‘He does not work at all.’
 work-Neg-Aug-Aug Aux-Npast-Indic
- (134c) chonoad-en-quimbo-shē ic-e-c ‘He really does not work at all, not a bit.’
 work-Neg-Aug-Aug Aux-Npast-Indic

12.3.3 Negative subordinate clauses

The negative construction described in the preceding section is the most common use of the negative suffixes -en and -a, considering that this is the most common sentential negation strategy in the language. There is another construction type using these same negative suffixes plus the adjective-modifying/adjectivalizing enclitics, where the adjectivalization (which apparently has not been reanalyzed as something else) occurs as a subordinate clause in a complex sentence involving a non-copular matrix verb, usually with a negative circumstantial (i.e., ‘without’) adverbial function (135 & 136; negative subordinate clauses in brackets).

- (135) aton shubu ic-ac-no cho-ac-sho is-ash bēdi
 3Gen house be-Act.Nzr-Loc come-Infer-when:S/O>O see-after:S/A>S jaguar
dē-bidiad-anec aocbidi nid-quid [matses pe-a-mbo-bi]
 nose-turn.around-after:S/A>Sjust go-Hab Matses eat-Neg:Perf-Aug-Emph
 ‘After it sees that [the Matses] has arrived home, the jaguar turns around and just goes back to where it was, **without having eaten the Matses.**’

A-IV 036 bēdi dapa 32

- (136) tsaodi [ubi chui-a-bi] cuen-ac que-onda-sh
 I.don’t.know 1Abs tell-Neg.Perf-Emph run.off-Infer say-Dist.Past-3
 “‘I don’t know. He ran off **without telling me,**” he said.’

+ K-XXII 008 chema 075

The sentences in (135) and (136) could just as well have the verb phrase pe-a-mbo ic-ec (eat-Neg:Perf-Aug Aux-while:S/A>S) or chui-a-bi ic-ec instead, without really changing the meaning. Thus, an alternate interpretation is that ic-ec can optionally occur covertly, considering that verbs ending in these negative non-finite suffixes cannot be confused

with the main (finite) clause. The negative clauses in (135) and (136) would then be seen as abbreviated adverbialized clauses. However one looks at it, the negative clauses act as subordinate adverbial clauses. My interpretation is that these are adjectivalized clauses, occurring as expansions of the adjective slot in an adverbial adjective construction (§12.4). Compare the adverbial adjective constructions with a simple adjectives in (137a) and (138a) with those in (137b) and (138b), where the adjective slot is filled by a subordinate negative adjectivalized verb/clause.

(137a) ushu-mbo chënque-e-c
white-Aug shine-Npast-Indic
'It shines white.'

(137b) uënës-en-quio chënque-e-c
die-Neg-Adjzr shine-Npast-Indic
'It shines without going out.'

(138a) cue-mbo pudun-o-sh
straight-Aug jump-Past-3
'He jumped straight.'

(138b) [ubi chui]-a-bi pudun-o-sh
1Abs tell-Neg:Perf-Emph jump-Past-3
'He jumped without having told me.'

With the enclitics, -pambo 'Augmentative' and -patsëc 'Diminutive,' the negative verb *must* occurs as a subordinate adverbial clause (139a & 140), never with the auxiliary (139b).

(139a) cho-en-pambo ano-bi tabad-e-c
come-Neg-Adjzr:Aug there-Emph stay-Npast-Indic
'Instead of coming (like he should), he is staying over there.'

(139b) *cho-en-pambo ic-e-c ('He is not coming.')

come-Neg-Aug Aux-Npast-Indic

(140) cho-en-patsëc cho-e-c
come-Neg-Adjzr:Dim come-Npast-Indic
'He is coming slowly.' (more literally: 'He is coming almost without coming')

The adjectivalized clause in sentence in (140) functions semantically more like a modifier, than a separate clause, while the clause in (139a) functions more like a separate clause relating a sub-event. Previous to this section, we have been discussing

adverbialized clauses primarily as subordinate to copular verbs (whether reanalyzed as an auxiliary verb construction or not), but here, where the matrix verb can be a regular, semantically rich verb, co-reference between the subordinate and matrix verb becomes an issue. This is much more so for a sentence like (139a) than for (140). Whenever two clauses in a sentence refer to two separate/separable events, the need may arise to understand the identity of arguments in the two clauses and their co-reference relations. What we find, at least from the text examples, is that there is always subject (S/A) co-reference between the negative clause and matrix clause, and that the subject does not occur overtly twice (141 & 142; and all examples in this section).

- (141) ad-**quid**-bi bəshuicquid paəd-**en**-**quio** cuēte cuidi-n
do.thus-Agt.Nzr-Emph saki.monkey fall-Neg-Adjzr dicot.tree branch-Loc
titinque-**quid**
run-Hab

‘Those ones, the saki monkeys run on tree branches without falling.’

A-I 055 bəshuicquid 30

- (142) dacuəd-**en**-**quio** capu-**quid** bosen ne-e-c
be.afraid-Neg-Adjzr locomote-Agt.Nzr Neotropical.otter be-Npast-Indic
‘Neotropical otters are ones that swim around without being afraid.’

A-IV 032 bosen 17

Because I have not done much elicitation on this topic, it may in fact be that the situation is similar to that in English *while V-ing* clauses: if the subject of the subordinate clause is not mentioned overtly, the subjects of the subordinate clause and the matrix clause are co-referential by default, while if the subordinate clause subject is mentioned overtly, then there may be no co-reference relation to the matrix verb arguments. Similarly, the automatic relative time reference relation between the two clauses is simultaneity, but I still have to confirm whether this is a strict rule or a default relation which could be counteracted when the adjectivalized negative clause contains a temporal adjective.

As a final note, it should be mentioned that negative verbs can occur without the auxiliary verbs in a few other environments. One is in a type of coordination, like in (143).

- (143) adecbidi nidaid ëquëduc capu-quid ne-e-c sebad-n
 likewise:Intr ground inside locomote-Agt.Nzr be-Npast-Indic clearing-Loc
capu-en-quoio
 locomote-Neg-Adjzr
 ‘Also, it is one that travels inside the ground, not out in open areas.’

A-I 049 tsauesamë 06

Less frequently, simple sentences occur in texts without the auxiliary, as in (144).

Speakers always judge these as incorrect, especially out of the context of the text; but rather than mistakes by the narrator, these sentences may instead be used for rhetorical effect. Also, I have overheard these negative verb forms without the auxiliary or a matrix clause as answers to questions (145).

- (144) dada-n aid daëdca-en-quoio ‘Men don’t plait those.’
 man-Erg that.one plait-Neg-Aug

A-XIII 018 shuccate 05

- (145a) ada debi cho-ac
 Uncert Davy come-Infer
 ‘Has Davy come?’

- (145b) cho-a-mbo
 come-Neg:Perf-Aug
 ‘Not yet.’

12.4 Adverbialized and adverbial clauses

In Matses, we can talk about a formal category of subordinate clauses called “adverbialized clauses” and a functional category of clauses called “adverbial clauses.” **Adverbial clauses** are defined by Thompson and Longacre (1985:172) as follows: “an adverbial subordinate clause, then, is one which modifies a verb phrase or a sentence.” This definition tells us about the function of adverbial clauses in a sentence, but nothing about the structure or syntax of the clause. For Matses, I define **adverbialized clauses** as

clauses made up of an adverbialized class-changed verb and all its associated arguments and obliques. Adverbialized clauses, like nominalized clauses and adjectivalized clauses, have main clause internal syntax. All adverbialized clauses happen to be adverbial clauses, but the converse is not true. Most types of adverbial clause are in fact adverbialized clauses (146; manner/ simultaneity clause), but some adverbial clauses are formally nominalized clauses (147; concessive clause), and a few are adjectivalized clauses (148; circumstantial clause).¹⁵

- (146) cuesban-dapa cuen-quid [aton podo-Ø tuscuduca]-pambo-ec
 bat-large pass.by-Hab 3Gen wing-Abs flap.audibly-Adjzr:Aug-Advzr:Intr
 ‘Big bats fly by audibly flapping their wings.’
 E-XI 049 cuesban 28
- (147) [ania-tsēc dada ic]-quid-bi ubuēshē-dapa nua-mbo ic-tsēc-quid
 small-Dim body be-Agt.Nzr-Emph testicles-large large-Aug be-Dim-Hab
cacsi
 pygmy.squirrel
 ‘Even though its body is small, the pygmy squirrel’s big testicles are very large.’
 A-IV 007 cacsi 15
- (148) [ush-en]-quio databēd-e-c ‘We watch them without sleeping.’
 sleep-Neg-Adjzr sit.by-Npast-Indic
 + K-XXII 006 chema 061

The different semantic subtypes of adverbial clauses are discussed in section 12.4.2, where I describe all the different adverbialized clauses and mention in which situations nominalized or adjectivalized clauses function as adverbial clauses.

Clause adverbialization as a class-changing process is actually a somewhat complex issue, and will be discussed in the first subsection of the present subsection. The other tricky issue is distinguishing adverbial clauses from clause-chaining clauses (sometimes called “medial clauses” as in Longacre 1985). A prominent feature of Matses

¹⁵ As in the preceding sections, I will continue to use square brackets surrounding the subordinate clause, excluding the subordinating suffix.

is that it is possible to form long clause chains with up to about a dozen non-finite clauses and one main clause. Chaining is accomplished by subordination, and adverbialized, nominalized, and adjectivalized clauses can occur in the clause chain. But only adverbialized clauses explicitly code argument co-reference (same subject, etc.). In fact, any time that a verb is adverbialized, the co-reference relationships between the subordinate clause arguments and the matrix clause arguments cannot remain ambiguous, unlike with nominalized clauses. There is no formal difference in Matses between adverbialized clauses (all of which are adverbial clauses) and clause-chaining clauses. I contend that adverbialized clauses are best analyzed as (subordinate) adverbial clauses which have, as one of their functions, structuring discourse in the form of long clause chains. Clause chaining is discussed in section 12.4.3. In addition to clause chaining and typical adverbial functions, adverbialized clauses also form a type of clausal listing conjunction (§12.4.3.2); code notions like ‘start to’ and ‘finish’ and other notions usually marked by complementation (§§12.4.4.1-12.4.4.3); express progressive aspect (§12.4.4.4); and create adverb-like words at sentence margins that function in inter-sentential overlap/back-reference (§12.4.4.6).

Adverbialized clauses share the same internal structure as all class-changed subordinate clauses, as mentioned in the introduction (§12.1.3). I will briefly recapitulate these internal syntactic properties here. For the most part, subordinate clauses retain main clause syntax. Case-marking is the same, obliques/adverbials can be associated with the subordinated verb (which is marked with the non-finite, class-changing suffix), relative ordering of noun phrases and obliques is free, zero-pronominalization of third-person arguments is possible, etc. Subordinate clauses differ from main clauses in that the verb must occur clause-finally, noun phrases that cannot be deleted in main clauses may be left out, and the use of fourth-person pronouns is optional or may be

required. Adverbialized clauses have no internal structural properties that distinguish them from nominalized and adjectivalized clauses. The one difference associated with adverbialization is that adjectivalized verbs may be further class-changed with adverbializing morphology.

Unique external syntax of adverbialized clauses includes the following properties. Adverbialized clauses: i) may exhibit transitivity agreement; ii) unlike nominalized clauses, they exhibit relative time reference rather than absolute time reference (adjectivalized clauses may make aspectual distinctions, but not tense); and iii) as already mentioned, unlike other subordinate clauses, adverbialized clauses explicitly code participant co-reference. As with adverbs and most other subordinate clause types, there are no strict restrictions about relative position of the adverbialized clause (or other type of adverbial clause) in relation to the main clauses in two-clause sentences. But if the matrix clause of the adverbialized clause is not the main verb, then the adverbialized clause, like all other arguments/obliques associated with a subordinate clause, must occur preceding the matrix verb (clause ordering in very complex sentences is discussed in section 12.4.3). Finally, it should be noted that it is considered by speakers bad grammar to utter a dependent-marked clause without the accompanying main clause, although, as brief responses to questions, the superordinate clause is sometimes left out.

12.4.1 Adverbialization

Adverbialization was discussed in the adverb morphology chapter (§7.8); in Matses there are morphological processes for adjective and verb adverbialization. Both of these types of adverbialization are of interest here since adjectivalized verbs can be further adverbialized. First, let us consider the “adjective-modifying” enclitics, *-mbo/-quio*, *-pambo*, etc., introduced in section 6.6.2. As mentioned in sections 11.7.3.1 and 11.8, when attached to an adjective, these enclitics make the adjective more

adverb-like, and allow adjectives to occur in copular clauses and adverbial adjective constructions (149a). Further modification with one of the class-changing enclitics, -ec ‘Adverbializer: Intransitive Agreement’ or -en ‘Adverbializer: Transitive Agreement’ changes the verb into the “most adverbial” type of adverb: a manner adverb (149b & 150).¹⁶

(149a) bēda-mbo isad-e-c (149b) bēda-mbo-ec isad-e-c
 good-Aug appear-Npast-Indic good-Aug-Advzr:Intr appear-Npast-Indic
 ‘It looks good/pretty.’ ‘It can be seen well [e.g., using glasses].’

(150) bēda-mbo-en chēsh-quid shē-pada-ua-quin
 good-Aug-Advzr:Tr carve-Hab tooth-flat-Vzr:make-while:S/A>A
 ‘They carve it [the spear] well, making the head flat [lit. making it flat-toothed].’
 A-XIII 033 tēdi 03

Cliticization with -ec or -en is the only process for creating manner adverbs from adjectives, while there are many suffixes that create adverbs from verbs.¹⁷ One type of verb adverbialization involves a -ec or -en: the verb may be first adjectivalized with one of the adjective-modifying enclitics (adjectivalizers, in this context), and then further adverbialized with -ec or -en (151), or the adjectivalized verb may be a verbalized noun (152).

¹⁶ The enclitics -ec and -en also occur as transitivity agreement markers on manner adverb roots and some postpositional phrases.

¹⁷ Again, we encounter the language-internal irrelevance of the labels suffix vs. enclitics (see §3.2.3 for a full discussion). The forms -ec and -en have the phrase as their domain when they occur following postpositions, and they can occur on adverbs, as well. Therefore, these fall under our definition of enclitic, even though they function more like suffixes when they occur as adjective or verb adverbializers. The other 18 adverbializing suffixes, however, only occur on verbs and since verbs don’t form phrases, they are not properly called enclitics. Yet, despite the different labels, -ec and -en and the rest of the adverbializing enclitics all behave the same as they occur on verbs.

- (151) tanca-mbo-en shēcten-n pe-quid
 make.crushing.noise-Adjzr-Advzr:Tr collared.peccary-Erg eat-Hab
 ‘Collared peccaries eat loudly (lit., eat making a loud crunching noise).’
 A-I 043 shēcten 19
- (152) podqued-ua-pambo-ec shēctenamē capu-quid
 path-Vzr:make-Adjzr:Aug-Advzr:Intr white.lipped.peccary locomote-Hab
 ‘White-lipped peccaries travel making wide paths.’
 A-I 044 shēctenamē 26

The class-changed verb may be associated with its arguments and obliques, such as the O in (152), and the quoted speech complement in (154) (see §12.5.1 for the status of the quoted material in direct quotation), and these constructions can be called adverbialized clauses (as opposed to just adverbialized verbs).

- (153) [acte dada-Ø podte podte]-tsēcquio-ec nid-e-c
 stream trunk-Abs (redup=Distr) cross-Adjzr:Dim-Advzr:Intr go-Npast-Indic
 ‘They (collared peccaries) go crossing streams.’
 C-III 001 shēcten 16
- (154) [sos sos ca]-pambo-en pe-quid
 gnawing.sound gnawing.sound say-Adjzr:Aug-Advzr:Tr eat-Agt.Nzr
isa ne-e-c
 porcupine be-Npast-Indic
 ‘The porcupine is one that eats loudly going “sos sos”.’
 A-IV 041 isa 21

These constructions code argument co-reference and temporal relation information between the subordinate clauses. Argument co-reference and temporal relations are generally not relevant in the adverbialization of adjective roots, since these do not code events. However, all verb adverbializations, whether through an intermediate adjectivalization or not, are specific in terms of argument co-reference, and also specify a particular temporal and/or logical relation. The type of argument co-reference specified by -ec and -en is ‘same subject’ and the temporal relation specified is simultaneity (‘while’).

In line with their transitivity agreement meaning, -ec indicates that the subordinate clause subject (S or A) is co-referential with the subject of an intransitive matrix verb (S), while -en indicates that the subordinate clause subject is co-referential with the subject of a transitive matrix verb (A).¹⁸ These relations can be observed in (152-154) above. As such, -ec and -en are simply adverbializers specifying transitivity agreement when they are attached to simple adjectives, but with verb roots, their meaning is more complex, and are more accurately be glossed as follows:

-ec ‘Adverbializer: while: subordinate S/A co-referential with matrix S’
-en ‘Adverbializer: while: subordinate S/A co-referential with matrix A’

In fact, for direct adverbialization of verbs (i.e., in the absence of an intervening adjectivalizing enclitic), I adopt these glosses, instead, abbreviating them in the morpheme gloss lines of examples as ‘while: S/A>S’ and ‘while: S/A>A.’ This brings us to the next property of -ec and -en: they can be used directly as verb adverbializers with no deviation in grammatical properties from the “pre-adjectivalized” adverbializations (155; cf. 152)

(155) podqued-ua-ec shēctenamē capu-quid
 path-Vzr:make-while:S/A>S white.lipped.peccary locomote-Hab
 ‘White-lipped peccaries travel making paths.’

Because the augmentative semantics of the enclitic -pambo are never bleached, we get a difference in meaning between (152) and (153). This ability to introduce the semantics associated with these enclitics seems to be a/the motivation for using adverbialized

¹⁸ Distinguishing between intransitive matrix clause subjects and transitive matrix clause subject may seem like a superfluous function of these suffixes (as does transitivity agreement in general). And, in fact, in two-clause sentences, the distinction is unnecessary. But, as will be shown in section 12.4.3, in complex clause chains, this function can help identify the subordinate clause’s matrix clause.

adjectivalizations like the one in (152) instead of direct adverbializations like the one in (155). The motivation for using -mbo/-quio seems to be more grammaticalized than semantically motivated, as these enclitics are semantically bleached as adjectivalizers. In fact, this seems to affect the distributional patterns of -en (but not -ec). We find that in most cases of direct adverbialization, the form -quin is preferred (156a),¹⁹ while -en is judged to be “old people’s speech” with most verbs (156b); with verbs ending in /ka/, however, only the form -en is used (157)

(156a) podqued-ua-quin shēctenamē-n pe-quad
 path-Vzr:make-while:A/S>A white.lipped.peccary -Erg eat-Hab
 ‘White-lipped peccaries make paths as they feed.’/ ‘...feed making paths.’

(156b) podqued-ua-en shēctenamē-n pe-quad
 path-Vzr:make-while:A/S>A white.lipped.peccary -Erg eat-Hab
 ‘White-lipped peccaries make paths as they feed.’/ ‘...feed making paths.’

(157) saued-shun pia dabi-quad matses-n [oesnid podo
 put.in-after:S/A>A arrow.cane fletch-Hab Matses-Erg curassow feather
dabitaccain
da-bitacca]-en
 shaft-stick-while:S/A>A
 ‘After storing the arrow cane, Matses fletch them by sticking curassow feathers
 on the shaft.’

A-XIII 034 pia 10

Thus, we note that the form of the suffix -en/-quin as used in direct verb adverbialization varies slightly from the form used for adjective adverbialization. But the important point to keep in mind is that direct verb adverbialized clauses and “pre-adjectivalized” adverbialized clauses have the same clause-internal structure, and the same distributional syntactic properties, so that there is little motivation to consider them a different category

¹⁹ -quin is possibly the product of -quio + en. We note that whenever the morphemes -quio and -en come together, the form, -quien, is produced. -quin would hypothetically be a further reduced form.

A last observation relevant to understanding argument co-reference is that the co-referential arguments may be related by metonymy, as a part-whole relation, an individual-group relation, etc. Co-referential arguments, for the most part, are not repeated in both the adverbialized and the matrix clauses. In fact, one of the benefits of clause-chaining in Matses is to be able to keep track of temporal and co-reference relationships in a more streamlined fashion. To state co-referent arguments in all clauses would hardly make it worth having this complex argument tracking system. Despite the strong preference for covert co-referent arguments in adverbialized clauses, especially in same-subject situations, when there are long clauses, it is not uncommon for them to be overt in some of the clauses. However, when there is metonymy in the co-referential relationship, overt co-referent arguments are more common, and an overtly-mentioned subordinate argument may appear to be a different referent than the matrix clause subject, as in (167; see also 154). Metonymy in co-reference relations is the topic of section 12.4.3.4.

- (159) [incuente shucque]-pambo-ec capu-quid ne-e-c
 tail-Abs fan-Adjzr:Aug-Advzr:Intr locomote-Agt.Nzr be-Npast-Indic
 '[The giant ant-eater] is one that walks with its big tail swaying back and forth.'

A-IV 027 shaë 04

12.4.2 Types of adverbial clauses

In the subsections of the present section, I will describe the different ways that the adverbial notions listed in Thompson and Longacre (1985) are conveyed in Matses using adverbialized clauses and/or other clause types or other grammar altogether. As much as possible, in this section I will try to restrict the examples to two-clause constructions, for the sake of clarity. However, due to a sometimes limited number of relevant or illustrative examples, I include some sample text sentences with more than two clauses,

but I reserve all explanations of inter-clausal relations involving more than two clauses for section 12.4.3, where I will show how clause chains and other complex sentences are built up from the clause types presented here. Table 12.4 lists all of the adverbializing suffixes in the language.

Table 12.4. Temporal, logical and argument co-reference relations coded by the 20 known adverbializing suffixes.

Suffix ^a	Basic meaning	Extended meanings	Subordinate clause argument		Matrix clause argument
-ec ^b	while	reason, circumstantial, conditional, concessive, additive	S A	=	S
-quin/-en	while	reason, circumstantial, conditional, concessive, additive	S A	=	A
-nuc ^b	while	concessive		≠ ^c	
-ash	after	reason, conditional, concessive	S A	=	S
-shun	after	reason, conditional, concessive	S A	=	A
-tanec	after	reason	S A	=	S
-tanquin	after	reason	S A	=	A
-anec	after		S A	=	S
-anquin	after		S A	=	A
-an	after (inferential)			≠ ^c	
-bon	after (experiential)			≠ ^c	
-sho	when	reason, conditional, concessive	S A O	=	O
-ac	when	reason, conditional	O	=	S A
-nuc ^b	until		S	=	O
-teno	before			≠ ^c	
-ec ^b	purpose		S A	=	S
-nush	purpose	before	S A	=	S
-nun	purpose	before	S A	=	(S) ^d A
-nuec	purpose	before	S A	=	S
-nuen	purpose	before	S A	=	A

^a Allomorphy patterns are described in sections 2.6.1.1, and 2.6.6.2, and 2.6.8.

^b These forms are listed more than once due to their homophonous/polysemous meanings.

^c The "not equal" sign (≠) indicates complete switch reference to a different set of arguments, so that none of the core arguments in the subordinate clause are also in its matrix clause.

^d These parentheses signal inter-speaker variation.

In the subsections of the present section, I will describe all of the adverbializing suffixes in Table 12.4 as they relate to Thompson and Longacre's (1985) typological categories of adverbial clauses. Thompson and Longacre's (1985) classification is semantically-based, and so, while Matses adverbialized clauses code most of these concepts, many are coded instead or additionally by other subordinate clause types (e.g., nominalizations) or by other grammar altogether. While I focus on adverbialized clauses in this section, I will mention and sometimes compare the other clauses types (or other grammar) that can fulfill the same adverbial function.

It seems that all of the adverbializing morphemes provide information about temporal relations. This temporal relation is always relative tense, dependent on the inflection of the main verb and the temporal relations in any other superordinate clauses. This distinguishes adverbialized clauses from nominalized clauses, which either have no time reference or have absolute time reference (§12.2), and from adjectivalized clauses which either provide no time reference or provide aspect information (§12.3). The temporal relations specified by adverbial clauses may be part of an adverbializing suffix's basic meaning or a secondary meaning. In the discussion of these suffixes, a constant issue is the relations among these multiple meanings; therefore, I will try to distinguish different types of polysemy here (keeping in mind that they are all just points in a continuum of meaning extension). The highest level of meaning divergence is **homophony**, where there is no clear meaning connection between identical forms (which possibly originate from distinct historical sources). Two identical forms may be described instead as **polysemous**, which implies a meaning connection between the two forms, which can almost always be found if the linguist is willing to be very abstract, takes into account historical data, or has an overactive imagination. Here, I will define several

subtypes of polysemy: **full polysemy** (which may border on homophony) is when a form contains two meanings that are incompatible in any particular context. An example is the suffix -nuc, which can mean ‘while: completely different referents’ or ‘until: S>O.’

While the two temporal meanings of -nuc may be related abstractly, and might be both partially true at the same time in some instances (§12.4.2.4), the argument co-reference meanings can never both be true at the same time. I chose to treat such cases of full polysemy as separate morphemes, as listed in Table 12.4. One could try to identify which of the two fully polysemous suffixes has the basic meaning by trying to determine which is derived from which, using either historical reconstruction or theories about which domains are “basic” (e.g., Langacker 1987). However, this would be at best speculative and does not seem relevant to a synchronic description, so I will not posit primary meanings in the cases of full polysemy. Accordingly, these receive distinct glosses in morpheme-gloss lines in examples.

Another polysemy possibility is when two compatible meanings, e.g., ‘Purpose’ and ‘before’ can both apply together in some instances, but in other contexts either one can obtain independently of the other. I identify the main or primary meaning using two types of cues: i) if one of the meanings only obtains independently when modified with another suffix (specifically -bi, in the case of adverbializing suffixes), then this is the **extended meaning**; the meaning that can obtain independently without being modified by a suffix is the **basic or primary meaning**. The other factor is more subjective: the basic meaning is the one that occurs most frequently or the one that speakers usually interpret in context-free sentences during elicitation. Luckily, in all such cases, both cues were available and I had no contradictory results. Because this extension is a synchronically-active phenomenon, and fairly transparent, I use only the basic meaning

in the morpheme-line glosses, while the free translations reflect the extended meanings (with “literal” translations in brackets, if helpful).

The final level of polysemy that I identify is what I call “implied meanings.”

Implied meanings are meanings that never occur independently of the basic meaning, and only obtain in some contexts. In some cases, the implied meaning is subtle, in other cases, it overshadows the basic meaning (but the basic meaning must still hold, at least loosely). For example, the English sentence *He got mad and then hit him* strongly implies reason, but it can never violate the specified temporal ordering of the conjoined clauses, no matter how much the reason meaning dominates the temporal meaning in any particular context. And it is always possible to come up with a scenario that does not involve a reason relation between the two conjoined clauses. In these cases, the basic meaning is easy to identify—it is the one that can occur independently. Extended and implied meanings are referred to collectively as **secondary meanings**. Again, only basic meanings will occur in the morpheme gloss line.

Certainly, the secondary meanings of some of these suffixes fall between some of the categories defined above, but these terms will help in talking about the different meanings more precisely. As a final convention, for the sake of ease of description, I distinguish two types of meanings, **temporal meanings**, which refer strictly to the relative temporal ordering between the clauses, and **logical meanings**, which refer to such notions as purpose, reason, circumstance, condition, concession, etc.

12.4.2.1 ‘while’

There are three adverbializing suffixes that code the temporal relations ‘while’ as their principal temporal/logical relation: two, **-ec** ‘while: S/A>S’ and **-quin/-en** ‘while: S/A>A’ code ‘same subject,’ and **-nuc** ‘while: Different Referent,’ signals that none of the core arguments (S, A, or O) are co-referential. All of these have secondary logical

meanings that can occur together with or instead of their basic temporal meaning. In this section, I will only deal with time meaning; sections 12.4.2.8-12.4.2.13 describe their other functions. The suffixes -sho ‘when: S/A/O>O’ and -ac ‘when: O>S/A’ code the temporal relation ‘when,’ which also include temporal overlap as part of their meanings, but these will be described separately in section 12.4.2.3.

The grammatical properties of the suffixes -ec and -quin/-en were already introduced in section 12.4.1; here I focus on their temporal meaning, which is their basic meaning. The essential meaning in these temporal clauses is that the subject is doing two (160) or more (161) things at once.

- (160) inchësh-n-uid-bi cuesban mamên-an-ec capu-e-c
 dark-Loc-only-Emph bat laugh-Incep-**while:S/A>S** locomote-Npast-Indic
 ‘Only at night, bats fly around while laughing [their vocalizations sound like laughter, at least to this speaker].’

A-I 051 cuesban 11

- (161) [në chompish podo que]-**quin** mene-ban-quin
 here small.two.toed.sloth arm say-**while:S/A>A** give-Iter-**while:S/A>A**
pe-quad matses-n
 eat-Hab Matses-Erg
 ‘Matses eat two-toed sloths handing out parts of it saying, “Here! a two-toed sloth arm!”’

A-IV 024 chompish 17

As pointed out above, these suffixes are also used to create manner adverbs from adjectives, and, accordingly, subordinate clauses involving these suffixes often sound like manner clauses (162) and (163).

- (162) utsi-bi cuëte da-diad-tsëc-ec ush-e-c
 other-Emph dicot.tree trunk-hang-Dim-**while:S/A>S** sleep-Npast-Indic
cuëte tédion
 dicot.tree below
 ‘Yet another (small [bat]) sleeps hanging onto the trunk of a tree, on the underside of the [fallen] tree.’

A-I 051 cuesban 21

- (163) [taë-n didique]-quin senta-n cuëte bacuë
 foot-Inst hang-**while:S/A>A** red.uakari.monkey-Erg dicot.tree fruit
pe-e-c
 eat-Npast-Indic
 ‘Uakari monkeys eat dicot tree fruits hanging (or ‘as they hang’) from their feet.’
 A-I 057 senta 06

It seems that either the matrix clause (162 & 163) or the adverbialized clause (164) may refer to the principal/more prominent activity coded by the sentence, it is actually often hard to know which clause is more central in the sentence, as in (165).

- (164) [aid che]-ec tabad-onda-sh
 that.one eat.unchewed-**while:S/A>S** stand:Pl-Dist.Past-3
 ‘They stayed there eating those.’
 + K-XXII 011 chema 106
- (165) [shëcuë-ua-ban]-quin ud-quid matses-n
 hole-Vzr:make-Iter-**while:S/A>A** dig in-Hab Matses-Erg
 ‘Matses perforate them, digging into them [the monkey teeth].’
 ‘Matses dig into them, perforating them.’
 A-XIII 012 poshto shëta 03

The ‘manner’ reading in these sentences seems to blend right in with the similar sentences that I have categorized as “circumstantial” constructions (§12.4.2.9). ‘Overlap’ may be a better term than ‘simultaneity’ to describe the temporal relation coded by these suffixes, since it is not always the case that the two activities occur concurrently from start to finish. In fact, the overlap meaning is not so strict. In (166), the stacking takes place during the bringing process, but not actually while bringing any one bundle of fronds. In (167), the tossing out does not actually occur simultaneously while inserting the new lip plugs (i.e., with the old one in one hand, the new one in the other), but it happens at about the same time and there is no important succession ordering between the two activities.

- (166) te-shun dada-n bë bë-quid tsindo-quin
 cut-after:S/A>A man-Erg (redup=Distr) bring-Hab stack-while:S/A>A
 ‘After cutting them, men bring [the fronds] making several trips, stacking them.’
 A-I 012 budëd 06
- (167) ad-shun-bi [shëni sia]-quin chuca usun-quid
 do.thus-after:S/A>A-Emph old throw.down-while:S/A>A new insert-Hab
 ‘After that, they throw out the old ones and put on the new ones.’
 A-XIII 006 ëctabëdte 11

While clauses with -ec and -quin/-en are the most adverb-like formally, those formed with -nuc (allomorph -nu) are most useful for grounding the event temporally (168-170), and are correspondingly the ones most clearly replaceable by simple locative adverbs or postpositional phrases.²⁰

- (168) badiad-nuc maca dectato-e-c
 dawn-while:Diff.Ref rat ascend-Npast-Indic
 ‘At dawn (lit. ‘while [the day is] dawning’) the spiny tree rats climb back up.’
 A-IV 016 abuc maca 10
- (169) [ue cho]-nuc te-ash manua-e-c
 rain come-while:Diff.Ref cut-after:S/A>S keep.rain.off-Npast-Indic
 ‘When it rains [lit. ‘when rain comes’], after cutting it, [Matses] cover their heads [with a manëcte palm leaf].’
 A-I 038 manëcte 09
- (170) tsise adecbidi cuëte-n samëd-cuen-ne-quid [tanun-quoic]-nuc
 coati likewise:Intr dicot.tree-Loc lay:Pl-Incho-Distr-Hab dry-Aug
 be-while:Diff.Ref
 ‘Also, coatis stop to lie in dicot trees when the weather is dry.’
 A-IV 028 tsise 20

²⁰ Unlike with -ec and -en, the suffix -nuc has no adjective adverbializing function, nor does it have any cognates in the language. Possible historical sources are the locative postposition -no (§8.3.1.1) or the locative/temporal formative /uc/ (§7.5.1), or maybe a combination of the two.

dolphin have nothing in common other than temporal overlap, while in fact, as seen by the speaker, the dolphin has intentions of frightening the person in the canoe.

The reader may have noted in the examples in this section a higher occurrence of sentences where the subordinate clause precedes the main clause (12 of the 15 examples, all but 166, 170, and 174). This sample is a fair representation of the pattern in the text data, where there is an obvious tendency for the main clause to follow the 'while' clause, but it is by no means a rule.

The suffix -ec occurs polysemously as a purpose marker (§12.4.2.7) and the suffix -nuc also occurs polysemously meaning 'until: S>O' (§12.4.2.4).

12.4.2.2 'after'

There are eight adverbializing suffixes (six marking 'same subject' and two marking 'different set of arguments') that code temporal priority to the matrix clause; i.e., the English translation would read 'after' at the beginning of the adverbial clause, or '(and) then' at the beginning of its matrix clause. The use of 'then' in the English translation is sometimes stylistically more adequate, but the 'after' gloss is more useful, since it allows translation of sentences with sentence-final subordinate clauses to be translated without inverting the order of the clauses. The translation 'after' also allows us to maintain the meaning of the Matses subordinate clause within its corresponding translated clause. For example, to use *then/and then* instead of *after* to translate the sentence in (175), one would need to invert the order of the second and third clauses (second translation), but not if one uses 'after' (first translation).

(175) [bēda-mbo-en danoshca]-shun tau-i-quid [cuēte bitsi
 good-Aug-Advzr:Tr smoothen-**after**:S/A>A burn-Hab dicot.tree bark
ma-sando-shun

head-put.in:Pl-**after**:S/A>A

‘**After** smoothening it nicely, they burn it, **after** covering it with tree bark.’

‘They smoothen it nicely, **then** they cover it with tree bark, **and then** burn it.’

A-IX 013 tēchu 07

However, it must be recognized that with ‘after’ clauses, their sentence-final position is even more infrequent than that of ‘while’ clauses, and (at least sometimes) intonation suggests that sentence-final ‘after’ clauses are “afterthoughts.” There seems to be a preference for ordering the clauses so that they iconically reflect the sequence of events in the real world.

Let us first look at the six same-subject after clauses, and try to distinguish them. There are two sets of three almost synonymous adverbializers: -ash, -tanec, and -anec all mark ‘after: S/A>S’; and -shun, -tanquin, and -anquin all mark ‘after: S/A>A.’ The first thing that comes to mind upon inspecting these suffixes is that four of them appear to be segmentable into smaller units, e.g., -tanec could be -tan ‘go’ + -ec ‘while: S/A>S’ and -anquin might be segmented as -an ‘Inceptive’ + -quin ‘while: S/A>A.’ There may be some etymological validity to these analyses, but the synchronic fact is that besides the participant co-reference, the semantics simply do not match up. Additionally, the suffixes -tan and -an are usually reduplicated together with the verb root, even when followed by an adverbializing suffix (176 & 177), but the /an/ and /tan/ in these suffixes are never reduplicated (178). No inflectional or subordinating suffixes are ever reduplicated with the verb root (semantics associated with verb reduplication can be rather complex, see §5.9; here I make my point principally with the form of the reduplications).

- (176) nes-tan nes-tan-shun pe-o-sh
 (redup=Distr) bathe-go-after:S/A>A eat-Past-3
 'After going to bathe several times (e.g., while working), he finally ate.'
- (177) nes-tan nes-tan-quin pe-o-sh
 (redup=Distr) bathe-go-while:S/A>A eat-Past-3
 'While continuously going and bathing, he ate.' ('after' semantics does not obtain)
- (178) nes nes-tanquin pe-o-sh
 (redup=hastily) bathe-after:S/A>A eat-Past-3
 'After bathing hurriedly, he ate.' ('go' semantics does not obtain)

The meaning differences between the triplets of suffixes can be rather subtle, and speakers often judge sentences with the different substituted suffixes as semantically identical. It is possible, however, to identify slightly different basic meanings, based essentially on the span of time that may pass between the two sequentially-ordered events:

- ash/-shun prior of two sequentially-ordered episodes, adjacent or with intervening time periods (i.e., the more general suffixes)
- tanec/-tanquin prior of two temporally adjacent sequential episodes
- anec/-anquin prior of two sequentially-ordered parts of the same episode

These meanings have three semantic/grammatical/distributional correlates associated with them: i) -anec/-anquin are restricted to matrix verbs involving locomotion; ii) default object co-reference (when both clauses are transitive) is strongest for -anquin, weakest for -shun; and iii) -ash and -shun are overall the most commonly found in texts; -tanec/-tanquin are the most commonly found in how-to texts. These points will be explained subsequently.

The suffixes -anec and -anquin are the most restricted: they can only occur when the main verb involves locomotion, i.e., spatial displacement of the subject (179-181).

- (179) chimu-anec shuinte dectato-ua-quid aocbidi
 defecate-after:S/A>S two.toed.sloth climb.up-again-Hab also
 ‘After it defecates, the two-toed sloth climbs up again.’

A-IV 022 shuinte 31

- (180a) anseme-anquin bě-o-sh (180b) *anseme-anquin chui-o-sh
 fish-after:S/A>A bring-Past-3 fish-after:S/A>A tell-Past-3
 ‘After fishing, he brought (the fish).’

- (181a) paëd-tanec shubi-o-sh (181b) *paëd-anec shubi-o-sh
 fall-after:S/A>S cry-Past-3 fall-after:S/A>S cry-Past-3
 ‘After falling, he cried.’

This grammatical restriction is associated with the property of -anec and -anquin that the subordinate and the matrix clauses are seen as essentially the same episode, where the matrix verb does not really code a separate event in which the subject does something else, but rather the movement of the subject away from the main part of the event. The suffixes -tanec and -tanquin do not have any restriction with respect to the verbs they can occur with, despite their probable historical origin involving -tan ‘go,’ which always codes locomotion. These can occur in sentences with locomotion (182) or without (181a & 183).

- (182) aid-n-bi matses abuc dectato-e-c
 that.one-Inst-Emph Matses high climb.up-Npast-Indic
dayunte-ua-tanec
 climbing.ring-Vzr.make-after:S/A>S
 ‘Matses climb high with those after going and making a climbing ring.’

A-XIII 009 dayunte 06

- (183) an-shui-tanquin mish-quid
 inside-heat-after:S/A>A touch-Hab
 ‘After heating the inside [of the canoe], they touch it [to see if it is pliable yet].’

A-IX 014 cano 05

These two suffixes do have the minor restriction that they cannot occur after the derivational suffix -tan 'go,' most likely on account of their probable historical origin involving -tan (184).

(184a) nes-tan-shun _____ pe-o-sh
 bathe-go-after:S/A>A eat-Past-3
 'After going to bathe, he ate.'

(184b) nes-tanquin _____ pe-o-sh
 bathe-after:S/A>A eat-Past-3
 'After bathing, he ate.'

(184c) *nes-tan-tanquin pe-o-sh

The suffixes -ash and -shun seem to have no grammatical restriction associated with them.

The distinguishing properties of -anec and -anquin seem to be fairly easy to see, particularly in light of their restriction to locomotion matrix verbs. The semantic and discourse distinctions between -ash/-shun and -tanec/-tanquin are much more subtle. The essential point to keep in mind is that their meanings do not contrast. Rather, -ash and -shun are more general, and -tanec and -tanquin are more specific; therefore, any clause that can be marked with -tanec or -tanquin can also optionally be coded with -ash or -shun, respectively. The suffixes -tanec and -tanquin are useful for stressing that the action coded in the matrix verb occurs directly after the one in the subordinate verb. For example, the sentence in (185) refers to the ritual of blowing tobacco snuff up each other's nostrils: the snuff is put into the tube, and is always blown right away (so that the tobacco does not fall out of the tube). Similarly, in how-to texts, these suffixes are useful to stress that the two episodes are sequential tasks that are parts of the same process, and generally performed without an intervening time lapse; in (186), if you don't tie the tips right away, the loose ends will unravel.

- (185) [sedunte-n nēnē saued]-tanec dēniad-quid matses
 snuff.tube-Loc tobacco put.in-after:S/A>S blow.tobacco.snuff-Hab Matses
 ‘After putting tobacco snuff in the tube, Matses blow it up each other’s noses.’
 A-XIII 020 sedunte 12
- (186) [ado-shun dē-bidica-ban]-tanquin dē-nēsh-ban-quid
 thus-after:S/A>A tip-twist-Iter-after:S/A>A tip-tie-Iter-Hab
 ‘After doing that, they twist the loose ends and tie knots in the tips.’
 A-XIII 043 uitsun 09

The suffixes -ash and -shun could just as well be substituted into (185) and (186), but the sense of immediacy would be lost. By contrast, -tanec and -tanquin could not be substituted for -ash and -shun in (187) - (189).

- (187) dēd-shun itia che-quid
 chop-after:S/A>A swamp.palm eat.unchewed-Hab
 ‘They eat swamp palm [fruits] after chopping it down.’
 A-I 029 itia 07
- (188) adembidi [opa tsine]-shun mēcueste pe-quid
 likewise:Tr dog chase.with-after:S/A>A agouti eat-Hab
 ‘Also, [Matses] chase agoutis with dogs and then they eat them.’
 A-IV 012 mēcueste 13
- (189) [podqued-ua]-ash capu-quid tambis ne-e-c
 path-Vzr:make-after:S/A>S locomote-Agt.Nzr paca be-Npast-Indic
 ‘Pacas are ones that walk around after making paths.’
 A-IV 010 tambis 14

Swamp palm fruits cannot just be picked up and eaten after felling the palm tree, they must first be softened, either by letting them lie in the mud after covering them with leaves, or by soaking them in warm water for a while; therefore, the felling and the eating are not adjacent and so -tanquin would be inappropriate for (187). The same goes for (188), where, after the chasing, the hunter must kill the agouti (a cat-sized rodent), pack it up, and carry it home where his wife will dress it and cook it and serve it to him, and only then will he eat it; to use -tanquin here would be impossible. In (189) the restriction on

using -tanec is a bit more complicated: the paca (a dog-sized rodent) does not simply make a path and then walk on it once. Rather, as it travels via the same route repeatedly, a path forms, and once the path is formed, the paca tends to follow it regularly.

These suffixes are frequently used together in a single sentence, especially in how-to texts, as in (190).

- (190) cues-shun matses-n chush-tanquin codoca-shun
 kill-after:S/A>A Matses-Erg singe-after:S/A>A boil-after:S/A>A
běshuicquid pe-quid
 saki.monkey eat-Hab
 ‘After killing them, Matses, after singeing their hair off, after cooking them, eat the saki monkeys.’

A-I 055 bēshuicquid 16

The meaning distinctions associated with -shun and -tanquin help keep the events straight. The recurring subject in all the clauses is general (‘Matses’), but more precisely, it is the men who kill the monkey, the women who singe its hair off and cook it, and both the men and women who eat it. Accordingly, we find -tanquin used to connect the two events that are actually performed uniquely by the same person. The suffix -shun is used to connect the less adjacent events: between the killing and the singing, there is considerable a time lapse including the packaging and carrying of the monkey, and the eating may not even occur until the next day if the monkey is brought in too late. But between the singeing and boiling, there is no delay, and the two events, dressing and cooking, can be considered parts of the same process. When the ordering of the clauses does not reflect the ordering of the events in real life, the semantic distinctions between these two sets of suffixes help keep track of the ordering of the events. This is described in the section on clause chaining (§12.4.3).

These semantic distinctions are associated with default object co-reference between the clauses when both the subordinate and the main clause contain transitive

verbs. Although co-reference of the A is what is marked explicitly by the subordinator, when there is no overtly-stated object in the adverbialized clause, there is a tendency for the objects of the two transitive verbs to be assumed to be co-referential as well. For example, in (191a), the expected interpretation is that what the subject brought had to be fish, and even (191b) sounds a bit like a nonsense scene where the subject hooked some plantains with a hook and line. The sentence in (191b), to make sense, then would have to describe a rather complex path, where the subject goes fishing, probably returns, and then goes to a swidden, and finally returns bringing the plantains. In (191a), some pretty explicit context would have to be associated with the sentence for it to mean something other than that the subject simply goes to the fishing spot and returns with the fish.

- (191a) anseme-shun bë-o-sh (191b) anseme-shun mani bë-o-sh
 fish-after:S/A>A bring-Past-3 fish-after:S/A>A **plantain**bring-Past-3
 ‘After fishing, he brought (the fish).’ ‘After fishing, he brought plantains.’

With -tanquin and -anquin, where temporal adjacency of the events makes it difficult for an additional entity to enter the scene, this object co-reference tendency seems to have been grammaticalized. With -tanquin, in the absence of one or both overtly-stated objects, only the object co-reference interpretation is possible, despite the nonsense meaning (192). With -anquin, object co-reference is obligatory; two different overtly-stated objects would be ungrammatical (193b). It is interesting to point out that for (193a), several speakers visualized the scene as the subject bringing back the fish still on the hook, despite the unusualness of such an event. This emphasizes the “single episode” meaning of -anquin. There is hardly room for a sub-episode involving unhooking the fish.

- (192) ansem-tanquin mani bē-o-sh
 fish-after:S/A>A plantain bring-Past-3
 ‘After hooking it, he brought the plantain.’
- (193a) ansem-anquin bē-o-sh ‘After fishing, he brought (the fish).’
 fish-after:S/A>A bring-Past-3
- (193b) *nuēcquid ansem-anquin mani bē-o-sh
 fish fish-after:S/A>A plantain bring-Past-3
 (‘After catching the fish, he brought plantains.’)

This brings us to the seventh and eight adverbializing suffix coding an ‘after’ temporal relation: -an ‘after: Different Referents: Inferential’ (194) and -bon ‘after: Different Referents: Experiential.’

- (194) [acte uesad]-an nēishamē-n acte pinchuc bacuēche-quid
 river empty-after:Diff.Ref:Infer tapir-Erg river palm.species fruit eat-Hab
 ‘...after the river level drops, tapirs eat acte pinchuc palm fruits.’

C-III 001 shēcten 09

They are like -nuc, in that they signal that none of the arguments in the subordinate and the matrix clause are co-referential. The suffix -bon is clearly a combination of -an and the verbal suffix -bo ‘Past/Prior,’ which can carry evidential semantics and co-occurs with some of the other adverbializing suffixes. However, as was already discussed in section 5.5.11, -bon does not seem to be synchronically segmentable.

As a final note on ‘after’ adverbializers, it is interesting to note the formal identity of -shun and the adverbial enclitic -shun ‘Event Initiation: Transitive Agreement’ and the formal similarity of -ash to the adverbial enclitic -uēsh ‘Event Initiation: Intransitive Agreement.’ Although it is not possible to identify these pairs as single morphemes, an abstract meaning connecting the two is evident: they are both associated with the origin of the matrix clause event. On locative adverbs and locative postpositional phrases, -uēsh and -shun signal that the location is associated with the initiation of the event (§7.6.1.2),

and on adverbial phrases, -ash and -shun signal that the event occurs prior to the event, possibly adjacently to the initiation of the event. The examples in (195) illustrate this point: they could both be used to relate the same scene.

(195a) ompo-ad-shun _____ is-onda-mbi 'I saw them after having hidden.'
hide-Rflx-after:S/A>A see-Dist.Past-1A

K-XXI 010 dēmushbo 33

(195b) ompo-ad-ac-no-shun _____ is-onda-mbi
hide-Rflx-Act.Nzr-Loc-Ev.Init:Tr see-Dist.Past-1A
'I saw them from where I had hidden.' / *'I saw them where they were hiding.'

The suffix -an is not homophonous/polysemous with any adverbial enclitics, but it is homophonous with the antipassive and the inceptive/inchoative markers, the latter of which is clearly associated with the initiation of the event. And it is hard to ignore a possible connection between -an and -anec and -anquin.

12.4.2.3 'when'

The adverbializing suffixes described in this section have the feature in common that they involve co-reference with an O argument, and they also code as their basic meaning a temporal relation that is somewhat different from those previously described. They are: -sho 'when: S/A/O>O' and -ac 'when: O>S/A.' I will describe each in turn.

The gloss 'when' may seem somewhat vague, but here I use it with a specific meaning: the subordinate clause event/state occurs during or adjacently prior to the matrix clause event/state; i.e., it is also translatable as 'while' (196), 'as' (197), or '(right) after' (198)²¹ (or as a complement clause, as in 199).

²¹ Because the suffix -sho is ambiguous with transitive subordinate verbs as to whether it is the A or the O that is in the co-reference relationship, in the morpheme glosses for -sho in this section I will use **bold** font to highlight which arguments are in the co-reference relationship.

- (196) [matses-n cun tita bed-pa-ac] _____ ca-denne-c _____ [ubi usun]-sho
 Matses-Erg 1Gen mother grab-Comment-Narr.Past say-Rem.Past-Indic 1Abs
 be.pregnant.with-when:S/A/O>O
 ‘They tell that Matses captured my mother; **while** she was pregnant with me.’
 K-XXI 007 dēmushbo 02
- (197) uënēs-bud-sho _____ matses-n tabote dē-bed-quid
 die-Dur-when:S/A/O>O Matses-Erg torch tip-tap.away.ashes-Hab
 ‘As [the torch] starts to die out, Matses tap away the ashes from the tip.’
 A-XIII 004 tabote 17
- (198) puđen-sho _____ achu camun-n tsiban-quid
 exit-when:S/A/O>O howler.monkey jaguar-Loc pursue-Hab
 ‘**When (=right after)** [the paca] exits [its burrow], the bush dogs [lit ‘howler
 monkey dogs/cats] pursue it....’
 A-IV 035 achu camun 26
- (199) nique-ac _____ [tonca-sho _____ tantia]-ash
 run.off-Narr.Past shoot.gun-when:S/A/O>O listen-after:S/A>S
 ‘They had run off after hearing them **shoot**/...hearing the gun shot.’
 + K-XXII 014 chema 140

The ‘right after’ meaning blends into the ‘while’ meaning: if the reference is to overlap of the two events, it is either overlap with the whole subordinate clause event, or with the final part of it; never with only the first part of the event in the -sho clause. In some instances, the simultaneous vs. adjacently prior meaning can be ambiguous. In (200), the agouti could be shot while approaching the hunter, or after it comes and stops to start eating (the second scenario is more likely, since Matses prefer to shoot at non-moving game).

- (200) [cain-ac _____ cho]-sho _____ mécueste pia-n se-quid
 wait-when:O>S/A come-when:S/A/O>O agouti arrow-Inst pierce-Hab
matses-n
 Matses-Erg
 ‘When (right after or while) it comes as they wait for it, Matses kill the agouti
 with an arrow.’

The adverbializing suffix -sho has the most unusual co-reference relations in that when attached to transitive verbs, it can refer to either the A or the O of the subordinate verb, causing potential ambiguity:

- (201) [bēdi-n senad nadanca]-sho se-o-mbi
 jaguar-Erg deer chase-when:S/A/O>O pierce-Past-1A
 ‘As the jaguar_i chased the deer, I shot it_i.’/
 ‘As the jaguar chased the deer_i, I shot it_i.’

In many instances, as in (202) and (199), the co-reference can be said to refer to both the A and the O at the same time, or to the event itself. Or no specific referent, as in (203), which technically refers not so much to the A as to the sound made by the event.

- (202) aid-bi matses-n tapun ac-quiv [[cobisan tapun
 that.one-Emph Matses-Erg palm.root drink-Hab palm.species palm.root
chotac-n ac]-sho is]-shun
 non-Indian-Erg drink-when:S/A/O>O see-after:S/A>A
 ‘That one [the cobisan palm], Matses now drink [extract from] the roots, after
 having seen non-Indians drink [extract from] cobisan palm roots.’

A-I 024 cobisan 06

- (203) [[matses-n cute bacuë pe]-sho tantia-shun]
 Matses-Erg dicot.tree fruit eat-when:S/A/O>O listen-after:S/A>A
shēcten cues-quiv
 collared.peccary kill-Hab
 ‘Matses hear them_i; as they_i eat dicot tree fruit and then kill the collared
 peccaries_i.’

A-I 043 shēcten 18

It is possible for a -sho clause and its matrix clause to have both same-object and same-subject co-reference. This is so in (204). The motivation for using -sho in (204) instead of -shun ‘after: S/A>A’ seems to be to focus on the dog (the O of both clauses), rather than the tayra (the A in both clauses). The ambiguous co-reference marking of -sho, however, can be confusing in sentences like (204), and the solution seems to be to

use a fourth-person pronoun: the fact that abi is in the absolutive case, reveals that the co-referential argument of mos is the object.

- (204) [abi mos]-sho batachued-n opa cuid-quid pe-quin
 4Abs bite-S/A/O>O tayra-Erg dog make.sick-Hab bite-while:S/A>A
 ‘When it bites it_i, the tayra [a dog-like mammal] makes the dog_i sick by biting it.’
 A-IV 033 batachued 20

The adverbializing suffix -sho seems to be the only one that can occur with the inferential evidentiality verbal suffix -ac (§5.6.1.2).²² The inferential suffix has an effect on the temporal relations of the subordinate clause: it attains a perfect reading, and it allows the matrix clause to occur temporally disjunct, posterior to the -sho clause (i.e., it can be translated as ‘after’ without implying ‘right after.’). This can be seen in (205), where the fruits do not necessarily fall right before the wood quail comes along. But it does specify that the wood quail eats the fruits upon detection of the fallen fruit, not after returning later; i.e., while the falling of the fruits and the eating of the fruits are not temporally adjacent, the eating occurs right after the detection of the evidence, the fallen fruits. Thus, as in finite inferential sentences (§5.6.1.2), the detection of the evidence is an additional temporal reference point that must be considered. In light of this, the meaning of -sho is not actually compromised when it co-occurs with -ac.

- (205) aid tididique-ac-sho ocodo-n che-quid
 that.one drop:Pl-Infer-when:S/A/O>O wood.quail-Erg eat.unchewed-Hab
 ‘Those [isan dachianmës palm fruits], after they_i have dropped to the ground,
 wood quail eat them.’

A-I 041 isan dachianmës 09

²² Note that -ac-sho cannot be the combination of -sho and the adverbializing suffix -ac ‘when: O>S/A’, described subsequently, which contains no evidential meaning. There is no cognate for -sho.

The inferential suffix -ac ‘Recent Past: Inferential’ when used as a verb inflection, signals that the speaker did not witness the action, and therefore had to infer the event from *resulting* evidence. When -ac occurs in these subordinate clauses, the “not-seeing” and the inference apply not to the speaker, but to the subject of the matrix clause, rather than the speaker. So in (205), it is the wood quail that does not see the fruits drop. In (206), what the hunter sees that motivates him to make a hunting blind is the evidence of fruits nibbled by agouti, not the agouti itself (if the hunter actually happened upon the agouti, either he would shoot it or the agouti would run off and not return later).

- (206) [[[cuëte bacuë pe]-ac-sho _____ is]-shun _____
 dicot.tree fruit eat-**Infer-when**:S/A/O>O see-after:S/A>A
shubu-ua]-shun _____ cain-quid matses-n mëcueste
 blind-Vzr:make-after:S/A>A wait-Hab Matses-Erg agouti
 ‘After seeing that they have eaten fruit, they build a blind, and then Matses wait
 for the agouti.’

A-IV 012 mëcueste 10

The -ac-sho suffix combination is sometimes used in situations where one might not expect to see an inferential. These are cases where the subordinate verb refers to a process that occurs gradually over time, like something getting old or worn, as in (207). One could account for the use of the inferential by suggesting that the subject of the matrix clause does not directly witness the *entire* deterioration process, but more likely the function is to give a perfect ending to a usually imperfective event (perfect is an aspect frequently associated with -ac, §5.6.1.2).

- (207) adembidi shëni-ac-sho _____ ne-quin _____ chuca usun-ua-quid
 likewise:Tr old-**Infer-when**:S/A/O>O toss-while:S/A>A new insert-again-Hab
 ‘Similarly, when [lip insert] gets old, they throw it out, putting in a new one.’

A-XIII 007 quid 10

The other adverbializing suffix coding ‘when,’ which effectively codes the opposite co-reference relationship as -sho, is -ac ‘when: O>S/A.’ Like -sho, it can be translated as ‘(right) after’ (208) and as ‘while/as’ (209 & 210).

- (208) matses-n ēctan-ac _____ chëshēid
 Matses-Erg imitate.spider.monkey-when:O>S/A spider.monkey
ededque-quid
 make.spider.monkey.vocalization-Hab
 ‘When (=right after) Matses imitate them_i, spider monkeys_i respond.’
 + A-I 053 chëshēid 33
- (209) anшонca-ac _____ tedesque-e-c
 bother.poking-when:O>S/A clack.teeth-Npast-Indic
 ‘When (=while) they bother it_i poking, [the collared peccary]_i clacks its teeth.’
 G-XV 001 shēcten 17
- (210) adecbidi [shēcten _____ opa-n tsiban]-ac _____ shēcūē-n
 likewise:Intr collared.peccary dog-Inst pursue-when:O>S/A hole-Loc
puđued-quid shēcten _____ ne-e-c
 enter-Agt.Nzr collared.peccary be-Npast-Indic
 ‘Also, the collared peccary is one that enters holes when (=while) it is being pursued by dogs.’
 A-I 043 shēcten 17

It should be noted that even when the ‘when’ is better interpreted as ‘while’ than as ‘after,’ there is always a sense of temporal priority in that the subordinate clause event always *begins* before the main clause event, as can be seen in (209) and (210). Clauses with -ac and -sho often occur adjacently in sentences, with the -sho clause as the matrix clause of the -ac clause, as in (211) and (200). This can be seen as is a way to get back to the original subject while keeping track of the object.

- (211) [ancush-ac _____ cho]-sho _____ cues-e-c _____ cueste-n
 flood.out-when:O>S/A come-when:S/A/O>O kill-Npast-Indic stick-Inst
 ‘After he floods [the armadillo]_i out, as it_i come out, he clubs it_i with a stick.’
 1-p47-B tsaues 06

I have one example that suggests that the co-reference relation might be a bit more complex for -ac than is indicated in its gloss. It might actually be properly glossed as ‘when: **non-subject**>S/A’, as suggested in example (212) where the co-referential participant of the adverbialized clause, is not the object (capu ‘walk’ is intransitive), but a peripheral participant (the leaves/ground). Since I realized this after leaving the field, and no other examples exhibit this pattern, I am not sure yet if this is a special case, a mistake, a general possibility, or something limited to intransitive verbs, so for now I will leave it as a topic for future research.

- (212) bēdia-tsēc capu-ac shocoshque-en-quo ic-e-c
 softly-Dim walk-while:O>S/A rustle-Neg-Aug Aux-Npast-Indic
 ‘If/When one walks slowly, [the leaves] won’t/don’t make noise.’

The suffix -bo ‘Prior’ can occur preceding -ac in some cases to mean specify experiential evidentiality, i.e., to make it explicit that the speaker witnessed the action, rather than inferred it (-ac is neutral with respect to evidentiality). See section 5.5.11 for a description of -bo and its use with adverbializing suffixes.

- (213) ashic aid umbi bed-bo-ac-bi aton champi nē-tsēc
 then that.one 1Erg grab-Prior-when:O>S/A-Emph 3 Gen daughter here-Dim
ic-onda-sh bacuë-mpi nē capu-tsēc-ec
 be-Dist.Past-3 child-small here locomote-Dim-Advzr:Intr
 ‘Also, that one, (the woman) whom I had just captured had a little daughter (like) this [holding hand at height of a small child’s head], a little kid (like) this [holding up hand again] that could already walk.’

+ K-XXII 011 chema 103

A note on clause order is appropriate here. There is a tendency for both -ac and -sho clauses to occur preceding their matrix clause, the tendency being stronger for -ac clauses. Again, there seems to be an association between temporal ordering of events in the real world and the ordering of clauses in the sentence. The stronger tendency for -ac

clauses to occur before their matrix clause can be attributed to the fact that when there is temporal overlap between the clauses, it is not complete, but only with the final part of the event coded by the -ac clause.

Temporal notions of the sort coded by -sho and -ac (i.e., 'when') are also expressed using nominalizations in relative clause-like constructions (214a) and (215a).

(214a) [ubi cues]-**boed** ushë nēish-quo-o-bi
 1Abs hit-Past.Nzr day get.mad-Emph-Past-1S
 'The day he hit me, I really got mad.'

(214b) [ubi cues]-**ac** nēish-quo-o-bi
 1Abs hit-**when:O>S/A** get.mad-Emph-Past-1S
 'When he hit me, I really got mad.'

(215a) [acte ac]-**quid** nēishamë cues-o-mbi
 water drink-Agt.Nzr tapir kill-Past-1A
 'I killed a tapir that was drinking water.' lit. 'I killed a water-drinker tapir.'

(215b) [acte ac]-**sho** nēishamë cues-o-mbi
 water drink-**while:S/A/O>O** tapir kill-Past-1A
 'I killed a tapir as it drank water.'

(215c) [acte ac]-**ac-sho** nēishamë cues-o-mbi
 water drink-**Infer-when:S/A/O>O** tapir kill-Past-1A
 'I killed a tapir that had (evidently) drunk water.'

It is interesting to contrast the similar sentences in (215). The relative clause version (215a) simply describes the tapir as one that was drinking water. It does not specify whether the speaker fired the shot while its snout was in the stream, or whether the hunter simply found it drinking water and then pursued and then finally shot it. The sentences with adverbial clauses are much more precise in terms of temporal relations. In (215b) it could only be that the tapir was shot while it was lapping up water or immediately

afterwards, while in (215c) it is clear that the hunter found evidence of a tapir drinking water (e.g., tapir tracks on a stream bank), tracked it,²³ and then shot it.

12.4.2.4 'until'

Another temporal notion coded by adverbialized clauses is 'until.' Essentially, it means that the subordinate clause marks the point in time at which the matrix clause event ceases; i.e., the subordinate clause is temporally posterior, but not properly translated as 'before.' It is coded by the suffix -nuc 'until: S>O' (216 & 217).

- (216) [cuëma cuënu-mbo-shë ic]-nuc cuda shëta cuëno-quid
 edge sharp-Aug-Aug be-until:S>O bamboo spearhead sharpen-Hab
 'They sharpen the spearhead until it's edge is very sharp.'

A-XIII 032 *cuda shëta* 09

- (217) ado-shun-bi shancuin podo-n danoshca-quid canti
 do.thus-after:S/A>A-Emph tree.species leaf-Inst sand-Hab bow
 [ise-mbo ic-nuc
 smooth-Aug be-until:S>O

'After doing that they sand the bow with shancuin tree leaves until it is smooth.'

2-p33-L *canti* 03

Recall that the suffix -nuc was introduced in section 12.4.2.1 as meaning 'while:

Different Referents.' And in fact we do find some partial temporal overlap in the 'until' clauses so that sometimes the sentence is not best translated with 'until.' For example, in (218), the straightness of the arrow sharpener is something that is true throughout the carving process, and in (219), the diamond pattern is apparent from the early stages of the weaving. Therefore, the state coded in the subordinate clauses refers to a state that is true

²³ Recall from section 5.6.1.2 that the detection of temporal reference point relative to inferentials includes not just the detection, but also any continued beholding of the evidence, so that the 'right after' meaning of -sho is not lost as long as the hunter continues to make visual contact with the track up until he shoots the tapir.

at the end of the process referred to by the matrix clause, but which may begin to be true before the process ends.

- (218) [cue-mbo-shë ic]-nuc chësh-quid made uisac
 straight-Aug-Aug be-**until:S>O** carve-Hab paca sharpener
 ‘They carve the paca tooth arrow sharpeners very straight.’

A-XIII 036 made uisac 03

- (219) [bëdi cho-mbo-tsëc ic]-nuc chido-n daëdca-quid
 pattern have-Aug-Dim be-**until:S>O** woman-Erg weave-Hab
 tote [aton bacuë de]-nun
 woven.carrying strap 3Gen child carry.on.back-Purp:S/A>A
 ‘Women weave carrying straps so they have a diamond pattern, so they can carry their kid.’

A-XIII 042 tote 06

We can compare **-nuc** with the other adverbializing suffix that can code an S>O participant co-reference, **-sho** (220). As can be seen, the temporal relations coded by these two suffixes is essentially the opposite.

- (220a) piu-mbo ic-nuc dabiun-ta ‘Paint it (until/so it is) red.’
 red-Aug be-**until:S>O** coat-Imper

- (220b) piu-mbo ic-sho dabiun-ta ‘Paint it when/if it is red.’
 red-Aug be-**when:S/A/O>O** coat-Imper

12.4.2.5 ‘before’

There is but one adverbializing suffix that has ‘before’ as its basic/primary meaning: **-teno** ‘before: Different Referents’ (221). It is rare, as I do not have it in any of my texts, and I only learned it during my final field season among the Matses.

- (221) [ue cho]-teno dascute bed-Ø
 rain come-**before:Diff.Ref** clothes grab-Imper
 ‘Grab the clothes (i.e., bring in the drying laundry) before it starts to rain.’

The suffix *-teno* can only marginally be considered to be able to imply purpose/reason, as explained in section 12.4.2.7. In that same section, I will describe several adverbializers that code 'Purpose' as their basic meaning and 'before' as a secondary meaning. The suffix *-teno* looks analyzable as the *-te* 'Future Action Nominalizer' (§4.7.5) and the locative postposition *-no* (§8.3.2.1). While this is a likely etymology, the meanings of these two morphemes do not quite add up to 'before.'

12.4.2.6 Locative and manner (including comparative, degree, and extent)

Adverbial clauses do not code locative and manner notions in Matses. The only subordinate clauses that refer specifically to location or manner are those constructions where an action-nominalized clause occurs as the object of a locative or comparative postposition. These construction types were discussed in section 12.2.5. 'While' clauses can also be interpreted as manner clauses.

12.4.2.7 Purpose (and Intention)

Purpose clauses are formed with five different adverbializing suffixes. These five suffixes are the only adverbializing suffixes that code a logical relation as their basic meaning instead of a temporal relation. All of these purpose clause constructions have secondary 'before' meanings. If the main clause is inflected for present, future, or non-past tense, it is understood that the event designated in the purpose clause has either not yet occurred or has not finished happening yet. If the main clause is in the past tense, then there is no implication about whether the event in the purpose clause really happened or not. Because the subordinate clause is unrealized (or unfinished) at the time that the main clause event takes place, purpose clauses are not used to express 'Reason' (or 'Causation') apart from purpose or intent being reasons for doing something. The purpose suffixes differ from each other in participant tracking and in their semantics (see

Table 12.4). The suffix -ec is strictly a purpose marker and though it implies a ‘before’ meaning, its function is never solely to specify temporal relations. The suffixes -nush and -nun are usually used to express purpose, but can also be used to specify a ‘before’ temporal relation as an extended meaning. The suffixes -nuec and -nuen might be better described as marking ‘Intention’ rather than ‘Purpose,’ since they either specify that the purpose clause event did not occur or that its occurrence is improbable. Like -ec, -nuec and -nuen have ‘before’ as an implied part of their meaning, but they can never mean ‘before’ independently of their purpose/intent meaning, and their main function is not to specify temporal relations. I will introduce each of these and contrast their semantics below.

The suffix -ec expresses the notion ‘to,’ as in (220) - (222).

- (220) ambo [tied död]-ec nid-onda-sh
 there swidden chop-Purp:S/A>S go-Dist.Past-3
 ‘They went **to** make swiddens there.’

+ K-XXII 001 chema 005

- (221) aton shëcuë ënëd-ac-no nid-quid tsad-tuid-ec
 3Gen hole end-Act.Nzr-Loc go-Hab sit-stop.&.do-Purp:S/A>S
 ‘It goes to where its hole ends **to** sit there.’

A-I 047 tsaues 11

- (222) adembidi matses-n dayunte-ua-ash [chiuish
 likewise:Tr Matses-Erg climbing.ring-Vzr:make-after:S/A>S fig
cain]-ec dectato-ne-quid
 wait-Purp:S/A>S climb.up-Distr-Hab
 ‘Also, Matses make climbing rings and then climb up **to** wait out a fig tree [i.e.,
 ‘to wait in the fig tree for game,’; the Matses cain can take the tree as its O].’

A-XIII 009 dayunte 13

This suffix occurs most frequently with matrix verbs coding locomotion. The suffix -ec ‘Purpose: S/A>S’ is identical phonologically and syntactically to the suffix that indicates ‘while: S/A>S’ (§§12.4.1, 12.4.2.1). These two suffixes cannot be treated as the same,

because the temporal relation expected in a purpose construction would be ‘before,’ not ‘while,’ since the events in the main and the subordinate clause are not simultaneous (223).

(223a) pe-ec cho-o-sh
eat-Purp:S/A>S come-Past-3
‘He came to eat.’

(223b) pe-ec cho-o-sh
eat-while:S/A>S come-Past-3
‘He came eating./He ate as he came.’

Also, -ec ‘while: S/A>S’ is not restricted to motion verbs. And also note that -ec ‘Purpose: S/A>S’ does not have a counterpart suffix for signaling ‘Purpose: S/A>A’, while -ec ‘while: S/A>S’ does: -quin/-en ‘while: S/A>A.’ Because -ec clauses translate into English as infinitives, the possibility that these are infinitive clauses has occurred to me. However, -ec purpose clauses differ from Matses -te infinitive clauses (§12.2.6) at least in that they can occur after the matrix verb. Nevertheless, of all the adverbializing clauses, -ec purpose clauses are the most infinitive-like in that they are the least likely to occur with an overt notional subject. In the examples in (224), the notional subject of the transitive verb pe would have to be ergative-marked, but as can be seen in (224b), it is impossible for it to occur overtly.

(224a) debi-Ø pe-ec cho-o-sh ‘Davy came to eat.’
Davy-Abs eat-Purp:S/A>S come-Past-3

(224b) *[debi-n pe]-ec cho-o-sh ‘Davy came to eat.’
Davy-Erg eat-Purp:S/A>S come-Past-3

However, this restriction is not complete, since in some emphatic constructions, the nominal subject of an -ec clause can occur overtly, as in (225), where not only does the nominal subject appear overtly, but it appears in addition to the matrix clause subject.

- (225) [umbi-bi mibi ised]-ec cho-o-bi
 1Erg-Emph 2Abs visit-Purp:S/A>S come-Past-1S
 'I came to I myself visit you (instead of sending someone else).'

While explicit subjects may occur in other adverbialized clauses, there is certainly a strong preference to suppress overt the co-referential argument in all adverbialized clauses; otherwise it sounds repetitive. However, in longer clause chains, co-referential subjects and objects occasionally occur, as will be described in section 12.4.3 below.

The suffixes -nun 'Purpose: S/A>S/A' and -nush 'Purpose: S/A>S' seem to differ from each other only in that -nush cannot be used with transitive matrix verbs.²⁴ They can usually be translated as 'in order to' (226-228).

- (226) antin-bi matses-n daëdca-e-c
 palm.species-Emph Matses-Erg plait-Npast-Indic
[shubu-ua]-nun
 house-Vzr:make-Purp:S/A>S/A
 'Matses plait antin palm [fronds] in order to make houses.'

A-I 014 antin 11

- (227) aid-bi chido-n [yuca nis]-nun tapun te-quid
 that.one-Emph woman-Erg manioc grate-Purp:S/A>S/A palm.root cut-Hab
 'Women cut that one's roots in order to grate manioc.'

A-I 032 pëdi 03

- (228) nes-nu matas-ad-nush
 bathe-Intent:1 cut.hair-Pass-Purp:S/A>S
 'I'm going to bathe before getting my hair cut (so the barber won't be offended)'

Note that example (228) could not be translated using 'before' instead of 'in order to' because the plaiting of the palms fronds occurs after the frame of the house is built, and Matses are constantly plaiting the thatch during the roofing process. Thus, the plaiting does not occur before the building of the house, but it does occur before the house is

²⁴ There is some inter-speaker variation as to whether -nun can be used with both transitive and intransitive matrix clauses, as opposed to just transitive clauses. Most speakers I worked with used it with both transitive and intransitive matrix verbs.

finished. This is an example of the ‘Purpose’ meaning applying independently of the ‘before’ meaning, suggesting ‘Purpose’ is the basic meaning (at least for -nun; I do not have similarly conclusive data for -nush). When suffixed with -bi,²⁵ these suffixes can be used to express pure temporal relations, with no necessary purpose implication (229a). Unsuffixed, -nun and -nush always imply some motivational connection for performing one event before the other (229b).

(229a) ush-nun-bi _____ nes-nu ‘I’m going to bathe before sleeping.’
 sleep-Purp:S/A>S/A-**Emph** bathe-Intent:1

(229b) ush-nun _____ nes-nu ‘I’m going to bathe so I can sleep.’
 sleep-Purp:S/A>S/A bathe-Intent:1 [i.e., thinking it’s hard to sleep dirty]

With -ec, the events in the subordinate and the matrix clause are more closely linked, as if one single effort was required for both the actions to take place. This semantic characteristic is reminiscent of the ‘single episode’ meaning associated with the suffixes -anec and -anquin (§12.4.2.2). With -nun and -nush, on the other hand, the motivation for performing one event may be to set up the second event, which will not necessarily happen automatically or naturally without a further effort on the part of the subject. This semantic contrast can be seen in the examples in (230).

(230a) ompod-o-bi [mibi dacto]-ec
 hide-Past-1S 2Abs scare-Purp:S/A>S
 ‘I hid to scare you.’ (i.e., so you would think I was lost)

(230b) ompod-o-bi [mibi dacto]-nush
 hide-Past-1S 2Abs scare-Purp:S/A>S
 ‘I hid in order to scare you.’ (i.e., so I could jump out and startle you)

²⁵ While -bi codes several emphasis-related notions, it does not code ‘category prototype,’ unlike -mbo/-quio on nouns. See section 4.6.6.

- (230c) ompod-o-bi [mibi dacto]-nuec
 hide-Past-1S 2Abs scare-Purp:S/A>S
 'I hid intending to scare you.' (but you saw me/but you didn't come by)

This brings us to the suffixes -nuen and -nuec, which, as can be seen in (230c) and (231c), are used for situations where the intended action (i.e., the one contained in the subordinate clause) either does not happen or in situations where there is some doubt that it will happen.

- (231a) piucquid bed-ec chonoad-o-bi 'I worked to make money.'
 money get-Purp:S/A>S work-Past-1S

- (231b) piucquid bed-nun chonoad-o-bi
 money get-Purp:S/A>S/A work-Past-1S
 'I worked in order to make money.' (suggests speaker has already been paid)

- (231c) piucquid bed-nuec chonoad-o-bi
 money get-Purp:S/A>S work-Past-1S
 'I worked thinking I'd get money.' (speaker wasn't paid or doubts he will be paid)

In this sense, there is a greater amount of logical separation between the two events with -nuec and -nuen than with -nun, -nush, or -ec. For example, in the habitual sentences in (232) - (233), -nuec and -nuen are used because the action in the purpose clause often does not actually happen, but the intent of the animals in question is clear.

- (232) matses cano-n dectato-nuc chishcan
 Matses canoe-Inst go.upstream-while:Diff.Ref dolphin
buashque-e-c [matses dacto]-nuec
 exhale.though.blowhole-Npast-Indic Matses scare-Purp:S/A>S
 'While Matses go upstream by canoe, dolphins audibly exhale through their blowholes in order to (or, 'hoping to') scare Matses.'

- (233) [opa bed]-nuec opa-n chushca-do-ac bëui
 dog grab-Purp:S/A>S dog-Erg bark.at-Incep-when:O>S/A tamandua
nidto-ash tsëcpen-quid bëui ne-e-c
 stand-after:S/A>S open.arms-Agt.Nzr tamandua be-Npast-Indic
 ‘Hoping to grab a dog, when the dogs start to bark at it, the tamandua stands up
 and then opens its arms.’

A-IV 026 bëui 33

- (234) [matses bed]-nuen nadanca nadanca-quid-quio bëdi-dapa
 Matses grab-Purp:S/A>A (redup=Distr) pursue-Agt.Nzr-Aug jaguar-large
ne-e-c
 be-Npast-Indic
 ‘The jaguar is one that follows people in order to (or, ‘with intention to’) catch
 them.’

A-IV 036 bëdi dapa 30

I have not performed quantitative analyses of relative ordering of clauses yet, but a provisional estimate based my review of the data yields the following: -ec clauses precede their matrix clause 80-90% of the time; -nush/-nun clauses 50-60%; and -nuec/-nuen clauses 40-50%. These preliminary figures suggest that ordering of events in real life is a factor influencing clause ordering in adverbial/clause-chaining constructions. Also, these frequency data, consistent with intonation and pause patterns, suggest that post-matrix clause position of adverbialized clauses cannot be accounted for as all being tacked-on afterthoughts (though they sometimes do seem to be).

Other than -ec, no other purpose adverbializers show homophony/polysemy relations with any other suffixes or enclitics. However, it is evident that the formative nu ‘Future’ is involved. It occurs as part of several future tense inflections, and the first-person ‘Intent’ inflection is -nu (§5.6.3.1).

It is interesting to point out that the only subordinating suffix that principally codes a ‘before’ temporal relation, -teno ‘before: Different Referents’ never has any implication as to purpose or intent. This is not completely unexpected, considering that -teno is used for clauses that do not share any participants, unlike all the other suffixes

discussed in this section, where the same volitional subject performs both the action in the matrix event and the intended action in the subordinate clause. In some cases, a motivational connection is implied between the subordinate and the matrix clause, but this is more of a 'reason' than a 'purpose' implication (235).

- (235) shubu besca-Ø debi cho-teno
 house sweep-Imper Davy come-before:Diff.Ref
 'Sweep the house before Davy comes.'

12.4.2.8 Reason

At this point, I have introduced all the basic meanings of all the adverbializing suffixes in the language, and I have introduced all the different temporal relations coded by these suffixes. All of the functions accomplished by the adverbializing suffixes described in section 12.4.2.8-12.4.2.15 should be considered secondary, logical meanings, either as implied meanings (with the basic temporal relations always holding) or extended meanings (able to occur independently of the basic temporal meanings). For example, many of the adverbial clause subordinating suffixes expressing 'after' or 'when' can be used to express the notion 'because' (236-239).

- (236) mua-ash cuen-o-sh 'He escaped because he lied.'/
 lie-after:S/A>S escape-Past-3 'He escaped after lying.'
- (237) nēish-shun cues-o-sh 'He hit him because he got mad.'/
 get.angry-after:S/A>A hit-Past-3 'He got mad and then hit him.'
- (238) [bed-Ø ca]-ac bed-o-mbi ca-onda-mbi
 grab-Abs say-when:O>S/A grab-Past-1A say-Dist.Past-1A
 "“They told me, ‘Take her,’ so I took her,” I told him."
 "“I took her **because** they told me, ‘Take her,’” I told him."

- (239) ma-uëd-an-sho mauëdante ca-e-c
 head-entangle-Antpass-when:S/A/O>O palm.genus say-Npast-Indic
 ‘They call it mauëdante (‘hair entangler’) because (?‘when’) it catches people’s hair.’

A-I 030 mauëdante 05

Of these three, only -sho seems awkward and inaccurate with the temporal meaning *because* replaced by *when* in the English translation: Matses don’t call the palm mauëdante only while or right after it entangles in people’s hair. Thus, I consider the ‘because’ meaning of -sho to be an extended meaning (as opposed to just an implied meaning), that can obtain independently of the ‘when’ temporal relation. The ‘because’ meanings of -ash and -shun are implied secondary meanings, but in the context of (236) and (237), the reason meaning is much more prominent than the temporal relation meaning. So, because the logical meaning overshadows the temporal meaning, we can say that one of the functions of -ash and -shun is to code reason. With -ac, the implied meaning seems to always be more subtle (238).

A very common way of expressing reason (‘because’ or ‘why’) is with quotative verbs and either -ash ‘after: S/A>S’ or -shun ‘after: S/A>A’ (240 & 241). In these constructions, literal interpretations are not always consistent with the meaning. For example, a literal interpretation of (241) is impossible considering that fish can’t talk, and even if they could metaphorically, their abundance would not be a result of their conversation.

- (240) aid matses-n shubu-ua-en-quo ic-e-c
 that.one Matses-Erg house-Vzr:make-Neg-Aug Aux-Npast-Indic
[baded-quo bidique-an-ne-quid que]-shun
 quickly-Aug twist-Incep-Distr-Hab say-after:S/A>A
 ‘Matses don’t make roofs with that one’s [fronds] because (lit. ‘after saying’) they start to twist up very quickly.’

A-I 013 dapais 04

- (241) atoda que-ash dadpen nuëquid ic-o-sh nëid dëbiate-mi
 what say-after:S/A>S many fish be-Past-3 this.one headwaters-Loc
 ‘Why are there so many fish in the headwaters of this one [the Gálvez River]?’
 lit. ‘After saying what, are there so many fish in the headwaters of this one?’

But it is the quotative verb (or the construction itself) that provides the extended meaning; the temporal relations of -ash and -shun still hold. To ask questions or give reasons with other temporal relations using que and ca, one simply uses different adverbializing suffixes (242); for relative future, the verb ac ‘do’ is often used instead of ca or que (243).

- (242) atoda que-quin mene-o-Ø
 what say-while:S/A>A give-Past-Interr:1/2
 ‘Why did you give it to him?’ lit. ‘Saying/thinking what, did you give it to him?’
- (243) atoda ac-nun mene-o-Ø
 what do-Purp:S/A>A give-Past-Interr:1/2
 ‘Why did you give it to him?’ lit. ‘To do what, did you give it to him?’

Reason relations between two clauses can also be expressed with the coordinating conjunction suffix -que (244; §12.6.1) or with negative adjectivalized clauses (245; §12.3.3).

- (244) padpide-en di bidica-Ø cun chiëshëd
 again-Manr:Tr palm.fiber twist-Imper 1Gen penis.string
tës-ad-o-sh-que
 pull.off-Rflx-Past-3-because
 “‘Twist palm fiber again because my penis string has broken.’”

A-XIII 017 chiëshëd 02

- (245) is-ad-en-quio nid-aid ëquëduc-uid-bi capu-quid
 see-Pass-Neg-Aug go-Pat.Nzr inside-only-Emph locomote-Agt.Nzr
mencudu ne-e-c
 naked.tailed.armadillo be-Npast-Indic
 ‘It can’t be seen (because) the naked-tailed armadillo is one that travels inside the ground.’

A-I 050 mencudu 06

When the clauses have different subjects, reason is expressed using a special quotative construction using *-shun* and involving the particle *ma* (§12.5.3).

12.4.2.9 Circumstantial

Circumstantial adverbial clauses are made using one of the two ‘while’ same-subject suffixes, *-ec* (246) and *-quin* (247 & 248).

- (246) *mua-ec* _____ *cuen-o-sh* ‘He escaped by lying.’/
lie-while:S/A>S *escape-Past-3* ‘He escaped while lying.’
- (247) *mua-quin* _____ *piucquid bed-o-sh* ‘He got the money by lying.’/
lie-while:S/A>A *money* *grab-Past-3* ‘He got the money while lying.’
- (248) *ëshë seca-tsëc-quin* _____ *matses-n nënë chococa-quad*
seed scatter-Dim-while:S/A>A *Matses-Erg tobacco plant-Hab*
 ‘Matses plant tobacco by scattering the seeds.’

+ A-XIII 022 nënë 08

Note that in (246) the ‘while’ and ‘by’ readings are interchangeable without affecting the meaning of the sentence. In (247) and (248), by contrast, the ‘by’ and the ‘while’ meanings are not completely interchangeable, yet the specified temporal relations still hold. In comparing the above examples with those in the beginning of the preceding section, we can note that reason is implied from the ‘after’ and ‘when’ temporal relations (as one might expect of a cause-effect relation), while circumstance is implied from the ‘while’ temporal relation. These “circumstantial” clauses might just as well be called “manner” clauses, as I refer to some of the clauses described in section 12.4.2.1. (I’m not sure what the difference is.)

Negative circumstantial clauses are accomplished by negative adjectivalized clauses, as described in section 12.3.3. (249) is an additional example.

- (249) [shocoshque-en-quoio nid]-quin [otacquoio nid-tsēc]-quin
 rustle.leaf.litter-Neg-Adjzr go-while:S/A>A quietly go-Dim-while:S/A>A
pudun-quin bēdi-dapa-n bed-quid shēcten
 jump-while:S/A>A jaguar-large-Erg grab-Hab collared.peccary
 ‘While walking **without rustling the leaf litter**, while approaching quietly, the
 jaguar pounces on the collared peccary.’

A-IV 036 bēdi dapa 19

Negative circumstantial clauses can also be formed with negative verb phrases and -ec or -quin (250). I am still not sure what the difference between these two types of circumstantial clauses is; speakers can identify no difference between the two sentences in (251).

- (250) [pos-en-quoio ic]-quin dē-te-quid matses-n sedunte
 split.open-Neg-Aug Aux-while:S/A>A tip-cut-Hab Matses-Erg snuff.tube
 ‘Matses cut off the tips of the snuff tube without splitting it.’

A-XIII 020 sedunte 08

- (251a) ubi chui-a-bi nid-ac ‘He left without telling me.’
 1Abs tell-Neg:Perf-Emph go-Infer

- (251b) ubi chui-a-bi ic-ec nid-ac ‘He left without telling me.’
 1Abs tell-Neg:Perf-Emph Aux-while:S/A>S go-Infer

12.4.2.10 Simultaneity

See sections 12.4.2.1 and 12.4.2.3 on ‘while’ and ‘when’ clauses.

12.4.2.11 Conditional

As can be seen in (252) - (254), conditional semantics are yet another implied secondary meaning of the ‘while’ and ‘when’ suffixes, a typologically common enough phenomenon (Thompson and Longacre 1985).

- (252) padenquio uidēnua-ta pudun-quin [[pia
no hold-Imper jump-while:S/A>A arrow
chiad]-sho pudun]-quin pia uidēnua-shun-ta
carry.on.shoulder-when:S/A/O>O jump-while:S/A>A arrow hold-Appl-Imper
'No, grab them by jumping (out from behind a tree), if they are carrying arrows,
grab their arrows by jumping out.'
+ K-XXII 002 chema 018
- (253) ad-sho [podo an-se]-ac nēbi uēnēs-quid
do.thus-when:S/A/O>O arm under-pierce-when:O>S/A now die-Hab
nēishamē
tapir
'When that happens to it, if it pierces it under its front leg, the tapir dies right
away.'
A-XIII 023 nēishamē dectante 21
- (254) ēnapen nid-ec ush-tuid-quin matses-n
far go-while:S/A>S sleep-upon.arrival-while:S/A>A Matses-Erg
isan podo shubu-ua-e-c
palm.species frond house-Vzr:make-Npast-Indic
'When Matses go far, if/when they stop to sleep, they make a shelter from isan
palm fronds.'
E-XI 001 isan 20

In Matses, 'after' clauses are additionally used as conditional clauses (255 & 256).

- (255) bed-shun-bi-en nuqui is-tsia-c
grab-after:S/A>A-Emph-Contr 1+2 see-Npast:Cond-Indic:1/2
nain-quin cuesban
finish-while:S/A>A bat
'But, after catching them we would see all the (kinds of) bats.'
'But if we catch them, we will see the different kinds of bats.'
C-V 016 cuesban 32
- (256a) istuid-shun cues-e-mbi
find-after:S/A>A hit-Npast-1A
'If/When I find him, I will hit him.' (certain or likely)
- (256b) istuid-shun cues-tsia-mbi
find-after:S/A>A hit-Npast:Cond-1A
'If I (could) find him, I would hit him.' (uncertain or impossible)

In conditioned commands (252), in real or habitual situations (253, 254, & 257), or in *probable* predictive situations (256a & 258a), sentences with conditional clauses have the same form as those with temporal ‘when’ or ‘after’ clauses; the inflection on the main verb is indicative. In fact, in many of these sentences (particularly 254), the *if* and *when* in the English translations could be interchanged without really affecting the meaning.

- (257a) bēdia-tsēc capu-ec shocoshque-en-quo ic-e-c
 softly-Dim walk-while:S/A>S rustle-Neg-Aug Aux-Npast-Indic
 ‘If/When one walks slowly, he won’t/doesn’t make noise.’
- (257b) bēdia-tsēc capu-ac shocoshque-en-quo ic-e-c
 softly-Dim walk-when:O>S/A rustle-Neg-Aug Aux-Npast-Indic
 ‘If/When one walks slowly, [the leaves] won’t/don’t make noise.’
- (258a) debi cho-en-quo ic-sho chushca-e-mpi
 Davy come-Neg-Aug Aux-when:S/A/O>O reprimand-Npast-1A
 ‘If Davy doesn’t come, I will yell at him.’ (likely that he won’t come)
- (258b) debi cho-en-quo ic-sho chushca-tsia-mpi
 Davy come-Neg-Aug Aux-when:S/A/O>O reprimand-Npast:Cond-1A
 ‘If Davy doesn’t come, I will yell at him.’ (unlikely that he won’t come)
- (258c) debi cho-en-quo ic-sho chushca-tsen-o-mpi
 Davy come-Neg-Aug Aux-when:S/A/O>O reprimand-almost-Past-1A
 ‘If Davy hadn’t come, I would have yelled at him.’ (past counterfactual)

In hypothetical (258b & 259) or *improbable* predictive (256b & 258b) situations, the main verb takes conditional inflection. In sentences containing counterfactual clauses where the main verb event is in the present (260) or future (256b), the conditional inflection is similarly used; if the main clause is in the past (258c), then the main verb is suffixed with the derivational suffix *-tsen* ‘almost’ (§5.5.7) together with a past tense inflectional suffix (this suffix combination is lexicalized as the past conditional tense-aspect in Matses; there is no real ‘almost’ semantics in these constructions).

- (259) bēda-mbo ic-tsia-bi chuiquid ic-ec
 good-Aug be-Npast:Cond-1S chief be-while:S/A>S
 ‘If I were chief, I would be good.’ (present hypothetical)
 ‘If I were to be chief, I would be good.’ (future hypothetical)
- (260) onque-ac-no nid-shun mimbi tantia-tsia-c
 talk-Act.Nzr-Loc go-after:S/A>A 2Erg understand-Npast:Cond-1/2
 ‘If you had gone to the meeting, you would know.’ (counterfactual)

Note that in the negative conditional constructions (258), *when* (the basic meaning of *-sho*) cannot replace *if* in the English translations and still make sense.

12.4.2.12 Concessive

Concessive clauses are formed by suffixing the emphatic suffix *-bi* (allomorph *-i* following to the adverbial clause’s (adverbialized or nominalized clause) subordinating suffix. The sentences in (261) - (264) are all examples of “*definite concessive clauses*,” i.e., ones that “can always be paraphrased with the complex introducer ‘in spite of *the fact that...*’” (Thompson and Longacre 1985:198). Note in (263b) that *-bi* on adverbial clauses does not just mark concession, but also another type of emphasis.

- (261) [uanno nid]-shun-bi adembidi cashuc-shun
 apart go-after:S/A>A-**Emph** likewise:Tr remove.a.piece-after:S/A>A
dada-n ēctabēdte usun-quid
 man-Erg lip.whisker insert-Hab
 ‘Even when they go far away, men just the same remove (splinters of isan palm trunk) and wear the lip whiskers.’

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- (262) [icbo dadpen ic]-quid-bi matses-n buid
 communal.nesting.insects many be-Agt.Nzr-**Emph** Matses-Erg pitch
codoca-nun tēsh-quid
 boil-Purp:S/A>S/A pull.off-Hab
 ‘Even when there are many bees in the hive, Matses still pull off [the nest] in order to cook pitch.’

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- (263a) [ue cho]-nuc nid-e-bi ‘When it is raining, I’m going to go.’
rain come-while:Diff.Ref go-Npast-1S
- (263b) [ue cho]-nuc-bi nid-e-bi
rain come-while:Diff.Ref-Emph go-Npast-1S
‘Even if it rains, I’m going to go.’/ ‘When it rains, only then will I go.’

Looking at the adverbialized clauses in this section, we can identify another detail about the multiple functions of adverbializing suffixes. With reason, circumstantial, and conditional clauses, the implied logical meanings were compatible with the temporal relation and to various extents the logical meaning simply overshadowed the basic temporal relation. The concessive meaning is different in that it seems to be “added on” to the temporal meaning, i.e., the temporal meaning is still prominent and unchanged, but a sort of contrastive meaning is added. Thus, rather than being a naturally implied meaning, these clauses seem to have a modified or “added-to” meaning, and accordingly the concessive meaning does not obtain without adding -bi. In addition to adverbialized clauses (261, 263, & 264a), the enclitic -bi can mark concession suffixed to nominalizations (262, 264b), noun phrases (265), or even simple nouns (266).²⁶

- (264a) dacuéd-quin-bi na-o-sh ‘Even though he was scared, he did it.’
scare-while:S/A>A-Emph do-Past-3
- (264b) dacuéd-quid-n-bi na-o-sh ‘Even though he is a coward, he did it.’
scare-while:S/A>A-Erg-Emph do-Past-3
- (265a) dada-n-penquio-bi cues-o-sh (265b) dada-penquio-bi cues-o-sh
man-Erg-Neg-Emph hit-Past-3 man-Neg-Emph hit-Past-3
‘Even though she_i is not a man,
she_i hit him.’ ‘Even though she_i is not a man,
he hit her_i.’
- (266) dada-bi shubi-o-sh ‘Even though he is a man, he cried.’
man-Emph cry-Past-3

²⁶ Note that these last examples (273 & 274) are single-clause sentences.

Concessive clauses can be further emphasized with *-c* ‘Separate’ (which only occurs following *-bi*). The enclitic sequence *-bi-c* can follow pronouns, nouns, nominalized clauses, adverbs or adverbial clauses. It adds a further of contrast (267).

(267a) nimēduc dēd-quin-bi mibi tied shēni dēd-e-c
 primary forest chop-while:S/A>A-**Emph** 2Abs swidden old chop-Npast- Indic
 ‘Even though you are felling primary forest, you are also felling secondary forest [lit. ‘an old swidden’].’

(267b) nimēduc dēd-quin-bi-c mibi tied shēni
 primary forest chop-while:S/A>A-**Emph-Separ** 2Abs swidden old
dēd-e-c
 chop-Npast- Indic
 ‘Even though you think you are felling primary forest, you are actually felling secondary forest.’

I have not found any good examples of an “indefinite concessive clause.”

Attempts to elicit a Matses indefinite concessive clause for “No matter who it is, I won’t take him/her,” “No matter what, I’m going,” and “Whether it rains or not, I’m going” were responded with (268), (269), and (270), respectively.

(268) utsibobi buan-en-quo ic-e-bi (269) adequi nid-e-bi
 anybody take-Neg-Aug Aux-Npast-1S in.any.way go-Npast-1S
 ‘I’m not going to take anybody.’ ‘I’m going just the same.’

(270) ue cho-nuc-bi nid-e-bi ue cho-en-quo
 rain come-while:Diff.Ref-**Emph** go-Npast-1S rain come-Neg-Aug
ic-nuc-bi nid-e-bi
 Aux-Diff.Ref-**Emph** go-Npast-1S
 ‘Even if it rains, I’m going to go; even if it doesn’t rain, I’m going to go.’

These are close at least semantically to indefinite concessive clauses, as described in Thompson and Longacre (1985). But the interesting thing is that indefinite pronouns like utsibobi and indefinite “proadverbs” like adequi could easily be analyzed as containing the suffix *-bi* (271), just like in (definite) concessive adverbial clauses.

- (271a) /á.de.kí/ ‘in.any.way’ (271b) /u.tsí.bo.bí/ ‘anybody’
 adec-bi utsi-bo-bi
 thus-Emph other-Pl-Emph

12.4.2.13 Additive

Additive clauses are ones where the subordinating morphemes “express one state of affairs in addition to another” (Thompson and Longacre 1985:200), as with the English *besides* and *in addition to*. Additive and concessive clauses have the same form, and the difference in interpretation is basically due to the semantics of the situation or to individuals’ expectations. For example, the sentences in (272) could have both concessive and additive interpretations, depending on one’s expectations.

- (272a) [icsa-patsëc ic]-ec-bi shonto ne-e-c
 ugly-Dim be-while:S/A>S-Emph idiot be-Npast-Inidic
 ‘Even though he is ugly, he is an idiot.’ (expectation that ugly people are smart)
 ‘In addition to being ugly, he is an idiot.’ (no such expectation)
- (272b) [icsa-patsëc ic]-quid-bi shonto ne-e-c
 ugly-Dim be-Agt.Nzr-Emph idiot be-Npast-Inidic
 ‘Even though he is ugly, he is an idiot.’ (expectation that ugly people are smart)
 ‘In addition to being ugly, he is an idiot.’ (no such expectation)

The subtle semantic difference between the adverbialized clause (272a) and the nominalized clause (272b) versions is that the ugliness expressed in the adverbial clause could be a transient property of the subject, while with the nominalization the subject is understood to be permanently ugly. With additive clauses expressing actions, rather than properties, adverbial clauses (273a) are not replaced with nominalized clauses (273b).

- (273a) [tied död]-**quin-bi** tambis cues-ac-o-sh
 swidden chop-while:S/A>A-**Emph** paca kill-Infer-Past-3
 ‘In addition to felling trees to make his swidden, he killed a paca.’
 ‘Even though he was felling trees to make a swidden, he killed a paca.’
 ‘Right while he was felling trees to make a swidden, he killed a paca.’
- (273b) [tied död]-**quid-n-bi** tambis cues-ac-o-sh
 swidden chop-Agt.Nzr-Erg paca kill-Infer-Past-3
 ‘Even the one who is felling trees to make a swidden killed a paca.’
 ‘The very same one who is felling trees to make a swidden killed a paca.’
 *‘In addition to...’

Note that reversing the relative order of the subordinate and the main clause in any of the clauses in (272) in (273) does not affect the possible meanings. This construction type is also used to mark emphasis (e.g., with respect to time overlap) (273a, third interpretation), and to mark contrast between the main and subordinate clause (274).

- (274) achu camun [piu piu-mbo ic]-ec-bi
 howler.monkey dog/cat (redup=Deintens) red-Aug be-while:S/A>S-**Emph**
incuente in-chëshë in-chëshë-patséc-quid ne-e-c
 tail (redup=partly) tail-black-Dim-Agt.Nzr be-Npast -Indic
 ‘The bush dog [lit. ‘howler monkey dog’] is one that is reddish but has a black tail tip.’

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12.4.2.14 Substitutive

Substitutive clauses are ones where the subordinating markers signal “the replacing of an expected event by an unexpected one” (Thompson and Longacre 1985: 199). Substitutive clauses are not coded by adverbialized clauses in Matses, but by nominalized clauses; like concessive and additive clauses, they occur with the emphatic enclitic **-bi**, and can be further emphasized/elaborated with **-c** (275).

- (275a) cues-nan-tiad-**quid-bi** cuen-o-sh
 hit-Recip-Abil-Agt.Nzr-**Emph** run.off-Past-3
 ‘Instead of fighting, he ran off.’

- (275b) cues-nan-tiad-quid-bi-c cuen-o-sh
 hit-Recip-Abil-Agt.Nzr-Emph-Separ run.off-Past-3
 'He would have fought, but he had to run off.'

This construction type was discussed in section 12.2.3.

The particle adoedic (which is not neatly segmentable; possibly ado 'do thus' + ?-ec 'while: S/A>S + ?-bi 'Emphasis' + -c 'Emphasis'; §9.4.4) means something like 'but (unfortunately) instead.' It can be used following an adverbial clause within a sentence to contrast the adverbial clause with the matrix clause (276).

- (276) [pe-nu que]-quin adoedic [tacbid umu
 eat-Intent:1 say-while:S/A>A but.instead venter grue
cues-ac]-sho [checa ne-e-c
 kill-Infer-when:S/A/O>O worthless.small.mammal be-Npast-Indic.
que]-quin ne-quid matses-n
 say-while:S/A>A toss-Hab Matses-Erg
 'Matses say, "I'm going to eat it," **but then, instead**, they end up killing a rice rat
 and throwing it away saying, "It's a worthless small mammal".'

A-IV 017 tacbid umu 09

12.4.2.15 Absolutive

Matses nominalized clauses can be described as absolutive (= absolute) clauses in many environments, at least according to Thompson and Longacre's (1985: 201) three criteria. Matses nominalized clauses: i) are marked by the nominalizer as being subordinate; ii) carry no explicit signal of the relationship between the main and subordinate clause; and iii) the interpretation of this relationship often must be inferred from the context. Several examples of adverbial-type nominalized clauses have already been presented in the preceding sections. One example is (215a), repeated below as (277), which can actually have more than one interpretation:

- (277) [acte ac]-quid nēishamē cues-o-mbi
 water drink-Agt.Nzr tapir kill-Past-1A
 ‘I killed a tapir that was drinking water.’ (noun-modifying clause)
 ‘I killed a tapir at the place where it drinks water.’ (locative clause)

The sort of notions that one might expect to be expressed by absolutive clauses are most commonly expressed in Matses with regular adverbialized clauses (278), which have subordinators that specify both the temporal and participant co-reference relations between the subordinate and the main clause, and therefore cannot be called absolutive clauses.

- (278) is-shun-bi mēdin-en-quo ic-o-sh
 see-after:S/A>A-Emph shake.hand-Neg.Perf-Aug Aux-Past-3
 ‘Having seen me (or ‘Even though he saw me’), he did not greet me.’

12.4.2.16 General patterns in adverbialized clauses

After looking at all the meanings associated with the adverbialized clauses, we can recognize the following general patterns:

- 1) All of the suffixes specify an inter-clausal temporal relation: an adverbializing suffix may code a temporal relation: i) as its only temporal/logical meaning (e.g., -an ‘after: Different Referent’); ii) as its basic/primary meaning (e.g., -ash ‘after: S/A>S’); iii) as an extended secondary meaning (e.g., ‘before’ coded by -nush ‘Purpose: S/A>S’); or iv) as an implied secondary meaning that cannot obtain separately from the primary meaning (e.g., ‘before’ in -ec ‘Purpose: S/A>S’).
- 2) Adverbialized clauses marking completely different referents (-nuc, -an, -bon, and -teno) between the two clauses do not have logical meanings (e.g., purpose, reason, etc.), while those marking same subject or object-subject relations almost always do (-anec and

-anquin seem to be the only exceptions). It seems that the inter-clausal connection between arguments is important for making the logical connections.

3) While adverbial clause suffixes that code 'while,' 'after,' and 'when' have temporal relation as their basic/primary meaning, this is not the case for most suffixes that can designate a 'before' meaning/implication. Having a 'before' clause is unnecessary for ordering clauses in a language that has an 'after' clause, and the 'before' temporal relation is the more unnatural for relating events. Therefore, it is not surprising that the primary motivation for using 'before' clauses is to express a logical connection, rather than relating a simple sequence of events.

4) As I have pointed out in several of the above sections, there are at least two factors motivating clause ordering. One is a general preference for clause-final position for main clauses.²⁷ The other factor seems to be an iconic motivation to order clauses in the same order in which they occur in the real world. With 'after' clauses, both of these factors work in concord to favor pre-main position of subordinate clauses, and, accordingly, 'after' clauses are the ones that most frequently occur in this order (and in the reverse order, they sound like afterthoughts). Purpose/'before' clauses represent an opposition of the two clause-ordering factors, and accordingly we find these in post-main clause position more frequently than other clauses, about half the time (-ec purpose clauses being the exception). 'While' clauses are the intermediate case; because the relative temporal ordering is simultaneous, it is neutral with respect to the iconic clause ordering motivation, and, expectedly, we regularly find 'while' clauses after their matrix clause, but not as frequently as purpose/'before' clauses. These are tendencies, not to be taken as

²⁷ Recall that subordinate clauses must precede non-main matrix clauses as a rule.

rules. And there are surely discourse factors not taken into account here that also affect clause ordering. The next section discusses clause ordering of more than two clauses.

12.4.3 Clause chaining

Matses can be said to have a clause-chaining system. Although clause chaining is a very prominent part of the language, it is not a very prototypical system. First let us consider some of the prototypical aspects of the Matses clause-chaining system. The essential property of Matses that makes us want to call it a clause-chaining language is that there is almost no inter-clausal coordination (§12.6), so that any time that two clauses are to be joined in a single sentence, it is through subordination, so that there is a single clause in the sentence with an inflected, finite, independent verb (= main clause) and one or more clauses with uninflected, non-finite, dependent verbs (= subordinate clauses).²⁸ And with almost all sentence types, there is no way to join two clauses with verbs of the same rank, so as Longacre (1985:239) puts it: “In brief, the subordinate/coordinate distinction is irrelevant...” The other important feature of Matses is that the long, complex sentences are made up mostly of adverbialized clauses, all of which provide information about argument co-reference (same subject, O>S/A, different set of arguments, etc.), which is a trademark of chaining languages.

Matses, however, has several properties that would make it a non-prototypical chaining language. The first is that chains are made up mostly of adverbialized clauses and also of nominalized and adjectivalized clauses, and therefore there is no special clause-chaining clause type. We might prefer to say instead that in Matses there are no

²⁸ The subordinate clauses are parallel to Longacre’s (1985) “medial” clauses and the main verb is parallel to his “final” clause. However, because in Matses the main verb frequently occurs other than in sentence-final position, I prefer not to use the term “final verb/clause.” Furthermore, to use the term “medial” would suggest that these are special clause types restricted to clause chaining, but in Matses clause-chaining clauses are the same as adverbialized clauses (and other clause types), and so a separate term would be misleading.

adverbial clauses, but that all the adverbial clause constructions introduced in section 12.4.2 are “mini clause chains” that utilize a medial verb. However, due to the adverbial semantics of these all these clauses, and due to the fact that adverbialized clauses are similar in form and grammar to adverbs in Matses, a description of this type is discouraged. I prefer to characterize it by saying that clause chaining is one of the several functions of adverbial clauses, especially of adverbialized clauses.

The most non-prototypical feature of Matses clause-chaining is the relationship between subordinate (marking) and matrix (reference) clauses (terms in parentheses are Haiman and Munro’s 1983 terms). Longacre (1985:264) describes the relation between the main clause and the non-main clauses in a clause-chaining structure as follows: “This final clause is like an engine that pulls a string of cars.” This one-dimensional analogy fits a small number of Matses clause-chaining sentences, but, just as frequently, the relation between the main clause and the dependent clauses is two-dimensional (i.e., it can’t be represented as a line) and is better visualized as a professional dog walker walking a half-dozen dogs on a half-dozen leashes (some or all the dogs sometimes even get ahead of the dog-walker). The most frequent situation, however, reflects a combination of the train and the dog walker analogies, which could be pictured as the dog-walker stringing some of the dogs together on the same leash, and leading others on separate leashes. The process is best described technically as a system of subordination, where a matrix clause can have multiple subordinate clauses directly subordinated to it and/or or nested within each other to several levels. Due to this fact, the term “chaining” is a bit misleading because it implies a one-dimensional, single-rank, linking relationship among the subordinate clauses. Nevertheless, I will use the term “clause chaining” to refer to these complex constructions due to their other fundamental similarities to clause

chaining in other languages. The term “chain configuration” will be used more specifically to describe one-dimensional clause chaining (see §12.4.3.1 below).

In the subsections of the present section I will first describe the different clause configurations in clause-chaining sentences, then in section 12.4.3.2, I will describe a special listing construction accomplished by clause chaining. In sections 12.4.3.3 and 12.4.3.4, I will describe grammatical and semantic relationships among co-referential arguments, particularly equi-deletion and metonymy. In these first four subsections, I focus on adverbialized clauses, and in the final subsection, section 12.4.3.5, I discuss the role of nominalized and adjectivalized clauses in clause-chaining constructions.

12.4.3.1 Possible multi-clause sentence configurations

We can categorize multi-clause constructions with respect to the subordinate-matrix relationships of their clauses: i) **chain** configuration: one-dimensional, multi-level embedding (sometimes conforming to the train analogy); ii) **hub** configuration, where all the subordinate clauses are directly subordinate to the main clause (the dog walker analogy); iii) **branching** configuration, where one of the non-main matrix clauses has multiple subordinate clauses; and iv) **combinations** of two or all of these. Despite the many possible two-dimensional configurations, the language still has the constraint that words in spoken speech must be conveyed one-dimensionally, as a string of words. In this section, I will describe how this string of words is related in a sometimes non-linear fashion. The following characteristic of subordination is the single-most important factor restricting the possible ordering of the clauses: a subordinate clause in Matses must have all its non-verbal material (including any subordinate clauses) preceding the verb; main clauses do not have this restriction. Before exemplifying the different possible configurations, it should be noted that the most objective clue for determining a subordinate clause’s matrix clause is the transitivity-sensitive argument

co-reference (e.g., adverbialized clauses with co-reference suffixes that refer specifically to a matrix clause A or O must have a transitive matrix verb). Keeping track of matrix clauses may be the functional motivation for maintaining the otherwise superfluous transitivity agreement system. Secondly, knowledge of the sequential ordering of the related events in real life helped determine subordinate-matrix clauses connections. In the examples in this section, I will present each clause on a separate line, and highlight in bold all subordinating morphemes in the text line, and the relevant co-referential arguments in the morpheme gloss line.

1) Chain configuration. In this sentence type, each matrix clause has but one subordinate clause (this is what I mean by “one-dimensional”). Long one-dimensional chains are most commonly made up of exclusively (279) or mostly of same-subject ‘after’ suffixes.

- | | |
|--|-----------------------|
| (279) ad-shun-bi | A |
| do.thus-after:S/A>A-Emph | |
| poshto shēta ud-tanquin | B (matrix of A) |
| woolly.monkey tooth dig.in-after:S/A>A | |
| matses-n di bidica-shun | C (matrix of B) |
| Matses-Erg palm.fiber twist-after:S/A>A | |
| ancun-ash | D (matrix of C) |
| string-after:S/A>S | |
| matses tē-diad-quid | E (main, matrix of D) |
| Matses neck-hang-Hab | |
| ‘After doing that, after making holes in the woolly monkey teeth, after Matses twist palm fiber twine, and after stringing (the teeth into a necklace), Matses wear it on their neck.’ | |

A-XIII 012 poshto shēta 04

The longest sentences always include this one-dimensional chain configuration, though usually combined with one of the other configurations. These longest chains are most common in how-to texts or where a long process is described. As mentioned in the preceding section, there is an iconic motivation to arrange the clauses in chronological

order, with the most recent events last (at the right). When all the subordinate clauses are ‘after’ clauses, and all the clauses are arranged in chronological order (as in 279), the main clause will be uttered last and the construction adheres perfectly to the prototypical chaining structure, conforming to the train analogy.²⁹ Nevertheless, the process is best described as multi-level, nested subordination, rather than simple clause-to-clause linking. With sentences like (279), it is hard to show this, but it becomes evident in more complicated constructions. The essential point that other authors’ chaining and my multi-level embedding have in common is that one or more clauses are not *directly* subordinate to the main verb. In other words, non-main matrix verbs somehow link the main verb to other non-finite clauses, whether it be by multi-level embedding or some other linking process.

Other forms of one-dimensional clause chaining do not conform to a neat chain (or train analogy). The motivation for using the term “one-dimensional” is that each matrix clause has but one subordinate clause, allowing us to illustrate the inter-clausal relationships as a line. However, this does not exclude the possibility that a diagram illustrating the subordinate-matrix relations of the clauses will not reflect the physical ordering of the clauses in the sentence. Sometimes the main clause will be first in the sentence, as in (280)

- (280) adembidi isipachi dayunte-ua-quid matses-n A (main,
 likewise:Tr vine.species climbing.ring-Vzr:make-Hab Matses-Erg matrix of C)
shuinte cues-ec B
 two.toed.sloth kill-Purp:S/A>S
dectato-nun C (matrix of B)
 climb.up-Purp:S/A>A
 ‘Similarly, Matses make isipachi vines into a climbing ring in order to climb up
 trees to kill two-toed sloths.’

2-p76-L dayunte 02

²⁹ The train analogy has always seemed odd to me since in most clause-chaining languages, the main verb (the locomotive) is last, not first.

The physical ordering of the clauses in (280) is A-B-C, the subordinate relation is also one-dimensional (non-branching), but different: B>C>A. Upon initial inspection, one might assume that this is a case of a subordinate-matrix relationship existing between non-adjacent clauses, but in light of the multi-level embedding view, we see that B is part of clause C and so the two are still adjacent. This adjacency requirement appears to be a characteristic feature (or epiphenomenon?) of the chain configuration (but not the hub configuration, see below). Therefore, one-dimensional embedding is limited to clauses where the main clause is either first or final (otherwise the main clause would isolate clauses in a matrix-subordinate relationship on opposite sides of it). Sentences with a sentence-medial main clause will have a hub configuration, which will be exemplified next. But before moving on, it should first be mentioned that sometimes it is difficult to separate out the clauses as in the above two examples, since subordinate clauses can occur *within* the main clause, just like any adverb can occur in any order within a simple clause. Sentence (281) is a good example because both argument tracking and knowledge of the real event tells us that the first word, ‘Matses,’ is not the A of the verb ‘eat,’ but of the main verb ‘kill’ (and also the nominal subject of ‘listen’):

- | | |
|--|-------------------------|
| (281) <u>matses-n</u> | (part of main clause C) |
| Matses-Erg | |
| <u>cuëte</u> <u>bacuë</u> <u>pe-sho</u> | A |
| dicot.tree fruit eat-when:S/A/O>O | |
| <u>tantia-shun</u> | B (matrix of A) |
| listen-after:S/A>A | |
| <u>shëcten</u> <u>cues-quad</u> | C (main, matrix of B) |
| collared.peccary kill-Hab | |
| ‘Matses, after hearing them as they eat fruit, kill the collared peccaries.’ | |
| *‘After hearing Matses eating fruits...’ | |

2) Hub configuration. One could imagine the possibility that all of the ‘after’ clauses in example (279) are directly subordinate to the main clause, in which case they could be placed in any order, with no adjacency restriction. But in Matses this does not occur, presumably because it would be very confusing.³⁰ With ‘while’ clauses, however, all of the simultaneous clauses can be directly subordinate to the main clause and placed in any order without creating confusion. Semantically speaking, it would not be difficult to picture multi-level embedding among the ‘while’ clauses, considering that if they are temporally simultaneous with the main verb, then they are also simultaneous with each other. However, we can show that this is not the case using examples like (282), in which all three of the adverbialized clauses mark co-reference with a *transitive* matrix verb, and the only transitive verb in the sentence is the main verb. Therefore, the three ‘while’ clause are like spokes in a wheel, all directly connected to the main verb (the “hub”).³¹

(282) <u>shocoshque-en-quin</u>	A
rustle.leaf.litter-Neg-Adjzr	
<u>nid-quin</u>	B (matrix of A)
go-while:S/A>A	
<u>otacquio nid-tsēc-quin</u>	C
quietly go-Dim-while:S/A>A	
<u>pudun-quin</u>	D
jump-while:S/A>A	
<u>bēdi-dapa-n bed-quid shēcten</u>	E (main, matrix of B, C & D)
jaguar-large-Erg grab-Hab collared.peccary	
‘While walking without rustling the leaf litter, while moving quietly, pouncing, the jaguar catches the collared peccary.’	

A-IV 036 bēdi dapa 19

³⁰ Recall, as noted in section 12.4.2.16 (generalization 4), that it tends to be the case that any real-life ordering is reflected iconically in linguistic ordering of the clauses, but where no real-life ordering exists (e.g., simultaneity), linguistic ordering is imposed is not an issue.

³¹ Clause A, the negative adjectivalized clause is subordinate to clause B, not the main clause, so this is not in a strict hub configuration (it is a combination hub and chain), but the example is illustrative.

A strict hub configuration, with no multi-level embedding, can similarly be achieved when all the adverbialized clauses have different temporal relations to the main verb. One's knowledge of arrow-making technique reveals the clause configuration in (283), as opposed to transitivity agreement clues, since all the verbs in the sentence are transitive.

- (283) aid-bi
 that.one-Emph
pia na-nun A
 arrow do-Purp:S/A>A
buid-n tēquēnca-shun B
 pitch-Inst coat-after:S/A>A
pia dabi-quid C (main, matrix of A, B & D)
 arrow fletch-Hab
uesnid podo bitacca-en D
 curassow feather stick-while:S/A>A
 'That one [pitch]...in order to make the arrows, after coating the shaft with pitch, they fletch the arrow by sticking on the curassow feathers.'

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Complex sentences with a hub configuration confirm that subordinate clauses with the main verb as their matrix do not have to be adjacent to their matrix clause, as must be the case with at least one clause any time there is a hub configuration sentence with four or more clauses (as in 282 & 283). Any time a hub configuration sentence contains more than two subordinate clauses, the subordinate-matrix relation can no longer be represented with a one-dimensional figure. Sentences with a strict hub configuration (i.e., no multi-level nesting) tend to be shorter than one-dimensional chains.

3) Branching configuration. The branching configuration requires at least four clauses (unlike the chain and hub configuration sentences, which only require three). Its representation will always require a two-dimensional figure. The examples in (284) and (285) illustrate branching configurations of adverbialized clauses.

- (284) opa bed-nuec A
 dog grab-Purp:S/A>S
opa-n chushca-do-ac B
 dog -Erg bark.at-Incep-after:O>S/A
bëui nidto-ash C (matrix of A & B)
 tamandua stand-after:S/A>S
tsëcpen-quad D (matrix of C)
 open.arms-Agt.Nzr
bëui ne-e-c E (main, matrix of D)
 tamandua be-Npast-Indic
 'The tamandua is one that in order to grab the dog, when the dogs starts to bark at it, the tamandua stands up and then opens its arms.'

A-IV 026 bëui 33

- (285) adembidi matses-n shëctenamë cues-e-c A (main, matrix of D)
 likewise:Tr Matses-Erg white.lipped.peccary kill-Npast-Indic
istuid-shun B
 find-after:S/A>A
munque-sho C
 grunt-when:S/A/O>O
tantia-shun D (matrix of B & C)
 listen-after:S/A>A
 'Also, Matses kill white-lipped peccaries, after they encounter them and hear them grunt.'

A-I 044 shëctenamë 06

The four adverbialized clauses in sentence in (286) could be interpreted as having either a branching structure or a chain structure, depending on whether we assume the matrix clause of clause B is clause C or clause D. There is no way to really confirm either possibility in this case.

(286) <u>cuête</u> <u>cuidi</u> <u>uënës-aid-bi</u>	A
dicot.tree branch die-Pat.Nzr-Emph	
<u>istuid-shun</u>	B (matrix of A)
find-after:S/A>A	
<u>shëcca</u> <u>shëcca-quin</u>	C
(redup=Distr) pull.on-while:S/A>A	
<u>podquën-shun</u>	D (matrix of B & C)
break.off-after:S/A>A	
<u>ne-bud</u> <u>ne-bud-quid</u>	E (matrix of D)
(redup=Distr) toss-downward-Agt.Nzr	
<u>bëchun</u> <u>ne-e-c</u>	F (main & matrix of E)
capuchin.monkey be-Npast-Indic	
‘Capuchins are ones that, after finding dead tree branches, they break them off by pulling on them, and then throw them down.’	

A-IV 036 bëdi dapa 08

The branching configuration is essentially a combination of the hub and chain configurations, with the distinction that a subordinate clause is the matrix of multiple subordinate clauses, while with the hub configuration only the main clause has multiple subordinate clauses.

4) Combinations. Presumably, any combination involving any of the three above configurations is possible. Below, I illustrate a few sentences exhibiting a combination of more than one of these configurations. Example (287) illustrates a combination of the hub and chain configurations, with a sentence-central main verb.

- (287) matses-n isan podo cuēsh-shun A
 Matses-Erg palm.species frond break.up-after:S/A>A
bidica-shun B (matrix of A)
 twist-after:S/A>A
dayunte-ua-quid C (main, matrix of B & E)
 climbing.ring-Vzr:make-Hab
isan bushte-ec D
 palm.species cut.peduncle-Purp:S/A>S
dectato-nun E (matrix of D)
 climb.up-Purp:S/A>A
 ‘Matses, after breaking an isan palm frond, after twisting it, they make a climbing ring before climbing an isan tree in order to cut its peduncle.’

2-p76-L dayunte 01

Example (288) exhibits the exact same inter-clausal relations, but with the main clause in sentence final position, showing that a subordinate clause can be physically separated from the main clause by a series of chained clauses (as opposed to only by a single clause).

- (288) ad-ec A
 do.thus-while:S/A>S
tsad-cuen tsad-cuen-sho B (matrix of A)
 (redup-Distr) sit-do.and.keep.going-when:S/A/O>O
matses-n capu-ec C
 Matses-Erg hunt-Purp:S/A>S
nid-shun D (matrix of C)
 go-after:S/A>A
matses-n cues-quid E (main, matrix of B & D)
 Matses-Erg kill-Hab
 ‘While it sits and travels like that, Matses go hunting and then kill it.’

A-IV 024 chompish 13

Finally, example (289) shows a combination of the branching and the chain configurations. (We know clause D is not subordinate to clause E because the verb in clause E is intransitive.)

- (289) cuēs-shun A
gather-after: S/A>A
ēsh-chic-shun B (matrix of A)
seed-pull-after: S/A>A
pēchush-shun C (matrix of B)
stretch-after: S/A>A
ushē mēduc san-shun D (matrix of C)
sun in.middle put:Pl-after: S/A>A
tanun-ac-sho E
dry-Infer-when: S/A/O>O
toshcodocate-n toshcodoca-shun F (matrix of D & E)
spindle-Inst spin-after: S/A>A
chido-n aton bēnē mene-quid pia tsi-mac-te G (main, matrix of F)
wife-Erg 3Gen husband give-Hab arrow notch-wrap-Inst.Nzr-Abs
‘After gathering it, after pulling out the seeds, after stretching it out, after putting
it in the sun, after it dries, after spinning it with a spindle, the woman gives her
husband the “arrow notch wrapper” [= cotton thread].’

B-p54 F sedquid 2

12.4.3.2 Listing constructions

A special construction type is accomplished using the adverbializing suffixes -ash ‘after: S/A>S’ or -quin ‘while: S/A>A.’ These constructions are hard to classify into one of the above sentence configuration categories because they seem like chains in some ways and like hub configuration sentences in others. The matter remains unresolved. These sentences have the special function of listing, a function that in many languages would be accomplished by juxtaposition and/or conjunctions. Let us look at some examples:

- (290) actiacho-n capu-ash-bi
 floodplain.forest-Loc locomote-after:S/A>S-Emph
mannan-n capu-ash
 hill-Loc locomote-after:S/A>S
acte cuidi cuëma-n capu-ash
 stream branch edge-Loc locomote-after:S/A>S
que-quid
do-Agt.Nzr
mapiocos ne-e-c
 common.opossum be-Npast-Indic
 ‘The common opossum is one that walks around in floodplain forest, walks
 around in upland forest, and walks along small streams.’

A-IV 045 mapiocos 17

- (291) yuca pe-quin
 manioc eat-while:S/A>A
piacbo pe-quin
 corn eat-while:S/A>A
cuëte bacuë pe-quin
 dicot.tree fruit eat-while:S/A>A
ca-tsëc-quid
do-Dim-Agt.Nzr
tacbid umu ne-e-c
 venter grue be-Npast-Indic
 ‘The little rice rats are ones that eat manioc, eat corn, and eat dicot tree fruits.’

A-IV 017 tacbid umu 11

Examples (290) and (291) are fairly prototypical examples, except for the fact that examples with -ash are much more common than ones with -quin. I will present the less prototypical variations below, but first let us look at some grammatical patterns that are apparent in prototypical cases.

The first pattern is that the verb is the same one in all the listed clauses (I will refer to the adverbialized clauses in these constructions as “listed” clauses). Second, a semantically empty verb, que ‘do (intransitive)’ or ca ‘do (transitive),’ generally occurs following the listed clauses; there are other, less-frequently used options to using que/ca (see below), but if either que or ca does occur, it matches the transitivity of the listed

verbs.³² The third general grammatical pattern is that the listed clauses and the que/ca clause (if it occurs) are nominalized into one complex nominal predicate, which is then linked via the copula ne to the entity being described (see §12.2.2 for this copular construction type that is used mainly for habitual aspect predication). This last property is probably more a function of the fact that most of my examples of this sentence type are in natural history accounts that are usually told in habitual aspect, rather than due to something directly related to the listing construction.

The other relevant pattern to note is a semantic one. While the subordinating suffixes that are used code temporal relations, and would make sense interpreted as ‘after’ and ‘while’ clauses, this does not reflect the communicative intent of the sentence (as indicated in my English translations). While these clause types could be used to describe habitual events with real temporal relations, as in (292), the constructions that are the topic of this section are meant to be taken as a list, with no temporal relations or sequential ordering implied among the clauses. In fact, a sequential interpretation in some cases would be nonsensical, as in (293).

- (292) isitodo cue-mbo ic-quid-n bud-ash
 liana straight-Aug be-Agt.Nzr-Loc descend-after:S/A>S
abuc maca nidaid-n capu-ash
 high rat ground-Loc locomote-after:S/A>S
adecbidi abuc ush-e-c
 likewise:Intr high sleep-Npast-Indic
 ‘They climb down a straight vine, then the spiny tree rats walk around on the ground, and then they once again sleep high up.’

A-IV 016 abuc maca 09

³² These verbs only occur in this conjunction context, so the gloss ‘do’ is somewhat arbitrary. The quotative verbs que ‘say’ and ca ‘tell/say to’ (§12.5.1) must occur with a segment of quoted speech, so despite the formal identity, this use of que and ca cannot be glossed ‘say’ and ‘tell.’

- (293) mannan-n-quoio cani-ash
 hill-Loc-Aug grow-after:S/A>S
macuësh potse-n-quoio cani-ash
 hill halfway-Loc-Aug grow-after:S/A>S
acte cuidi cuëma-n cani-ash
 stream branch edge-Loc grow-after:S/A>S
que-quiv
 do-Agt.Nzr
mio ne-e-c
 palm.species be-Npast-Indic
 'The mio palm is one that grows on hill tops, grows on hill inclines, and grows
 along small streams.'

A-I 016 mio 11

This semantic property presents us with some difficulty in analyzing these sentences. Since all the verbs match in transitivity, and there is no real-life temporal relationship to consider, there is no way of identifying the matrix clauses of the listed clauses. They could just as well be in a chaining configuration or in a hub relationship (with que or ca being the hub). Looking at non-listing sentences using these same adverbializing suffixes is not helpful, since sequences of -ash clauses are usually in a chain configuration, and sequences of -quin clauses in hub configurations (see preceding section). The semantics suggest that they are not in a chain configuration, but this is hard to show grammatically. More complicated listing sentences like (294) show that the clauses are not always in a straight chain (otherwise clause C would have to have a suffix that specified a co-referential *transitive* matrix subject), but we still cannot be sure if this is a hub configuration or just a branching one; i.e., the first (complex) -ash clause (C) could still be either directly subordinate to either the next -ash clause (E) or the que clause (F).

- (294) shēmēn (part of clause C)
 olingo
actiacho-n cuēte bacuē che-ec B
 floodplain.forest-Loc dicot.tree fruit eat.unchewed-while:S/A>S
capu-ash C (matrix of B)
 locomote-after:S/A>S
mannan-n cuēte bacuē che-ec D
 hill-Loc dicot.tree fruit eat.unchewed-while:S/A>S
capu-ash E (matrix of D [& C?])
 locomote-after:S/A>S
que-quiv F (matrix of E [& C?])
 do-Agt.Nzr
shēmēn ne-e-c E (main, matrix of F)
 olingo be-Npast-Indic
 ‘The olingo is one that climbs around in floodplain forest eating dicot tree fruit
 and also climbs around in upland forest eating dicot tree fruits.’

A-IV 030 shēmēn 17

Variations on this construction also provide some indirect clues. Two options to using que or ca are: i) to repeat the listed clause verb once more and nominalize it (295); ii) or to just nominalize the last occurrence of the listed clause verb (296).

- (295) shēcuē-n ush-tsēc-ash
 hole-Loc sleep-Dim-after:S/A>S
ushte-ua-ash
 nest-Vzr.make-after:S/A>S
ush-tsēc-quiv
 sleep-Dim-Agt.Nzr
tacbid umu ne-e-c
 venter grue be-Npast-Indic
 ‘The little rice rats [lit ‘blue bellies’] are ones that sleep in holes and sleep in nests
 after making them.’

A-IV 017 tacbid umu 16

- (296) bëui adecbidi
 tamandua likewise:Intr
acte cuëma-n ic-ash-bi
 river edge-Loc be-after:S/A>S-Emph
mananuc ic-ash-bi
 upland.forest be-after:S/A>S-Emph
actiacho-n ic-quid
 floodplain.forest-Loc be-Agt.Nzr
bëui ne-e-c
 tamandua be-Npast-Indic
 ‘Tamanduas (dog-sized anteaters) are ones that are along rivers, then are in
 upland forests, and then are in floodplain forests.’

A-IV 026 bëui 26

This second option, (296), discourages the hub analysis, considering that the expected “hub verb” is gone. To argue for the hub analysis in this construction, we could have to say that the final listed clause verb is the hub verb. Thus, while this discourages the hub analysis, it is still inconclusive. Luckily for Matses speakers, since the temporal relations in these listing constructions are semantically irrelevant, it does not matter how one analyzes the subordination relations. For non-listing clauses, however, how one analyzes the subordination relations can have an important effect on the interpretation of the sentence.

Two more variations on this construction should be mentioned before leaving this topic. First, very infrequently,³³ as in (297), the verbs in the listed clauses are not identical (unfortunately, I have no examples where the listed verbs differ in transitivity). Also, there is no requirement that the final listed clause be nominalized. In (298), the complex clause, rather than being nominalized, is adjectivalized, then adverbialized and incorporated into a larger sentence.

³³ Infrequently enough that they might turn out to be performance errors (I have to check in elicitation).

- (297) abuc ic-ash
 high **be**-after:S/A>S
nidaid-n capu-ash
 ground-Loc **locomote**-after:S/A>S
que-quid
 do-Agt.Nzr
bēdi-dapa ne-e-c
 jaguar-large **be**-Npast-Indic
 ‘The jaguar is one that is high up and also walks on the ground.’

A-IV 036 bēdi dapa 15

- (298) uanno tsad-ash-bi
 apart **sit**-after:S/A>S-Emph
uquē tsad-ash-bi
 other.side **sit**-after:S/A>S-Emph
u tsad-ash-bi
 far **sit**-after:S/A>S-Emph
que-mbo-ec
do-Adjzr-Advzr:Intr
tsipud tsad-cuen tsad-cuen-e-c
 pygmy.anteater (redup=Distr) **sit**-while.passing-Npast-Indic
shuinte-bi-mbo-ec
 two.toed.sloth-be.like-Adjzr-Advzr:Intr
 ‘Sitting far off, then on the other side, then far away, the pygmy ant eater is constantly sitting in different places, just like the two-toed sloth does.’

A-IV 025 tsiput 21

In conclusion, it is my impression that due the fact that listing constructions do not code real-life sequences of events, they are relatively free to be expressed with a variety of stylistic variants.

12.4.3.3 *Equi-deletion*

Ideally, co-referential arguments in adverbialized clauses do not occur explicitly (i.e., there is “equi-deletion” of co-referential arguments). This bears out clearly in elicitation, in two-clause sentences in texts, and when asking speakers to evaluate long sentences in texts. However, it is not infrequent, particularly with multi-clause sentences, for co-referential arguments to be repeated (299 & 300; see also 279).

- (299) aid-n-bi [matses-n cuëno]-shun shëctenamë
 that.one-Inst-Emph Matses-Erg sharpen-after:S/A>A white.lipped.peccary
matses-n se-quid nadanca-shun
 Matses-Erg pierce-Hab pursue-after:S/A>A
 ‘With that same one, after Matses sharpen it, Matses kill white-lipped peccaries,
 after chasing them down.’
 A-I 034 oninian siante 05
- (300) [[ad-ec capu]-quin bëdi-dapa-n shëcten
 do.thus-Manr:Intr locomote-while:S/A>A jaguar-large-Erg collared.peccary
istuid]-shun shëcten pe-quid bëdi-dapa-n
 find-after:S/A>A collared.peccary eat-Hab jaguar-large-Erg
 ‘While walking around like that, the jaguar finds collared peccaries and the jaguar
 eats them.’
 A-IV 036 bëdi dapa 18

It should be emphasized that it is the argument in the subordinate clause that is suppressed, not the one in the main clause. The main-clause argument may be separated from the main verb by an intervening adverbialized clause, as in (301). In sentences like (301), where both verbs are of the same transitivity, it is not obvious to which clause the overt argument belongs, but this is readily understood when the clauses differ in transitivity, as in (302) and (303).

- (301) debi-Ø nes-ash ush-o-sh ‘After bathing, Davy slept.’
 Davy-Abs bathe-after:S/A>S sleep-Past-3
- (302a) debi-n nes-shun pe-o-sh (302b) *[debi-Ø nes]-shun pe-o-sh
 Davy-Erg bathe-after:S/A>A eat-Past-3
 ‘After bathing, Davy ate.’
- (303a) debi-Ø pe-ash ush-o-sh (303b) *[debi-n pe]-ash ush-o-sh
 Davy-Abs eat-after:S/A>A sleep-Past-3
 ‘After eating, Davy slept.’ (Davy as S of main verb)
 ‘After eating Davy, [the jaguar] slept.’ (Davy as O of adverbialized verb)

While there is optional zero-pronominalization of third-person arguments in all simplex sentence types, recall (from §11.2.4) that first- and second-person pronouns are

obligatory with all but a few special person-specific inflections. But in adverbialized clauses, even first- and second-person arguments are not be explicit when they are co-referential arguments in subordinate clauses (304 & 305).

- (304) [**Ø** **bed**]-**shun**-**bi-en** **nuqui is-tsia-c**
 1+2 grab-after:S/A>A-Emph-Contr 1+2 see-Npast:Cond-Indic:1/2
 [**Ø** **nain**]-**quin** **cuesban**
 1+2 finish-while:S/A>A bat
 ‘After catching them we would see all the bats (lit. finishing seeing the bats).’
 C-V 016 cuesban 32
- (305) [**Ø** **ompo-ad**]-**shun** **is-onda-mbi** ‘I saw them after having hidden.’
 1S hide-Rflx-after:S/A>A see-Dist.Past-1A
 K-XXI 010 dëmushbo 33

12.4.3.4 Metonymy across co-referential arguments

One aspect of argument co-reference that can be confusing to the non-Matses is that co-referential arguments are sometimes related by metonymy. I have identified three semantic types of metonymy that occur across co-reference relations: i) part-whole; ii) individual-group; and iii) old-new replacement. (“Meronymy” might be a more precise term for at least some of these relations.) One of the advantages of an inter-clausal argument co-reference system is that one can repress overt repetition of a co-referential argument without introducing ambiguity. Thus, there is not only an option to leave out arguments, but the lack of repetition is strongly preferred. With metonymy, however, where co-reference is not so precise, it is much more common, but not obligatory, to mention the co-referential entities in both the subordinate and the matrix clauses. Below, I exemplify the three different types of metonymy. In this section, co-referential arguments will be in bold in the text line and in the English translation line, and the co-reference marker will be in bold in the morpheme gloss line.

1) Part-whole. This is the most common type of metonymy relation found in the texts. The part-whole relation can involve animals (306), plants (307), or non-living objects (308).

- (306) ad-sho _____ [podo an-se]-ac _____ nëbi uënës-quid
 do.thus-when:S/A/O>O arm under-pierce-when:O>S/A now die-Hab
nëishamë
 tapir
 ‘When that happens to it [**the tapir**] if it [the bamboo blade] pierces under the **front leg**, the **tapir** dies right away.’

A-XIII 023 nëishamë dectante 21

- (307) [[nitsin-ac _____ cani]-ash _____ bacuë sin-ac]-sho
 plant-after:O>S/A grow-after:S/A>S fruit ripe-Infer-when:S/A/O>O
tësh-e-c _____ quëuëte -n
 pull.off-Npast-Indic hook-Inst
 ‘After they plant it [**the seed**], after it [**the peach palm tree**] grows, when the **fruits** ripen, they pull **them [the fruits]** down with a hooked stick.’

1-p20-B titado 02

- (308) [tës-ad-ash _____ secque]-sho _____ chido-n _____ mocodi
 pull.off-Antcaus-after:S/A>S scatter-when:S/A/O>O woman-Erg seed.necklace
tsid-quid
 gather-Hab
 ‘When they [**seeds**] scatter after it [**the necklace**] breaks off, the women gather up the **mocodi seeds**.’

A-XIII 013 mocodi 11

Even blood can be considered a “part” (309).

- (309) [cuesban-n pe]-aid _____ matses _____ cuesban-n _____ pe-ac _____ intac
 bat-Erg eat-Pat.Nzr Matses bat-Erg bite-when:O>S/A blood
bëdan-en-quio _____ ic-quid
 heal-Neg-Aug Aux-Hab
 ‘People who are **bitten by bats**, after the bat bites them, **their blood** doesn’t heal (i.e., coagulate).’

E-XI 049 cuesban 08

The metonymy co-reference relations also occurs in adverbialized adjectivalized clauses, which also specify same-subject co-reference (310; §12.4.1).

- (310) [incuente-Ø shucque]-pambo-ec capu-quid ne-e-c
 tail-Abs fan-Adjzr:Aug-Advzr:Intr locomote-Agt.Nzr be-Npast-Indic
 ‘It [the giant anteater] is one that walks with its big tail swaying back and forth.’

A-IV 027 shaë 04

2) Individual-group. Another type of co-reference relation can be between a group of entities (usually humans or animals) and a subset of the group (311) or a single individual from the group (312). Note in (311) that ‘cross’ and ‘go’ must refer to a subset of the group, because in a preceding clause some of them are killed. The co-reference relation in (312) involves the inter-sentential “overlap” adverbial in (319b) referring back to the directly preceding sentence in the text (312a).

- (311) [[[tied chedo istuid]-quin chotac-n cues]-ac
 swidden etc find-while:S/A>A non-Indian-Erg kill-after:O>S/A
yaquidana pote-ec nid-onda-sh
 Yaquerana.River cross-while:S/A>S go-Dist.Past-3
 ‘Finding the (Matses) farms and villages, the non-Indians killed them [some of the Matses], they [the rest of the group of Matses] left crossing the Yaquerana River [into Brazil].’

+ K-XXII 001 chema 003

- (312a) cues-tanec matses ëëë que-quid aton utsi cuën-ec
 kill-after:S/A>S Matses calling.sound say-Hab 3Gen brother call-while:S/A>S
 ‘When he [the hunter] kills it [the collared peccary], he calls his brothers saying, ëëë.’

C-III 001 shëcten 25

- (312b) ado-ac aton utsi [tsiuec cho]-quid uanno tsad-quid
 do.thus-after:O>S/A 3Gen brother last come-Agt.Nzr apart sit-Hab
 ‘After doing that [i.e., calling the brothers], the brother that comes last sits apart (in the corner of the house).’

C-III 001 shëcten 26

3) Old-new (replacement). The final type of across-clause co-reference metonymy relation that I have found is the most surprising. The relation is between an old artifact and a new artifact (often made from completely new materials) that is made specifically to replace it (313 & 314).

- (313) shēni-bud-ac-sho [adembidi shuccate
 old-Dur-Infer-when:S/A/O>O likewise:Tr **fire.fan**
chuca-ua]-quin daēdca-quid
 new-Vzr:make-while:S/A>A plait-Hab
 ‘When it [the fan] gets old, they similarly make a new fan, plaiting it.’
 A-XIII 018 shuccate 14

- (314) podquēd-ac-sho matses-n [chuca-ua]-quin
 break-Infer-when:S/A/O>O Matses-Erg new.one-Vzr:make-while:S/A>A
dabi-quid
 fletch-Hab
 ‘When it [an arrow] breaks, Matses make a new one, fletching it.’
 A-XIII 034 pia 17

The logic behind this metonymy might be that of “renewing” something, which could be by fixing it (in which case true co-reference would hold), or by replacing it. Or it might have originated as an abbreviation (i.e., deleting the ‘throwing out’ part) of clauses like the one in (315), where the co-reference relations hold true without metonymy.

- (315) adembidi shēni-ac-sho ne-quin chuca usun-ua-quid
 likewise:Tr old-Infer-when:S/A/O>O **toss-while:S/A>A** new insert-again-Hab
 ‘Similarly, when it [the lip insert] gets old, they throw it out, putting in a new one.’
 A-XIII 007 quid 10

Example (316) is interesting in that it contains two types of metonymy at once: both the old-new and the part-whole (or more accurately, material-product) relations.

- (316) [ad-ec icsa-bud-ac]-sho matses-n
 like that-Manr:Intr bad-Dur-Infer-when:S/A/O>O Matses-Erg
padpide-en di dachin-quid
 again-Manr:Tr **palm.fiber** peel.palm.fiber-Hab
 ‘When it [the hammock] gets ruined like that, Matses once again peel **palm fiber**
 [from from which a new hammock is made].’

A-XIII 039 di 26

A final interesting inter-clausal co-reference relationship I have found is not really an instance of metonymy, but rather an apparent construal of ‘weather’ as a single or unified entity:

- (317) ue mëduc [[[ue se-bud]-ec badiad]-sho
 rain Temp rain fall-downward-while:S/A>S dawn-when:S/A/O>O
is]-ash acate-n se-ad-nu que-quid
 see-after:S/A>S tree.toad.poison-Inst pierce-Pass-Intent:1 say-Hab
 ‘During the rainy season, when they see that **rain**_i is falling as **it**_i dawns, they say,
 “I’m going to have myself pierced with tree toad poison”.’

A-XIII 019 acate 11

12.4.3.5 Nominalized clauses and adjectivalized clauses in clause chains

Since nominalized and adjectivalized clauses can occur as components of adverbialized clauses, or they can have adverbialized clauses embedded in them, nominalized and adjectivalized clauses co-occur with adverbialized clauses in complex sentences in many different ways. For example, a nominalized clause can be in the object slot of an adverbial clause in a clause chain, as in (318; see also 286).

- (318) iu chuda (part of clause B, head of A)
 tree rift (= tree species)
nua uibën ic-quid A (relative clause modifying
 large buttress.root be-Agt.Nzr iu chuda)
istuid-shun B (contains A as argument)
 find-after:S/A>A
matses-n uncate chësh-quid C (main, matrix of B & D)
 Matses-Erg paddle carve-Hab
moco-n cuësh-tanquin D
 ax-Inst cut.with.grain-after:S/A>A
 ‘When they find an iu chuda tree that has a large buttress root, Matses carve a
 paddle...after cutting it out from the tree with an ax.’

A-XIII 028 uncate 04

Adjectivalized clauses can similarly occur embedded in adverbialized clauses, as in (319;
 see also 282).

- (319) moco nado-pambo-ec A
 ax do.thus-Adjzr:Aug-Advzr:Intr
dëd-an-tiad-pambo B
 chop-Antpass-Abil-Adjzr:Aug
ic-sho C (matrix of A & B)
 be-while:S/A/O>O
bed-Ø que-onda-sh D (main, matrix of C)
 grab-Imper say-Dist.Past-3
 ‘...he was holding an ax like this [speaker makes gesture of holding an ax]
 wanting to cut us with it, so “Grab it!” they said...’

+ K-XXII 004 chema 040

Also, a complex of adverbialized clauses can be nominalized as a unit and subordinated
 to a nominalized clause in a copular clause, as in (320; see also 284 and most of the
 sentences in §12.4.3.2).

- (320) mactac ic-sho-bi A
 mineral.lick be-when:S/A/O>O-Emph
mactac cuëma-n cain-quin B
 mineral.lick edge-Loc wait-while:S/A>A
nëishamë bed-shun C (matrix of A & B)
 tapir grab-after:S/A>A
pe-quid D (matrix of C)
 eat-Agt.Nzr
ne-e-c E (main, matrix of D)
 be-Npast-Indic
 ‘When it [the tapir] is at the salt lick, while [the jaguar] waiting at the edge of the salt lick, it grabs the tapir and then eats it.

A-IV 001 bëchun 10

These constructions are not surprising considering what has already been presented about these clause types, but here it should be noted that like adverbialized clauses, nominalizations can be embedded to more than one level (321), and that despite occurring formally as relative clauses, nominalized clauses can modify sentences semantically in a way very similar to adverbialized clauses (322).

- (321) cho-sho A
 come-when:S/A/O>O
matses-n ambi cueste (part of clause C, head of B)
 Matses-Erg 4Inst stick
ania-tsëc ic-quid B (relative clause
 small-Dim be-Agt.Nzr modifying cueste)
te-boed-n C (contains B)
 cut-Past.Nzr-Inst
matses-n tsaues tsicate-shun D (matrix of C)
 Matses -Erg long nosed.armadillo close.off-after:S/A>A
cueste-mpi dë-te-tanquin E (matrix of D)
 stick-small tip-cut-after:S/A>A
të-cues-tsëc-quid F (main, matrix of A & E)
 crown-kill-Dim-Hab
 ‘When it comes out, Matses close off the burrow with those thin sticks that they had cut, and then after cutting off the tip of the small stick, they hit it on the neck.’

A-I 047 tsaues 29

- (322) di pinchuc shapesh dachic-shun A
 palm.species palm.species unopened.fronde peel.palm.fiber-after:S/A>A
chido-n di bidica-e-c B (matrix of A & C)
 woman-Erg palm.fiber twist-Npast-Indic
aton bënë-n sha-te-aid C (relative clause)
 3Gen husband-Loc unopened.fronde-cut-Pat.Nzr modifying di
 ‘Women remove the palm fiber from the di pinchuc palm’s unopened frond, then
 they twist the palm fiber [from the di palm frond] that was cut by their husbands.’
 or more loosely, ‘...after their husbands cut the di palm frond.’

A-I 005 di pinchuc 03

And sometimes nominalized clauses are incorporated right into a chain configuration,
 linking other subordinate clauses together just like any adverbializing suffix in a
 one-dimensional multi-level embedding sentence (323).

- (323) isan matses-n bushte-shun A
 palm.species Matses-Erg cut.peduncle-after:S/A>A
bë-aid B (matrix of A)
 bring-Pat.Nzr
chu-ua-shun C (matrix of B)
 warm-Vzr:make-after:S/A>A
nitsin-aid D (matrix of C)
 place-Pat.Nzr
shubu pe-quid-n daësh-quid E (main, matrix of D)
 house eat-Agt.Nzr-Erg eat.gnawing-Hab
 ‘Bicolored arboreal rice rats [lit. ‘house eaters’] eat [isan palm fruits] that matses
 have left sitting out after warming up [the isan fruits] that they brought after
 cutting down the peduncle of the isan palm tree.’

A-IV 018 shubu pequid 05

In conclusion, we cannot say that clause chaining is limited to adverbialized clauses,
 although the adverbialized clause is the subordinate clause type most closely associated
 with clause chaining and long, complex sentences.

12.4.4 Other functions of adverbialized clauses

In this section, I mention some other functions of adverbialized clauses that are not usually coded by adverbial clauses. These include progressive aspect, back-referencing, and expression of several notions often coded by complementation.

12.4.4.1 'start' and 'finish'

In many languages, English being an example, the notions of beginning to do something or finishing doing something are expressed in object complement constructions with complement-taking verbs like 'start,' 'begin,' and 'finish.' These would be categorized as "phrasal predicates (aspectuals)" complement clauses by Noonan (1985:129). In Matses, these notions are expressed with the begun or finished action in a 'while' clause subordinate to a matrix clause with verbs *ta* 'begin [intransitive]' (324), *taua* 'begin [transitive]' (325 & 326), *tabado* 'begin [transitive]' (327), and *nain* 'finish [transitive]' (328).

- (324) *chonoad-ec* *ta-o-sh* (325) *dēd-quin* *taua-o-sh*
 work-while:S/A>S **begin-Past-3** chop-while:S/A>A **begin-Past-3**
 'He started working.' 'He began to fell trees.'

- (326) *aid-n* [*chido bed*]-*quin* *taua-onda-mbi*
 that.one-Inst woman grab-while:S/A>A **begin-Dist.Past-1A**
 'With that one [the Dēmushbo woman], I started capturing women.' (i.e., That was the first woman he captured.)

+ K-XXII 003 chema 028

- (327) *adomboen-bi-di* *bidica-quin* *tabado-quid*
 in.the.same.way-Emph-Emph roll-while:S/A>A **begin-Hab**
 'In the same way [as with pots], they begin rolling the clay.'

A-IX 013 tēchu 03

terms in quotation marks in this section are Noonan's [1985].) This same construction can also have a circumstantial reading (330).

(329) dectato-quin _____ tan-nu 'I'm going to try to climb up.'
climb.up-while:S/A>A try-Intent:1

(330) moco mapi-n cues-quin _____ tan-quid
ax head-Inst hit-while:S/A>A test-Hab
'They test it by hitting it [the canoe] with the blunt end of an ax head.'

A-IX 014 cano 06

The transitive verbs is 'see' can function as a "predicate of knowledge and acquisition of knowledge" in some contexts and as an "immediate perception predicate" in other contexts. The adverbializing suffix -sho marks an immediately perceived event (331a & 332), unless in combination with the inferential suffix -ac, which indicates that the subject of the main verb inferred the occurrence of the event from some resulting evidence (331b & 332).

(331a) [mimbi debi cues]-sho _____ is-o-mbi 'I saw you hit Davy.'
2Erg Davy hit-when:S/A/O>O see-Past-1A

(331b) [mimbi debi cues]-ac-sho _____ is-o-mbi
2Erg Davy hit-Infer-when:S/A/O>O see-Past-1A
'I saw (or 'inferred') that you hit Davy.'

(332) [[ambo-bi madin diad]-sho _____ is]-ash _____ bëchun
there-Emph wasp hang-when:S/A/O>O see-after:S/A>S capuchin.monkey
chëshë-n tësh-shun-e-c
black-Erg pull.off-after:S/A>A-Npast-Indic
'After finding a wasp nest hanging there, the brown capuchin monkey pulls it off.'

A-IV 046 bëchun ushu 19

- (333) [[[umbi bed]-ac-sho is]-ash cun mado-n chido
 1Erg grab-Infer-when:S/A/O>O see-after:S/A>S 1Gen son-Gen woman
que]-ash cun tita que-onda-sh
 say-after:S/A>S 1Gen daughter-in-law say-Dist.Past-3
 ‘After **seeing that I had taken her**, he said, “My son’s wife,” and then said, “My
 daughter-in-law”.’

+ K-XXII 012 chema 116

This pair of constructions does not really represent two different construction types, but only really differs in method of acquisition of knowledge. Sometimes both a “knowledge and acquisition of knowledge” and an “immediate perception reading” are compatible in the same sentence, as in (334). See section 12.4.2.3 for more on these constructions and the suffixes -ac and -sho.

- (334) badiad-sho is-ash aton shëcuë-n pudued-e-c
 dawn-when:S/O>O see-after:S/A>S 3Gen hole-Loc enter-Npast-Indic
 ‘When they see (that) it (is) dawning, they [the night monkeys] enter their hole.’
 1-p62-B dide 08

The highly polysemous verb tantia ‘think/believe/understand/listen,’ has a correspondingly large number of functions, including a “propositional attitude predicate” function (335; quoted speech in brackets), an “immediate perception” function (336), and a “predicate of knowledge and acquisition of knowledge” function (337).

- (335) [dachui-an-mane] que-quin tantia-e-c
 curse.to.die-Antpass-Fut.Poten:1 say-while:S/A>A think-Npast-Indic
 ‘They think that they might curse someone to die.’
 lit. ‘They think saying, ‘I might curse someone to die.’

C-III 001 shëcten 39

- (336) nique-ac [tonca-sho tantia]-ash
 run.off-Narr.Past shoot.gun-when:S/A/O>O listen-after:S/A>S
 ‘They had run off after hearing him shoot.’

+ K-XXII 014 chema 140

- (337) tantia-en-quo ic-o-mbi [mibi dachiacanquid ne-e-c]
 know-Neg-Aug Aux-Past-1A 2Abs sorcerer be-Npast-Indic
ca-quin
 say-while:S/A>A
 ‘I didn’t know you were a sorcerer.’ lit., ‘I didn’t know to say “You are a
 sorcerer”.’

Examples (338) and (339) illustrate two similar examples, one with the verb quiad ‘learn.’

- (338) u-ben-tséc-bi capu-quin tantia-en-quo ic-e-mbi
 I-alone-Dim-Emph hunt-while:S/A>A understand-Neg-Aug Aux-Npast-1A
 ‘I don’t know how to hunt alone.’
- (339) dadaua-ec mē-quiad-e-bi ‘I’m going to learn to write.’
 write-while:S/A>A hand-learn-Npast-1S

Another verb that semantically resembles a complement-taking verb is the intransitive verb dacuéd ‘be afraid,’ a “predicate of fearing” verb. These constructions involve quotation of a verb inflected with the suffix -nushe that marks a future potential event (340; §5.6.3.2).

- (340) dacuéd-e-bi [cues-nushe] que-ash
 be.afraid-Npast-1S hit-Fut.Pot say-after:S/A>S
 ‘I’m afraid that he will hit me.’ lit., ‘I’m afraid after saying, “He might hit me”.’

12.4.4.3 isquien ‘I realized that...’

It is would not surprising if as adverbialized clauses begin to be used regularly for complement-like functions, that they will over time begin to look more like complementation constructions than clause-chaining ones. We have already seen this happen with nominalization and the infinitive (§12.2.6). Here follows a description of a case which can still be analyzed formally as a clause-chaining constructions with an adverbialized subordinate verb, but is already showing phonological and syntactic signs

of grammaticization. This case involves the form isquien, sometimes pronounced in its more readily segmentable form, isaquien, which means ‘I realized that [main clause]’ (341 & 342).

(341) isquien _____ piac ‘I realized that they had eaten.’
is-ac-bi-en _____ pe-ac
 see-when:O>S/A-Emph-Contr eat-Infer

(342) is-ac-bi-en _____ debi ush-e-c
 see-when:O>S/A-Emph-Contr Davy sleep-Npast-Indic
 ‘I realized Davy had fallen asleep as we talked.’

We note that the temporal relations and the argument tracking meaning of -ac are compatible (or at least not contradictory) with the with the meaning of the clauses. We also note that -bi-en is expected here since isquien is used to express surprise or counter-expectation. However, several things force us to consider this a special construction. The first is evident in (341), where a past tense event is referred to, but the main verb is in the present tense (it appear the nonpast suffix -e replaces the recent past experiential suffix -o in this construction). Additionally, and not so obviously from these examples, is the large set of restrictions associated with this construction, which we would not expect of a simple clause-chaining constructions. The restrictions are: i) the subject of is ‘see’ must always be the first person (which is never expressed overtly); ii) the main verb can only be inflected with nonpast tense or past inferential suffixes; and iii) the relative ordering of the clauses is strict.

12.4.4.4 *Progressive aspect*

There is no inflectional or derivational suffix in Matses that marks progressive aspect. One verbal derivational suffix marks ‘ongoing’ aspect in the sense that an action is performed continuously without stopping (bud ‘Durative’; §5.5.2.3), and several

inflectional suffixes code habitual aspect (used for talking about general activities), but there are no morphological means to code progressive aspect in the sense of imperfective representation of an otherwise punctual or semi-punctual event. There are two similar constructions that do not necessarily simply code progressive aspect, but it always have a progressive reading. Both involve using a 'while' adverbialized clause for the main informational content. One uses the verb ic 'be' (343), which can be a copular or auxiliary verb, but here 'be' can be interpreted literally as English *He is being difficult*. The other construction uses the proverb ne 'do: Intransitive' (344).

- | | | |
|-------|--|---|
| (343) | <u>pe-ec</u> _____ <u>ic-o-bi</u>
eat-while:S/A>S be-Past-1S | 'I was eating.'
or 'I was there, eating.' |
| (344) | <u>debi</u> <u>anseme-ec</u> _____ <u>ne-e-c</u>
Davy fish-while:S/A do-Npast-Indic | 'Davy is fishing.'
or 'What Davy is doing is fishing.' |

What motivates the second readings in the above examples is that these constructions are not used to just up and say "I was eating." or "Davy is fishing" (one would use a simple nonpast clause for this), but rather they are the sort of statements that are given as answers give to questions like: "Where were you?" or "Why isn't Davy here?" Note that to say 'Davy did it by fishing (with hook and line),' one would replace the verb ne with its transitive counterpart na 'do: Transitive' and the suffix -ec with -quin 'while: S/A>A.' In fact, the combination of a transitive verb and the intransitive pro-verb in (344) is unexpected, suggesting that these constructions are being reanalyzed as something besides a clause-chaining constructions, and more similar to an English progressive construction.

12.4.4.5 Future questions

Another use of adverbialized clauses is to ask future questions, and as with the constructions in the preceding sections, there is evidence of reanalysis (345 & 346).

- (345) adac cues-quin-da-mbi ic-pa-e-Ø chompian-n
 now kill-while:S/A>A-Uncert-1A be-Comment-Npast-Interr:1/2 shotgun-Inst
 ‘Now? Should I kill (them) with the shotgun?’

+ K-XXII 002 chema 017

- (346) cuesunne-quin-da ic-tiad “‘Should we kill (them)?’.”
 kill-while:S/A>A-Uncert be-Abil

K-XXI 009 dēmushbo 26

Unexpectedly, if the subordinate verb is transitive, it may take the suffix -quin, which specifies that the matrix verb is transitive, despite the fact that ic is intransitive.

12.4.4.6 Back-reference/inter-sentential overlap

Inter-sentential overlap or “back-referencing” (Thompson and Longacre 1985) in Matses discourse is formed with adverbializing suffixes following the pro-verbs ad ‘do like that [intransitive]’ and ado ‘do like that [transitive].’ Three sequential sentences from a text in (347) exemplify this:

- (347a) nē-uēsh-bi pudun-quin cun papa pado-n
 here-Ev.Init:Intr-Emph jump-while:S/A>A 1Gen father deceased-Erg
[cun tita bed]-quid chedo-n uidēnua-onda-sh
 1Gen mother grab-Agt.Nzr etc-Erg hold-Dist.Past-3
 ‘Jumping out from very near (to where the first Dēmushbo Indian was passing by), my late father who captured my mother, and his group, **grabbed him.**’

+ K-XXII 003 chema 023

- (347b) ado-ac-bi-en cuaa cuaa cuaa
 do.thus-when:O>S/A-Emph-Contr distress.call distress.call distress.call
 ‘**When they did that to him** (the Dēmushbo yelled): “cuaa, cuaa cuaa!”.’

+ K-XXII 003 chema 024

- (347c) ad-nuc-bi-en aton utsi tdu tdu tdu tdu
do.thus-while:Diff.Ref-Emph-Contr 3Gen brother (chasing.away.yell)
 ëëë ëëë ëëë aac aac aac aac camun-n cun utsi
 (chasing.away.yell) (chasing.away.yell) jaguar-Erg 1Gen brother
ac-e-c ëëë aac aac
 kill-Npast-Indic (chasing away.yell) (chasing.away.yell)
 ‘Meanwhile, his brother (was saying): “tdu tdu tdu ëëë ëëë ëëë aac aac aac aac [to
 frighten off the jaguar]! A jaguar is killing my brother! ëëë aac aac!”.’
 + K-XXII 003 chema 025

In how-to texts, back references that specify same subject and an ‘after’ temporal relation are more common (348).

- (348) ad-shun-bi pia an-nitsin-quid buid buan-quin
do.thus-after:S/A>A-Emph arrow inside-place-Hab pitch insert-while-S/A>A
 ‘After that [after attaching the foreshaft], they put it [the arrow head] on, putting
 pitch in the hole [in the arrow cane].’
 A-XIII 001 buid 16

Almost always, these adverbials occur at the beginning of a sentence, at the sentence margin, sometimes directly subordinate to the main verb, other times subordinate to the next verb in the sentence.

These inter-clausal adverbials almost always contain the emphatic enclitic *-bi*, which seems to be becoming bleached from overuse. Also, some of the forms appear to be exhibiting phonological union. For example, the morphophonological rule /d/ + /sh/ → /shsh/ (§2.6.1.1) is usually further reduced to /sh/ (especially when the suffix *-bi* is involved); in this way, these back-reference forms resemble monomorphemic forms (which have no geminate fricatives; §2.2.1.3). See example (312) in section 12.4.3.5 and the sample texts in the appendices for many more examples. Depending on their phonological and semantic properties, I have not segmented some of these in the present work, but the reader should be able to spot them as they begin with /ad/ and almost always occur sentence initially.

12.4.5 Morphology that can follow adverbializers

Technically, any enclitic that can follow an adverb should be able to follow an adverbialized clause. This is borne out in elicitations. The exceptions have obvious semantic or syntactic justification. For example, since adverbializing suffixes all code relative tense, the relative sequence ordering suffixes, -ba ‘first’ and -tsen ‘next’ are not compatible with adverbializing suffixes. Similarly, transitivity agreement is already part of most of the meaning of adverbializing suffixes, so transitivity agreement enclitics do not follow adverbializing suffixes. In fact, two transitivity agreement enclitics, -ec and -en, double as adverbializers (§12.4.1), and we could say on adverbialized verbs, the adverbializing suffixes occur in place of the transitivity agreement enclitics. In this section I will focus on the enclitics that most commonly occur on adverbialized verbs.

The most common enclitic to occur following adverbializing suffixes is -bi ‘Emphatic,’ which, as has been pointed out in the respective subsections of section 12.4.2, has several emphatic-related meanings, including ‘Contrast,’ ‘Separateness’ and ‘Emphasis’ (e.g., ‘right (when/after)’), and is required for introducing concessive or additive meanings into adverbialized clauses. Fields (1973:194) suggests that the function of -bi following switch-reference suffixes in Matses is to “direct the listener’s attention to the next event in the narration” and “only appears when the following (non-predetermined) event occurs outside of the expected sequence of events” [original in Spanish]. My data does not uphold this assertion.

The enclitic -en ‘Contrast’ occurs less frequently, usually following -bi. It expresses a sense of contrast that can be realized as unexpectedness (i.e., contrast with what is expected), contradiction (i.e., contrast with what someone else says, or with what the speaker said before), etc. The series of sentences from a text in (349) illustrate this:

(349a) is-a-mbo nain-quin ' [I] have not seen every one yet.'
 see-Neg:Perf-Aug finish-while:S/A>A
 C-V 016 cuesban 31

(349b) bed-shun-bi-en nuqui is-tsia-c
 grab-after:S/A>A-Emph-Contr 1+2 see-Npast:Cond-Indic:1/2
nain-quin cuesban
 finish-while:S/A>A bat
 'But, after catching them we would see all the (kinds of) bats.'
 C-V 016 cuesban 32

Fields (1973) calls this construction a “subjective” construction, and suggests that it codes unexpectedness. The suffixes -bi and -en also occur following simple adverbs, so their occurrence here is not surprising. The meanings/functions of these two suffixes are not different from their meaning with simple adverbs, so I refer the reader to the adverb morphology chapter for more detailed discussions of these. The uncertainty enclitic -da (which also occurs on adverbs) also occurs commonly following adverbializing suffixes, as illustrated in the preceding section.

One surprising morphological property of adverbialized clauses is that the first-person pronominal enclitics -bi ‘1S’ and -mbi ‘1A’ can occur as their final phonologically-bound element. These enclitics normally only occur on finite verbs, and also on the interrogative particle/enclitic ada/-da and some question words, but to my knowledge, not on adverbs. Interestingly, when -bi or -mbi occurs on an adverbializing suffix, they are arguments of the *following* clause, not of the adverbialized clause that they are phonologically bound to. This is evident in an example like (350), where -mbi ‘1A’ is attached to an intransitive verb followed by a transitive matrix verb.

(350) badiad-shun-bi-mbi is-tan-chit-e-c
 awaken.at.dawn-after:S/A>A-Emph-1A see-go-Uncert-Npast-Indic
 ‘Perhaps I will go visit tomorrow.’

I am not sure if I am analyzing the subordinate verb correctly in (351), but if I am, it suggests that the augmentative enclitic -mbo/-quio can also occur following adverbializing suffixes, albeit very infrequently (this is my only example).

- (351) adashic nidaid shëcuën
ad-ash-bi-c nidaid shëcuë-n
do.thus-after:S/A>S-Emph-Separ ground hole-Loc
bësto **bëstopashquio** **tambis usudquid**
bësto bësto-pa-ash-quio tambis usud-quid
(redup=Distr) cover-**Comment-after:S/A>S-Aug** paca be.in.a.hole-Hab
‘Also, pacas sit in holes in the ground after covering up the entrances with leaves.’

A-IV 010 tambis 09

12.5 Quotation

In Matses, all quotations are direct. By “direct” I mean that the speaker quotes others using the quoted person’s exact words, or at least an approximation that is to be taken as the speaker’s exact words. Thus, unlike in indirect quotation (= indirect speech), the listener must shift deictic reference points, from the speaker’s point of view, to that of the person being quoted. Compare the two quotation types in English. Direct quotation: *He went, “You look awful!”* vs. indirect quotation: *He said (that) I look awful.* The quoted speech may represent a person’s actual speech, a person’s thoughts, or an animal’s vocalization. All quotation is accomplished by one of three quotative verbs: que ‘say [intransitive],’ ca ‘tell/say to [transitive],’ and dan ‘supposed incorrectly saying.’ The quotative verbs que and ca actually behave differently from the verb dan, and so que and ca are discussed in the following subsection of the present section, and dan is discussed separately in subsection 12.5.4. Among the functions of ca is the expression of causation (§12.5.2) and reason (§12.5.3).

12.5.1 Direct quotation using *que* and *ca*

The quotative verb *que* (352) is the intransitive counterpart of the verb *ca*³⁴

(353). (In examples in this section, quoted speech will be enclosed by square brackets.)

- (352) [adashic nid-o-bi] que-onda-sh tsësio mëdin-bo
 then go-Past-1S say-Dist.Past-3 old.man deceased.person-Pl
 “After that we moved on,” said the now-deceased old men.’
 + K-XXII 014 chema 133

- (353) [di nando-Ø] ca-onda-sh mëdin-bo-n
 hammock put.in-Imper tell-Dist.Past-3 deceased.person-Pl-Erg
 “Pack up your hammocks!” the now-deceased ones told them.’
 + K-XXII 006 chema 058

The subject of either of these verbs is the quoted person or animal. The object of *ca* is usually the person being talked to (353 & 354, first reading), but can also be the person being talked about (354, second reading & 355).

- (354) [mua ne-e-c] ca-enda ‘Don’t tell him that she is a liar.’
 liar be-Npast-Indic tell/say-Neg.Imper ‘Don’t say about him that he is a liar.’
- (355) [ambo ush-e-c] ca-tiapi-mbo ic-quid cuesban ne-e-c
 there sleep-Npast-Indic say-Neg.Abil-Adjzr be-Agt.Nzr bat be-Npast-Indic
 ‘Bats are ones that one can’t say about them, “They sleep there” (i.e., bats can’t have all their different roost types enumerated by anyone).’
 C-V 016 cuesban 23

The quotative verbs must directly follow the quoted utterance, with no intervening words allowed (356), but the noun phrase referring to the person being quoted (the S or A of the clause) and, in transitive clauses, the person being talked to/about (the O) may occur before the quoted utterance or after the quotative verb (357). Or, more commonly, the core participants occur as zero third-person pronouns (358).

³⁴ These are pronounced /ke/ and /ka/.

- (356a) debi nid-nu que-o-sh
Davy go-Intent:1 say-Past-3
'Davy said, "I'm going".'
- (356b) nid-nu que-o-sh debi
go-Intent:1 say-Past-3 Davy
'Davy said, "I'm going".'
- (356c) *[nid-nu] debi que-o-sh
- (356d) *debi que-o-sh [nid-nu]
- (357a) debi [nid-nu] ca-o-mpi
Davy go-Intent:1 tell-Past-1A
'I told Davy, "I'm going".'
- (357b) [nid-nu] ca-o-mpi debi
go-Intent:1 tell-Past-1A Davy
'I told Davy, "I'm going".'
- (358a) [nid-nu] que-o-sh
go-Intent:1 say-Past-3
'He/she said, "I'm going".'
- (358b) [nid-nu] ca-o-sh
go-Intent:1 tell-Past
'He/she told him/her, "I'm going".'

The quoted material may represent a person's thoughts (359) or an animal's vocalizations (360 & 361).³⁵ There are lexicalized terms for some animal vocalizations in which the quotative verb is phonologically bound to the segments representing the vocalization or other sound (362; §2.9).

- (359) [dachui-an-mane] que-quin tantia-e-c
curse.to.die-Antpass-Fut:Poten:1 say-while:S/A>A think-Npast-Indic
'He thinks saying, "I might curse someone to die [so I won't look back].'
C-III 001 shëcten 39
- (360) chooc que-ec poshto tsid-ad-quad
(woolly.monkey.call) say-while:S/A>S woolly.monkey gather-Rflx-Hab
'The woolly monkeys holler, "chooc" as they gather into a group.'
A-I 052 poshto 12
- (361) matses chui-ec ii ii ii ii que-quad dide
Matses tell-while:S/A>S (night.monkey.call) say-Agt.Nzr night.monkey
ne-e-c
be-Npast-Indic
'Night monkeys are ones that go, "ii ii ii ii," informing Matses (that someone is coming).'
A-IV 003 dide 07
- (362a) yoque 'make howler monkey vocalization' (362b) chushque 'bark'

³⁵ Other sounds can also be "quoted," as in *It went boom!* (see §9.7.)

Quotations are commonly nested to two levels:

- (363) [[min matses-bi ne-e-c-que chui-enda] que-o-sh] que-onda-sh
 2Gen person-Emph be-Npast-so tell-Neg.Imper say-Past-3 say-Dist.Past-3
 ““They are your own people, so don’t tell them,’ they said,” she said.’
 + K-XXII 013 chema 122
- (364) [[cun matses-n onquete-n onque-ec ad-quid-bi
 1Gen person-Gen language-Inst talk-while:S/A>S do.thus-Agt.Nzr-Emph
matses utsi ne-e-c] ca-onda-mbi] que-onda-sh
 Indian other be-Npast-Indic tell-Dist.Past-1A say-Dist.Past-3
 ““They speak my people’s language, but those are another tribe of people,’ I told
 them,” she said.’
 + K-XXII 013 chema 124

I have also occasionally heard nesting to three levels, but it is uncommon and usually accompanied by slow, careful speech to avoid confusion. And sentences like (365) are judged grammatically correct by speakers.

- (365) cun papa [cun chido [debi nid-nu] que-o-sh] que-o-sh] que-o-sh
 1Gen father 1Gen wife Davy go-Intent:1 say-Past-3 say-Past-3 say-Past-3
 ‘My father said, “My wife said, ‘Davy said, “I’m going.”””’

Note that in (365), the wife referred to is the speaker’s fathers’ wife, not the speaker’s wife; i.e., each quoted utterance must be interpreted from the point of view of the person being quoted, not from the point of view of the speaker. This shifting deictic reference point seems to add to the confusion in multiply nested quotations like (365). To reduce the confusion associated with the changing deictic reference point and/or for rhetorical effect, many speakers, especially in narration, will imitate the person being quoted (e.g., higher pitch for quoted women) or use context-relevant intonation, such as emphatic intonation, higher volume, faster speech, etc. while uttering the quoted speech.

In light of all these properties of Matses quotation, quotation in Matses does not appear to be a really good example of complementation. The quoted utterance could be

said to be a type of complement, but it does not occur as the subject of que or ca, nor can it be object of ca (the object of ca is the person being told). Yet the quotative verbs que and ca cannot occur without a piece of quoted speech or the interrogative nouns atoda ‘what’ or atotsi ‘what’ (366), so we cannot treat quotation as two potentially independently occurring sentences (not to mention that the quoted utterance is often flanked by main-clause constituents, as in 365).

(366a) <u>atoda que-o-sh</u> what say-Past-3 ‘What did he say?’	(366b) * <u>ubi debi-n ca-o-sh</u> 1Abs Davy-Erg tell-Past-3 ‘(Davy told me.)’	(366c) * <u>que-o-sh</u> say-Past-3 ‘(He said it.)’
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Thus, the quoted utterance functions neither as a core argument nor as an adverbial clause (i.e., an optional constituent), but rather as a special kind of obligatory component of the quotative sentence. Quotation with que and ca can be considered a special kind of complementation involving two finite but dependent clauses. The verb dan, by contrast, seems to take the quoted speech as an object complement, as will be demonstrated in section 12.5.4 below.

12.5.2 Expressing causation using ca

Matses does not have any analytic constructions (i.e., two-verb structures) that could be called “true” analytic (periphrastic/syntactic) causative constructions. The construction that most closely approximates an analytic causative construction is direct quotation of imperative commands. Although these constructions are used regularly to convey causative situations, they cannot be considered real causative constructions because entailment of the completion of the caused event is not coded in the quotative verb, but rather is contingent upon cultural expectations based on kin relations. In other words, since these sentences do not commit the speaker to the belief that the order was

carried out, these are not causative sentences (Shibatani 1976). However, the implication that the order was carried out seems stronger than in comparable sentences in English, and, as discussed below in this section, quotation is preferred to morphological causative constructions for relating some causative events.

When one quotes an imperative using ca (367-369), the interpretation can be similar to that of verbal causatives (causative interpretations are in parentheses).

- (367) [di nando-Ø] ca-onda-sh mēdin-bo-n
 hammock put.in-Imper tell-Dist.Past-3 deceased.person-Pl-Erg
 “Pack up your hammocks!” the now-deceased ones told them.
 (The now-deceased ones made them pack up their hammocks.)
 + K-XXII 006 chema 058

- (368) [[bed-Ø] ca-ac bed-o-mbi] ca-onda-mbi
 grab-Imper say-O>S/A grab-Past-1A say-Dist.Past-1A
 “They told me, ‘Take her!’ so I took her,” I told him.
 (I told him that they made me take her, so I took her.)
 + K-XXII 010 chema 097

- | | |
|---|--|
| <p>(369a) [<u>na-Ø</u>] <u>ca-o-sh</u>
 do-Imper tell-Past-3
 ‘He told him, “Do it!”’
 (‘He made/had him do it.’)</p> | <p>(369b) [<u>pe-ta</u>] <u>ca-o-mbi</u>
 eat-Excl.Imper tell-Past-1Erg
 ‘I told him, “Eat (without me)!”’
 (‘I made/had him eat [without me].’)</p> |
| <p>(369c) [<u>nid-enda</u>] <u>ca-Ø</u>
 go-Neg.Imper tell- Imper</p> | <p>‘Don’t let him go!’
 lit. ‘Tell him, “Don’t go!”.’</p> |

The meaning of this type of construction is always literal, i.e., quoted imperatives only code causative situations that actually involve verbal commands. Also, quotation of imperative commands can only be used with human causers and causees. Not even dogs, which do receive verbal commands from the Matses while hunting, can be “causees” in these constructions—in fact, (non-mythical) animals can not be the O of the verb ca.

Quotation of imperatives implies successful completion of the causative event only if the relationship between the two participants is such that the person being spoken

to is expected to perform the action. Among the Matses, there are social obligations based on descent and kinship: children are generally expected to obey adults (all of whom are related to them through blood or marriage), and certain categories of kin are expected to perform certain activities for certain relatives. For example, Matses sons-in-law are obliged to help their father-in-law fell trees to make a swidden (Romanoff 1984). So in (370a), hearers will assume that Martha fetched the water, unless stated otherwise. But in (370b), on the other hand, the hearer would expect that Martha ignored Jonas or rapped him on the head for bothering her—but if she actually fetched the water for some reason, the speaker would be expected to say so (and explain why).

(370a) madia-n madta-Ø acte-Ø ue-Ø ca-o-sh
 Maria-Erg Martha-Abs water-Abs fetch-Imper tell-Past-3
 ‘Maria [Martha’s mother] told Martha to fetch water.’
 (‘Maria had/made Martha fetch water.’)

(370b) onas-n madta-Ø acte-Ø ue-Ø ca-o-sh
 Jonas-Erg Martha-Abs water-Abs fetch-Imper tell-Past-3
 ‘Jonas [Martha’s younger bother] told Martha to fetch water.’

Despite the high level of expectation associated with a daughter obeying her mother, (370a) can be followed by ‘...but she refused to do it!’ without being semantically contradictory and without any grammatical consequences. Therefore, this construction does not entail that the caused event was carried out, providing evidence that these quotative constructions are not true causative sentences.

The type of notion expressed in (370a) could just as well be expressed using -me ‘Causative’ (371).

(371) madia-n madta-Ø acte-Ø ue-me-o-sh
 Maria-Erg Martha-Abs water-Abs fetch-Caus-Past-3
 'Maria made/had/let Martha fetch water.' / 'Maria told Martha to fetch water.'

However, there are some restrictions to using (371) based on the Matses evidential system. The past tense verbal inflectional suffix -o in (370) and (371) simultaneously codes the evidential function of 'Experiential'; and in the past tense evidentiality is obligatorily marked in Matses. So unless the speaker saw the whole event (in this case both Maria giving the order and Martha fetching the water), (371) would not be used. In sentence (370a), on the other hand, -o only commits the speaker to having heard the command, and, because of the predictable behavior expected, it effectively conveys the whole event. There is no other brief way of reporting the action in (370a) if the speaker heard the command but did not directly witness the whole event. The suffixes that could be substituted for -o (e.g., -ac 'Recent Past Inferential' and -ash 'Recent Past Conjecture') would all imply that the speaker is inferring or speculating both that the order was given and that the order was carried out (§5.6.1).

If the speaker did see the whole event, he has a choice. Quoting an imperative instead of using a morphological causative has the advantage of allowing the speaker to be more specific about the method of interpersonal manipulation (direct oral command), and to disambiguate causation from permission. Another explanation, one offered by a Matses speaker, is that it is more polite to use quotation for reporting such events. And, in fact, we find that when speakers were asked to translate reported actions using a

Spanish causative construction like (372) into Matses, a quotation such as (373)³⁶ was the normal response if they construed the action as involving social obligation and verbal command as the most likely mode of manipulating the causee. The corresponding causative construction with -me (374) was accepted, but “not the usual way to say it,” unless the situation involved physical force or permission rather than causation.

(372) *Hizo que cocine.* ‘S/he made him/her cook.’

(373) codoca-Ø ca-o-sh
 cook-Imper tell-Past-3
 ‘He told her to cook.’

(374) codoca-me-o-sh
 cook-Caus-Past-3
 ‘He made/had her cook.’

In summary, there are multiple factors that motivate reporting causation using quotation: i) politeness; ii) disambiguation between of permission vs. causation and among possible means of effecting the event; iii) restrictions of the evidentiality system; iv) predictability of behavior based on a well-defined system of interpersonal obligation. But, constructions using *ca* do not entail causation and therefore cannot be considered causative constructions *per se*. As suggested by Tyler (2000), the notion of the inferability of causal relationships from sentences that do not contain causative elements are made frequently by drawing on cultural beliefs and patterns of cultural understanding. In light of this concept, it seems more accurate to describe the quotation of imperatives with *ca* in Matses as a construction type that lends itself well to the interpretation of a causative relation from context, while the construction itself does not code causation. These constructions are interesting in that: i) they give us a look at how cultural relationships affect the construal of interpersonal manipulation; and ii) they illustrate a

³⁶ Note that while Spanish and Matses can be neutral for gender in these sentences, English cannot. So pronouns in these English translations reflect Matses speakers’ explanations of their interpretations the event

verb that may be destined to become a causative marker (or a construction destined to become a causative construction) if reanalysis occurs.

12.5.3 Expressing reason using ma 'let'

Among the varied functions of the particle ma, one is to code reason via a sort of person deixis shift in quotations in complex sentences. In its one-clause sentence functions, ma means 'and' or 'how about' preceding a noun or noun phrase (375; §9.4.3), and preceding a verb, it means something like 'let him/her/it/them V (, I don't care)' (376; §9.4.3).

- (375) ma min champi nēid
 how.about 2Gen daughterthis.one
 "How about your daughter, this one here [what is *her* name]?"
 + K-XXII 006 chema 055

- (376) ma nēish-nu 'Let **him** get mad (what do I care!).'
 let get.mad-Intent:1

The sentence function of 'Reason' is related to the function of ma in simple sentences like (376). The verb of the quoted speech (in complex sentences as well as in simplex ones like 376) must be inflected with the suffix -nu. In clauses without ma, the suffix -nu always refers to Intention with the speaker (first person) as the specified subject, but in sentences like (376) - (378), -nu refers to a third or second person. So one could say that these constructions involve a change in person deixis, or just a different meaning of -nu that only obtains with ma.

- (377) ma mimbi cues-nu que-shun chompian ēshē mibi
 let 2Erg kill-Intent:1 say-after:S/A>A gun shell 2Abs
mene-e-mbi
 give-Npast-1Abs
 'So that you will kill [game], I'm giving you the shotgun shells.'

- (378) ayash-mpi ma nēishamē-n bedbid ac-nu
 vine.species-small let tapir-Erg trip.wire do-Intent:1
que-shun ayash-mpi tsincabed-quid
 say-after:S/A>A vine.species-small put.across-Hab
 ‘A little vine...so that the tapir will set off the trip wire, they place the vine
 across the path.’

A-XIII 023 nēishamē dectante 19

Even inanimate objects can be the subject of the -nu-inflected verb, despite the fact that inanimate objects cannot have an intent:

- (379) bin dabiun-tanquin ushē mēduc nitsin-quid
 rubber coat-after:S/A>A sun in.middle.of place-Hab
ma tanun-nu que-shun
 let dry-Intent:1 say -after:S/A>A
 ‘After coating it [the hunting purse] with rubber sap, they place it in the sun, so
 that it dries.’ lit. ‘...in the sun, saying “Let it dry.”’

A-XIII 038 shictoade 05

The meaning of the construction is clearly to express reason. While -shun (or -ash) can be used to express reason with inter-clausal same subject identity (§12.4.2.8), this construction is used when the clauses have different subjects. So while the meaning of the construction is clear, it is hard add up the meanings of ma, -nu, and -shun to get these semantics. Thus, we must either assign the meaning to the construction itself, or assign construction-specific meanings to ma and -nu.

Somewhat less complex constructions involving quotative verbs and adverbialized clauses are used to code ‘reason’ (12.4.2.8), ‘fear of’ (§12.4.4.2) and ‘think/know/believe’ (§12.4.4.2).

12.5.4 dan ‘suppose incorrectly’

The quotative verb dan ‘supposed incorrectly’ (or perhaps more accurately, ‘suppose incorrectly saying/thinking’) is similar in some ways to the quotative verb ca

described in the preceding sections. Both are transitive, both occur with direct speech as a complement of the sentence, in both the animal or person being quoted is the subject, in both the speech can be actual speech or a thought, (380), and neither can occur without the speech component (381) or the question word atoda 'what' (382).

(380a) debi-n [chido utsi bed-ash] dan-o-sh
 Davy-Erg woman another grab-Conjec **suppose.incorrectly-Past-3**
 'Davy supposed incorrectly saying, "Perhaps he got another wife".'

(380b) debi-n [chido utsi bed-ash] ca-o-sh
 Davy-Erg woman another grab-Conjec **say-Past-3**
 'Davy told him/said about him, "Perhaps he got another wife".'

(381a) *dan-o-sh

(381b) *ca-o-sh

(382a) atoda dan-o-Ø
 what:Abs **suppose.incorrectly-Past-Interr:1/2**
 'What did you think (incorrectly)?'

(382b) atoda ca-o-Ø 'What did you tell him?/
 what **say-Past-Interr:1/2** 'What did you say about him?'

One obvious difference is that dan has this specific and restricted meaning. Due to the expected use associated with this meaning, the quoted material less frequently represents actual uttered words, but the incorrect thoughts. And since one's thoughts are often not clearly formed, and because one can only guess at another's thoughts, the quoted material is not expected to be accurate, as it is often not an actual reproduction, like true quoted speech can be. This may be the reason for the significant syntactic differences between dan and the other quotative verbs (que and ca) discussed above.

The quoted speech component in que and ca quotations is difficult to characterize, since que is intransitive and ca take takes the person being told or talked about as the object. But with dan the quoted speech is clearly an object complement: dan is clearly

transitive (380a & 383), but it does not have any object argument other than the quoted speech.

- (383) [mibi nid-ac] dan-o-mbi
 2Abs go-Infer suppose.incorrectly-Past-1A
 ‘I thought that you had evidently left (but you were not actually gone).’

Another significant difference has to do with the form of the complement. With que and ca, the quoted utterance must represent sentence-like speech. But while the speech quoted by dan can be sentence-like (380a & 383), if the main verb of the quoted sentence is a copula, it is deleted, creating a non-sentence-like utterance (384 & 385).

- (384a) [mibi bēdaid-quo] dan-o-mbi
 2Abs good-Aug suppose.incorrectly-Past-1A
 ‘I thought that you were good (but you turned out to be a bad person).’

- (384b) mibi bēdaid-quo ic-e-c ‘You are good.’
 2Abs good-Aug **be-Npast-Indic**

- (384c) *[mibi bēdaid-quo ic-e-c] dan-o-mbi
 2Abs good-Aug **be-Npast-Indic** suppose.incorrectly-Past-1A

- (385a) [mibi ampe] dan-o-mbi
 2Abs thief suppose.incorrectly-Past-1A
 ‘I mistakenly thought that you were a/the thief.’

- (385b) mibi ampe ne-e-c ‘You are a thief.’
 2Abs thief **be-Npast-Indic**

- (385c) *[mibi ampe ne-e-c] dan-o-mbi
 2Abs thief **be-Npast-Indic** suppose.incorrectly-Past-1A
 (‘I mistakenly thought that you were a/the thief.’)

I have no text examples with dan, but I did jot down the overheard sentence in (386), which was said teasingly by a man to his wife when she asked why he had taken so long to return to the village.

- (386) ada [aton chido utsi bed-ash] dan-o-Ø
 Uncert 3Gen woman another grab-Conjec suppose.incorrectly-Past-Interr:1/2
 ‘Did you suppose incorrectly saying, “Perhaps he has taken another wife.”?’
 (What did you think, that I had married another woman, or something?)

This verb can also be used to talk about an animal’s behavior:

- (387) shēcten opa-n dan-o-sh
 collared.peccary dog-Erg suppose.incorrectly-Past-3
 ‘The dog mistakenly thought it was a collared peccary (but it was a giant anteater).’ more freely: ‘The dog mistook it for a collared peccary.’

The sentence in (387) is the most deviant semantically from the other sentences in that taken literally it would have to represent the articulation of the dog’s thought. This sentence also surprisingly has the “quoted material” (shēcten) separated from the verb by the subject of dan (opa-n), which is not possible with que and ca. The sentence in (387) therefore looks like just any regular transitive clause.

12.6 Coordination

Inter-clausal coordination is defined here as the grammatical linking of two fully-inflected, finite clauses, one of which is dependent (see introduction for definitions of finite, dependent, inflected, coordination, subordination, etc.). In the only clear case of coordination in Matses, a suffix follows (rather than replaces) the inflection and renders one of the clauses as dependent (but still finite), but only in the same way that adding the word *and* to the end of a clause in English makes it dependent. Matses accomplishes most of its inter-causal linking via subordination, and so we find that inter-clausal coordination is very restricted in Matses.

I have not yet explored whether there is any type of coordination accomplished by juxtaposition, other than the indirect questions mentioned in section 12.6.3. It should be

noted, however, that juxtaposition is used for coordination (conjunction and disjunction) in noun phrases and other phrases (§10.9), and may well be at work at sentence boundaries. I suspect that the very productive clause-chaining system makes clause linking through juxtaposition unnecessary, but further study is needed to substantiate this.

12.6.1 *-que* 'so'

The suffix *-que* (§5.7) occurs following fully-inflected finite verbs to signal a 'Reason' relation with a second adjacent fully-inflected finite clause (which does not take the *-que* suffix). This reason relation may be translated as 'so' or 'because,' depending on whether the suffixed clause precedes (388; quoted speech in brackets) or follows (389) the unsuffixed clause in the sentence.

- (388) ad-shun-bi [bēchish-ac-que baded dapan-nu]
do.thus-after:S/A>A-Emph get.dirty-Infer-so quickly wash-Intent:1
que-shun matses-n dapan-quid
say-after:S/A>A Matses-Erg wash-Hab
'After that, they say, "It got dirty, so I'm quickly going to wash it," and then they wash it [the armadillo].'

A-I 047 tsaues 31

- (389) tabote tabo-Ø is-nu abentsēc-uid-bi cuēd-e-c-que
torch light-Imper see-Intent:1 one-only-Emph call-Npast-Indic-because
'“Light the torch! I want to see because only one answers”.'

+ K-XXII 007 chema 069

The dependent (suffixed) clause may contain a verb that is inflected with almost any regular finite inflection, but the second clause must be inflected either with the first-person intention suffix, *-nu* (388 & 389), or an imperative inflection (390 & 391).

- (390) cun champi bundo-ac-que piush bëchi më-te-tan-Ø
 1Gen daughter get.hungry-Infer-so tortoise fat branch-cut-go-Imper
que-onda-sh
 say-Dist.Past-3
 “‘My daughter is hungry, so go cut down some piush bëchi fruits!’ she said.”
 + K-XXII 011 chema 104
- (391) min matses-bi ne-e-c-que chui-enda que-o-sh
 2Gen person-Emph be-Npast-Indic-so tell-Neg.Imper say-Past-3
que-onda-sh
 say-Dist.Past-3
 “‘They are your own people, so don’t tell them,’ they told me,” she told me.”
 + K-XXII 013 chema 122

Due to this restriction, this type of coordination is does not really provide an alternative to clause-chaining in the majority of situations.

The verbal inflectional suffix -nushe, which may be historically analyzed as containing the suffix -que, sometimes specifies a connection with a second finite clause inflection with -nu or an imperative suffix (392; §5.6.3.1):

- (392) nisi-n pe-nushe tapucute ta-siuid-Ø
 snake-Erg bite-potential:3 shoe foot-put.on.clothes-Imper
 ‘Put on boots because (if you don’t) a snake might bite you.’

But unlike clauses with verbs suffixed with -que, clauses with verbs inflected with -nushe do not have to occur with a second sentence and are therefore independent clauses.

12.6.2 Borrowed coordinator: o ‘or’

Some Matses speakers have borrowed the coordinating disjunction morpheme *o* ‘or’ from Spanish. I have detected this only in the speech of speakers that know Spanish. However, I have not seen it used yet to coordinate two finite/independent clauses. The speakers who use *o* use it to create complex phrases (§10.9.5), and in an enigmatic way, between clauses in clause chains, as in (393).

- (393) aid ues-quimbo-en inchësh-tsëc pe-quin
 that.one finish.off-Adjzr:Aug-Advzr:Tr dark-Dim eat-while:S/A>A
taua-ash-bi o badiad-te anuen-tsëcquio nimëduc
 begin-after:S/A>S-Emph or dawn-Inst.Nzr near-Dim primary.forest:Loc
nid-quid nēishamē
 go-Hab tapir
 ‘That one, after beginning to eat finishing everything off at dark, or in the
 predawn hours, the tapir goes into the nearby forest.’

C-III 001 shëcten 13

I have not detected any other borrowed coordinators (or subordinators, for that matter).

12.6.3 Indirect questions

According to Payne (1997:316), “indirect questions are a subtype of complement clause.” In English, sentences like *I don’t know who stole my socks* are an example of an indirect question occurring as an object complement. In Matses, similar constructions are less clearly identified as instances of complementation, and look more like coordination by juxtaposition. Indirect questions, like (394) might be interpreted in two ways: i) as two separate sentences; or ii) as mida-mbo-en ic-chit-e-c being a sentence-like object complement of the transitive verb tantia.

- (394) tantia-en-quio ic-e-mpi mida-mbo-en ic-chit-e-c
 know-Neg-Aug Aux-Npast-1A where-Aug-Contr be-Uncert-Npast-Indic
 i) ‘I don’t know (it); where might it be.’
 ii) ‘I don’t know where it might be.’

The issue is whether we should consider the object of the perception verb to be a covert third-person pronoun (the first analysis) or the whole other clause (the second analysis). The first analysis is encouraged by the fact that both sentences in (394) can stand alone as perfectly grammatical sentences representing a coherent series of utterances. And (395), which, along with (394) was given as a translation of *I don’t know where it might be*,

further discourages the second analysis, in light of the fact that the particle tsaodi never takes an object. Similarly, in (396) the object slot of is is already filled by the noun phrase niste ushu bacuë; and so the one-sentence analysis ('I have not seen what niste ushu fruits are like.') is not possible.

(395) tsaodi mida-mbo-en ic-chit-e-c
I.don't.know where-Aug-Contr be-Uncert-Npast-Indic
'I don't know. Where could it be?'

(396) niste ushu bacuë is-a-mbo ic-e-mbi mida
palm.species white fruit see-Neg:Perf-Aug Aux-Npast-1A how
pad-en ic-chit-e-c
like-Manr:Tr be-Uncert-Npast-Indic
'I have not seen niste ushu fruits; I'm not sure what they could be like.'

A-I 035 niste ushu 11

On the other hand, sentences like (397) suggest the second analysis, considering that the two-sentence analysis produces an odd assertion, and more importantly, it does not represent what the speaker meant the sentences to mean.

(397) aid-n tantia-en-quo ic-e-c
that.one-Erg know-Neg-Aug Aux-Npast-Indic
mida pad-quid-en-da ne-e-c ubi
how like-Agt.Nzr-Contr-Uncert be-Npast 1Abs
'He doesn't know what I am like.' / ?'He doesn't know (it); what could I be like?'

What we have in (397), it seems, is a situation where a series of syntactically independent assertions are linked by referential identity of the object of the perception verb clause with the predicate of the other clause. Neither clause is grammatically subordinate to the other, but occasionally the non-perception verb clause could be considered to be semantically subordinate to the perception verb clause, considering that the uncertainty marker -da, which usually applies to the speaker's uncertain state of mind, is transferred to the state of mind of the subject of the perception verb clause. As far as the other

sentences presented in this section, (394) really could be analyzed correctly either way. But (395) and (396) must be analyzed as completely independent from each other (apart from their logical sequence in discourse). Semantically dependent series of clauses in Matses appear to be extremely limited. The ones I have found only occur in present tense assertions where one assertion containing the (often negated) verb *tantia* occurs adjacent to a second assertion (often containing a question word and the uncertainty marker *ada/-da*.) The quoted speech in (398) appears to provide a marginal example.

- (398) [tionda-mbo acte paëd-e-c] tantia-nu que-shun
 how.far-Aug water fall-Npast-Indic listen-Intent:1 say-after:S/A>A
tantia-quid otacquio ic-quin
 listen-Agt.Nzr quietly be-while:S/A>A
 ‘They say, “I’m going to listen how far the water goes down [to figure out how far it is to the armadillo’s retreat burrow],” and then they listen being very quiet.’
 A-I 047 tsaues 09

12.7 Conclusions

The big picture for the chapter is that subordination dominates the clause-combining scene, quotation is common, and coordination is insignificant. It is interesting that all subordination is either synchronically identifiable as based on a class-changing process or very similar to, and transparently identifiable as historically derived from, a class-changing process. Each of the three class-changing processes has examples of reanalyzed constructions. The infinitive from nominalization; the negative verb phrase from adjectivalization; and the marking of progressive aspect and “realization” from adverbialization. One could speculate that class-changed clauses will continue to be reanalyzed until there is a plethora of complex clauses and verb phrases that are not even recognizable as nominalizations, etc.

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APPENDIX: SAMPLE TEXTS

Here I provide three sample texts from three different genres. All texts were recorded on digital minidisk recorders. Speakers were asked to speak as long as they wished without interrupting them. Texts were first transcribed, translated and input in the Shoebox parsing program by me. During subsequent field seasons, I went over questions about the texts that had come up while transcribing/translating them, and literate speakers were asked to transcribe and translate the same texts in order to identify discrepancies. Finally, a Matses school teacher was asked to revise a written version of the unbroken text lines of the texts. See section 1.6.4 and Fleck *et al.* (2002) for more details about text recording and other field methodology. Fleck *et al.* (2002) contains an additional short parsed text about bat natural history.

Text 1: Natural History Account about Spider Monkeys

Speaker A, 35-year-old man from Nuevo San Juan. Recorded 27 June 1998; 2:28 min.
Reference numbers *A-I 053 chëshëid 01* to *A-I 053 chëshëid 34*.

(01) chëshëid nadquid nec
chëshëid nad-quid ne-e-c
 spider.monkey like.this-Agt.Nzr be-Npast-Indic
 ‘Spider monkeys are ones that are like this.’

(02)¹ chëshëid chëshëmboshë icshobi chëshëid
chëshëid chëshë-mbo-shë ic-sho-bi chëshëid
 spider.monkey black-Aug-Aug be-when:S/A/O>O-Emph spider.monkey
caquin chëshëid cuënec
ca-quin chëshëid cuën-e-c
 say-while:S/A>A spider.monkey call-Npast-Indic
 ‘Because the spider monkey is black, they refer to it as “chëshëid,” calling it
 “chëshëid”.’

¹ The narrator has made the (possible) historical analysis of the term for woolly monkey as chëshë-quid ‘black one.’ A second speaker judged this sentence to be repetitive, suggesting that either the first or the third instance of chëshëid would be better omitted.

- (03) bētanteteno bēpiu bēpiumbo chëshëid icquid
bētantete-no redup bē-piu-mbo chëshëid ic-quid
 face-Loc partly face-red-Aug spider.monkey be-Hab
 ‘Spider monkeys have red on part of their faces. [lit. ‘...are partly red-faced where their faces are’].’
- (04) adoashic chëshëid ënapen incuente icquid
adoashic chëshëid ënapen incuente ic-quid
 also spider.monkey long tail have-Hab
 ‘Also, spider monkeys have long tails.’
- (05) mëpubic adecbidi ënapen chëshëid icquid
mëpu-bi-c adecbidi ënapen chëshëid ic-quid
 forearm-Emph-Separ likewise:Intr long spider.monkey have-Hab
 ‘The spider monkeys also has long forearms.’ [lit. ‘has the forearms long.’]
- (06) cuëte bacuë chedo chequid chëshëid nec
cuëte bacuë chedo che-quid chëshëid ne-e-c
 dicot.tree fruit too/etc eat.unchewed-Agt.Nzr spider.monkey be-Npast-Indic
 ‘Spider monkeys are eaters of dicot tree fruits and other similar foods.’
- (07)² isan chedo chequid chëshëid nec
isan chedo che-quid chëshëid ne-e-c
 palm.species too/etc eat.unchewed-Agt.Nzr spider.monkey be-Npast-Indic
 ‘Spider monkeys are isan palm fruit eaters, too.’
- (08) quëcu quëcu pequid chëshëid nec
quëcu quëcu pe-quid chëshëid ne-e-c
 tree.species tree.species eat-Agt.Nzr spider.monkey be-Npast-Indic
 ‘Quëcu fruits...spider monkeys are quëcu fruit eaters.’
- (09) chëshëid abichobimbo chëshëmboshë icshobi
chëshëid abichobi-mbo chëshë-mbo-shë ic-sho-bi
 spider.monkey entire-Aug black-Aug-Aug be-when:S/A/O>O-Emph
chëshëid caic
chëshëid ca-e-c
 spider.monkey say-Npast-Indic
 ‘Because the spider monkey is entirely very black, they call it chëshëid [analyzeable as ‘black one’].’

² A second speaker would use pe instead of che here, and che instead of pe in (08), based on the consistency of these fruits.

- (10) padnuen chëshëid utsi aniatsëcquio tsadquid
padnuen chëshëid utsi ania-tsëc-quio tsad-quid
 by.contrast spider.monkey other small-Dim-Aug be:Pl-Hab
 ‘By contrast, another type of spider monkey is very small.’
- (11) aid aid matsesën tsidu caic
aid aid matses-n tsidu ca-e-c
 that.one that.one Matses-Erg small.spider.monk say-Npast-Indic
 ‘Those...Matses call those (small spider monkeys) “tsidu”.’
- (12) chëshëidëmpi pictsëc tsadquid
chëshëid-mpi pictsëc tsad-quid
 spider.monkey-small small be:Pl-Hab
 ‘The little spider monkeys are small.’
- (13)³ padnuen chëshëidtapabic chëshëidquiobi
padnuen chëshëid-dapa-bi-c chëshëid-quio-bi
 by.contrast spider.monkey-large-Emph-Separ spider.monkey-Aug-Emph
 ‘Meanwhile, the big spider monkeys [are] the true, prototypical spider monkeys.’
- (14)⁴ matsesën utsi utsien chuna uisu cashun
matses-n redup utsi-en chuna uisu ca-shun
 Matses-Erg Distr other-Manr:Tr woolly.monkey black say-after:S/A>A
mëshe caic chëshëid
mëshe ca-e-c chëshëid
 spider.monkey say-Npast-Indic spider.monkey
 ‘Some Matses call the spider monkey “chuna uisu” and also call it “mëshe”...the spider monkey.’
- (15) chëshëidi adecbidi ushquid chëshëid nec
chëshëid-bi adecbidi ush-quid chëshëid ne-e-c
 spider.monkey-Emph likewise:Intr sleep-Agt.Nzr spider.monkey be-Npast-Indic
 ‘Spider monkeys likewise...spider monkeys are ones that sleep.’
- (16) maisash ushquid
mais-ash ush-quid
 spread.out-after:S/A>S sleep-Hab
 ‘They sleep after spreading out into small groups.’

³ A second speaker does not consider this a well-formed sentence.

⁴ These names are part of the Matses system of synonyms for game.

- (17) shubu shubupambo yacno ushquid nec
redup shubu-pambo ic-ac-no ush-quid ne-e-c
 Adjzr thick.vegetation-Aug be-Act.Nzr-Loc sleep-Agt.Nzr be-Npast-Indic
 ‘Spider monkeys are ones that sleep where there is thick vegetation.’
- (18) adembidi bacuë dequid chëshëid nec
adembidi bacuë de-quid chëshëid ne-e-c
 likewise:Tr child carry.on.back-Agt.Nzr spider.monkey be-Npast-Indic
 ‘Also, spider monkeys are ones that carry their young on their backs.’
- (19) matsesën chishmiacimbuembidi
matses-n chish-me-ac-bi-mbo-en-bi-di
 person-Erg suck-Caus-Act.Nzr-like-Aug-Manr.Tr-Emph-Same
chishmequid chëshëid nec
chish-me-quid chëshëid ne-e-c
 suck-Caus-Agt.Nzr spider.monkey be-Npast-Indic
 ‘Spider monkeys are ones that suckle their young in the exact same way that people suckle their young.’
- (20)⁵ ëquëshun shueshcacimbuen chëshëidën
ëquë-shun shueshca-ac-bi-mbo-en chëshëid-n
 other.side-Ev.Init.Tr comb-Act.Nzr-like-Aug-Advzr.Tr spider.monkey-Erg
shueshcatsëquid dëpiu dëpiumbo icquin
shueshca-tsëc-quid redup dë-piu-mbo ic-quin
 comb-Dim-Hab partly nose-red-Aug be-while:S/A>A
 ‘The spider monkey combs its hair so it looks like its hair was combed from the opposite side, while having a red nose.’
- (21) adquid chëshëid nec
ad-quid chëshëid ne-e-c
 like.that-Agt.Nzr spider.monkey be-Npast-Indic
 ‘Spider monkeys are like that.’
- (22)⁶ matsesën pïaidbidi chëshëid nec
matses-n pe-aid-bi-di chëshëid ne-e-c
 Matses-Erg eat-Pat.Nzr-Emph-Same spider.monkey be-Npast-Indic
 ‘These same spider monkeys are also ones that are eaten by Matses.’

⁵ The speaker is here making fun of spider monkeys, making fun of their head hair that sticks up and their red noses (they don’t really comb their hair).

⁶ The suffix -di ‘Same’ refers back to the preceding text on woolly monkeys.

- (23) pian seshun matsesën pequid chëshëid
pia-n se-shun matses-n pe-quid chëshëid
 arrow-Inst pierce-after:S/A>A Matses-Erg eat-Hab spider.monkey
 ‘After shooting them with arrows, Matses eat the spider monkeys.’
- (24) chompianën cuessun pequid chëshëid
chompian-n cues-shun pe-quid chëshëid
 shotgun-Inst kill-after:S/A>A eat-Hab spider.monkey
 ‘They kill them with shotguns and then eat the spider monkeys.’
- (25)⁷ nidaidën capuesa chëshëid neuaic
nidaid-n capu-esa chëshëid ne-ua-e-c
 ground-Loc locomote-Neg.A.Nzr spider.monkey be-again-Npast-Indic
 ‘The spider monkey is also one that does not walk on the ground.’
- (26) abucuidi cuëten icquid chëshëid nec
abuc-uid-bi cuëte-n ic-quid chëshëid ne-e-c
 high-only-Emph dicot.tree-Loc be-Agt.Nzr spider.monkey be-Npast-Indic
 ‘Spider monkeys are ones that are always in the high up, in the branches of trees.’
- (27) adembidi poshto yacimbuembidi
adembidi poshto ic-ac-bi-mbo-en-bi-di
 likewise:Tr woolly.monkey be-Act.Nzr-like-Aug-Advzr:Tr-Emph-Same
chëshëidën incuenten bedec chëshëidën
chëshëid-n incuente-n bed-e-c chëshëid-n
 spider.monkey-Erg tail-Inst grab-Npast-Indic spider.monkey-Erg
 ‘Also, just like woolly monkeys, spider monkeys hold on with their tails... spider monkeys’
- (28) adec chëshëid capuec incuenten
ad-ec chëshëid capu-e-c incuente-n
 like.that-Manr:Intr spider.monkey locomote-Npast-Indic tail-Inst
 ‘Spider monkeys get around like that using their tails.’

⁷ Note: -ua ‘again’ here means ‘too’ in comparison with woolly monkeys described in the preceding text.

- (29)⁸ mananuc yashic actiachon
mananuc ic-ash-bi-c actiacho-n
 upland.forest:Loc be-after:S/A>S-Emph-Separ floodplain.forest-Loc
chëshëid icquid abichobi itia yashic
chëshëid ic-quid abichobi itia ic-ash-bi-c
 spider.monkey be-Hab entire swamp.palm be-after:S/A>S-Emph-Separ
chëshëid
chëshëid
 spider.monkey
 ‘Spider monkeys are in upland forest, they are in floodplain forest, everywhere,
 spider monkeys are in swamp palm swamps.’
- (30) adquid chëshëid nec
ad-quid chëshëid ne-e-c
 like.that-Agt.Nzr spider.monkey be-Npast-Indic
 ‘Spider monkeys do/are like that.’
- (31) itia chedo daëshquid chëshëid nec
itia chedo daësh-quid chëshëid ne-e-c
 swamp.palm too/etc eat.gnawing-Agt.Nzr spider.monkey be-Npast-Indic
 ‘Spider monkeys are ones that eat the mesocarp of swamp palm fruits and other
 palm fruits.’
- (32) ededquequid chëshëid
ededque-quid chëshëid
 make.spider.monkey.vocalization-Hab spider.monkey
 ‘Spider monkeys make calls [specific to spider monkeys].’
- (33) matsesën ëctanac chëshëid
matses-n ëctan-ac chëshëid
 Matses-Erg imiatate.spider.monkey-when:O>S/A spider.monkey
ededquequid
ededque-quid
 make.spider.monkey.vocalization-Hab
 ‘When Matses imitate them, spider monkeys respond.’
- (34) aac aac quec chëshëid
imitation imitation que-ec chëshëid
 spider.monkey.call spider.monkey.call say-while:S/A>S spider.monkey
cuëdquid nec
cuëd-quid ne-e-c
 call-Agt.Nzr be-Npast-Indic
 ‘Spider monkeys are ones that call out saying “aac aac”.’

⁸ A second speaker considers this an ill-formed sentence

Text 2: Description of Tobacco and Tobacco Snuff

Speaker A, 35-year-old man from Nuevo San Juan. Recorded 17 July 1998; 2:13 min.

Reference numbers *A-XIII 022 nēnē 01* to *A-XIII 022 nēnē 26*.

- (01) nēnē
nēnē
tobacco
'Tobacco/Tobacco snuff.'
- (02) matsesēn nēnē masequid cuda mēdanten
matses-n nēnē mase-quid cuda mēdante-n
Matses-Erg tobacco pulverize-Hab bamboo mortar-Inst
'Matses pulverize tobacco (leaves) using a bamboo mortar.'
- (03) nēnē shuiquid matsesēn shēcpan cashucshun
nēnē shui-quid matses-n shēcpan cashuc-shun
tobacco heat-Hab Matses-Erg palm.petiole remove.a.piece-after:S/A>A
'Matses dry the tobacco (leaves) over a fire, after removing pieces of palm petioles [to make a drying rack].'
- (04)⁹ bēdamboen taquēcshun matsesēn nēnē shuiquid
bēda-mbo-en taquēc-shun matses-n nēnē shui-quid
good-Aug-Advzr:Tr tie.together-after:S/A>A Matses-Erg tobacco heat-Hab
'After tying the lengths (of palm petiole) together carefully [into a drying rack], Matses dry the tobacco (leaves).'
- (05) musuacsho matsesēn masequid cuda mēdanten
musu-ac-sho matses-n mase-quid cuda mēdante-n
dry-Infer-when:S/A/O>O Matses-Erg pulverize-Hab bamboo mortar-Inst
'After it has dried, Matses pulverize it in a bamboo mortar.'
- (06) adoshombic matsesēn nēnē chococaquid
ado-shun-bi-c matses-n nēnē chococa-quid
do.like.that-after:S/A>A-Emph-Same Matses-Erg tobacco plant-Hab
nēdēnquiacno
nēdēnque-ac-no
burn-Act.Nzr-Loc
'After doing that, Matses plant the tobacco where they have burned [dead branches].'

⁹ A second speaker prefers tauiquid 'toast' to shuiquid 'heat' here.

- (07) matsesën chococaquid nënë caiduaquin
matses-n chococa-quid nënë caidua-quin
 Matses-Erg plant-Hab tobacco make.increase-while:S/A>A
 ‘Matses plant tobacco, making it proliferate.’
- (08) ëshë secatsēcquin matsesën nënë chococaquid
ëshë seca-tsēc-quin matses-n nënë chococa-quid
 seed scatter-Dim-while:S/A>A Matses-Erg tobacco plant-Hab
 ‘Matses plant tobacco by scattering the (tiny) seeds.’
- (09) adoac nënë dadpen caniquid
ado-ac nënë dadpen cani-quid
 do.like.that-when:O>S/A tobacco many grow-Hab
 ‘When they do that, many tobacco (plants) grow.’
- (10) cuète danëdënquiacnombo matsesën nënë chococaquid
cuète da-nëdënque-ac-no-mbo matses-n nënë chococa-quid
 dicot.tree side-burn-Act.Nzr-Loc-Aug Matses-Erg tobacco plant-Hab
 ‘Matses plant tobacco right beside a (felled) tree that has been burned.’
- (11) ashshun nënë caiduashun dadpen
ad-shun nënë caidua-shun dadpen
 do.like.that-after:S/A>A tobacco make.increase-after:S/A>A many
caidacsho nënë chushiuashun
caid-ac-sho nënë chushiua-shun
 increase-Infer-when:S/A/O>O tobacco smoke-after:S/A>A
masequid matsesën
mase-quid matses-n
 pulverize-Hab Matses-Erg
 ‘Then, after making the tobacco increase, when there are many (tobacco plants),
 Matses smoke [dry] the tobacco and then pulverize it.’
- (12) adoash aidëmbi dëniadquid
ado-ash aid-n-bi dë-ne-ad-quid
 do.like.that-after:S/A>S that.one-Inst-Emph nose-blow.in-Pass-Hab
nënë
nënë-n
 tobacco-Inst
 ‘Then they blow that same stuff up each other’s noses...the tobacco [snuff].’
- (13) senad dëbiate casecaquin matsesën nënë masequid
senad dëbiate caseca-quin matses-n nënë mase-quid
 deer nose add-while:S/A>A Matses-Erg tobacco pulverize-Hab
 ‘Matses add [bark ashes from] the senad dëbiate tree when they pulverize the
 tobacco.’

- (14) tsusion masequid nënë
tsësio-n mase-quid nënë
 old.man-Erg pulverize-Hab tobacco
 ‘Old men pulverize tobacco.’
- (15) adembidi chido machon masequid nënë
adembidi chido macho-n mase-quid nënë
 likewise:Tr woman old.woman-Erg pulverize-Hab tobacco
 ‘Also, old women pulverize tobacco.’
- (16)¹⁰ adoash matses ansequequid nënë
ado-ash matses anseque-quid nënë
 do.like.that-after:S/A>S Matses put.in.mouth-Hab tobacco
chec
che-ec
 eat.unchewed-while:S/A>S
 ‘After doing that, Matses put tobacco snuff in their mouths.’
- (17) aton shëta tabiunquid matsesën
aton shëta ta-biun-quid matses-n
 3Gen tooth root-put.on-Hab Matses-Erg
 ‘Matses dip it putting it at the base of their teeth [between lower teeth and lips].’
- (18)¹¹ machombic adembidi quequin nënë
macho-n-bi-c adembidi que-quin nënë
 old.woman-Erg-Emph-Separ likewise:Tr do-while:S/A>A tobacco
chequid tsusiobon
che-quid tsësio-bo-n
 eat.unchewed-Hab old.man-Pl-Erg
 ‘Even old women as well as old men so dip tobacco.’
- (19) padnuen caniabo nënë dëniadquid
padnuen cania-bo nënë-n dë-ne-ad-quid
 by.contrast young.man-Pl tobacco-Inst nose-blow.in-Pass-Hab
 ‘On the other hand, young men blow it up each other’s noses.’
- (20) nënë dëniadquid matses
nënë-n dë-ne-ad-quid matses
 tobacco-Inst nose-blow.in-Pass-Hab Matses
 ‘Matses have tobacco blown up their noses.’

¹⁰ Here che ‘eat unchewed’ does not imply eating tobacco; it just means having it in one's mouth.

¹¹ A second speaker does not consider this a well-formed sentence.

- (21) uimabudash matses ansequiash nēnēmbi
uimabud-ash matses an-seque-ash nēnē-n-bi
 get.tired-after:S/A>S Matses mouth-pour.in-after:S/A>S tobacco-Inst-Emph
damishadquid
da-mish-ad-quid
 body-press-Rflx-Hab
 ‘After they get tired, after they put the tobacco in their mouths, Matses rub their bodies with that same tobacco snuff [mixed with spit].’
- (22) matses nēnē ansequetanec adecbidi
matses nēnē an-seque-tanec adecbidi
 Matses tobacco mouth-pour.in-after:S/A>S likewise:Intr
dēniadquid
dē-ne-ad-quid
 nose-blow.in-Pass-Hab
 ‘Matses put tobacco in their mouths and likewise have it blown up their noses.’
- (23) uimabudobique cun nēnē beccho dēniadnu
uimabud-o-bi-que cun nēnē bēccho dē-ne-ad-nu
 get.tired-Past-Emph-so 1Gen tobacco give.me nose-blow.in-Pass-Intent:1
quiash nēnē dēniadquid matses
que-ash nēnē-n dēniad-quid matses
 say-after:S/A>S tobacco-Inst have.blown.in.nose-Hab Matses
 ‘After saying, “I’m tired, bring me my tobacco snuff! I’m going to have it blown up my nose,” Matses blow tobacco up each other’s noses.’
- (24) adecbidi uimabudquiobique damishadtsēcnu cun
adecbidi uimabud-quio-o-bi-que da-mish-ad-tsēc-nu cun
 likewise:Intr get.tired-Intens-Past-1S-so body-rub-Rflx-Dim-Intent:1 1Gen
nēnē musuctsēcbono quiash ansequequid matses
nēnē musuc-tsēc-bo-nu que-ash an-seque-quid matses
 tobacco measure-Dim-Prior-Intent:1 say-after:S/A>S mouth-pour.in-Hab Matses
 ‘Similarly, they say, “I’m tired, so I’m going to put some of my tobacco snuff in my hand in order to rub my body with it,” and then Matses put some in their mouth.’
- (25) aton sedunten sauedquid matsesēn nēnē
aton sedunte-n saued-quid matses-n nēnē
 3Gen bottle-Loc put.in-Hab Matses-Erg tobacco
 ‘Matses put the tobacco snuff in a bottle.’
- (26) adoash ansequedonequid matses nēnē
ado-ash an-seque-do-ne-quid matses nēnē
 do.like.that-after:S/A>S mouth-pour.in-Incep-Distr-Hab Matses tobacco
 ‘Then, Matses put the tobacco in their mouths.’

Text 3: The Story of How the Matses Met the Dēmushbo Indians

Speaker K, 65-year-old man from Buenas Lomas. Recorded 20 August 2000; 11:59 min.

Reference numbers *K-XXII 001 chema 001* to *K-XXII 015 chema 152*.

- (001) nēmbobi ēnden tied icpondash nēmbombobi
nē-mbo-bi ēnden tied ic-pa-onda-sh nē-mbo-mbo-bi
 here-Aug-Emph before swidden be-Comment-Dist.Past-3 here-Aug-Aug-Emph
 ‘A long time ago our swiddens were right here, really right here [in Peru].’
- (002) adashic chotaquēn istuidac
adashic chotac-n istuid-ac
 then:Intr nonIndian-Erg find-Narr.Past
 ‘Then, non-Indians found (our people).’
- (003)¹² tied chedo istuidquin chotaquēn cuesac
tied chedo istuid-quin chotac-n cues-ac
 swidden too/etc find-while:S/A>A nonIndian-Erg kill-when:O>S/A
yaquidana potiaquec nidondash
yaquidana pote-ec nid-onda-sh
 Yaquerana.River cross-while:S/A>S go-Dist.Past-3
 ‘Finding the (Matses) farms and villages, the non-Indians killed them, and [the rest of the group of Matses] left crossing the Yaquerana River [into Brazil].’
- (004) yaquidana potec
yaquidana pote-ec
 Yaquerana.River cross.river-while:S/A>S
 ‘Crossing the Yaquerana River...[false start].’
- (005) ambo tied dēdec nidondash
a-mbo tied dēd-ec nid-onda-sh
 there-Aug swidden chop-Purp:S/A>S go-Dist.Past-3
 ‘They went to make swiddens there.’

¹² A second speaker would use istuidshun ‘after finding’ instead of istuidquin ‘while finding.’

- (006) aden poteshun tied
ad-en pote-shun tied
do.like.that-Advzr:Tr cross.river-after:S/A>A swidden
dëdondashic capucuen
dëd-onda-ash-bi-c redup
chop-Dist.Past-after:S/A>S-Emph-Separ Distr
capucuenquimbi tied utsidëdondash
capu-cuen-quin-bi tied utsidëd-onda-sh
locomote-go.do.go:Intr-while:S/A>A-Emph swidden other chop-Dist.Past-3
‘After crossing [the Yaquerana River] like that, they cut other swiddens, and then kept traveling around making other swiddens.’
- (007)¹³ adashic uquë padpidec capucuenondash
adashic ëquë padpide-ec capu-cuen-onda-sh
then other.side again-Manr:Intr locomote-Incho-Dist.Past-3
nibënquin matses utsi nibënquin
nibën-quin matses utsi nibën-quin
search-while:S/A>A Indian other search-while:S/A>A
‘Then, they began walking around on the other side searching, searching for other Indians.’
- (008) capucuennequin pambid chushiuaquin
capu-cuen-ne-quin pambid chushiua-quin
locomote-go.do.go:Intr-Distr-while:S/A>A meat smoke-while:S/A>A
pambid peben pebenquid istuidquin
pambid redup pe-ben-quid istuid-quin
meat Distr eat-do.while.passing-Agt.Nzr find-while:S/A>A
tauaondash dëmushbo
taua-onda-sh dëmushbo
begin-Dist.Past-3 Dëmushbo.Indians
‘While continuously traveling about, they found for the first time the ones that (at the time) were smoking and eating meat [i.e., away from their village], the Dëmushbo tribe.’
- (009) ubibic caniambo caniambo iccondabi ambo
ubi-bi-c cania-mbo cania-mbo ic-onda-bi a-mbo
1Abs-Emph-Separ young.man-Aug young.man-Aug be-Dist.Past-1S there-Aug
cania buntacquo
cania buntac-quo
young.man young-Emph
‘But I [as opposed to the old men he was with], truly a young man, I was truly a young man back then, a very young young man.’

¹³ A second speaker considers this sentence ill-formed.

- (010) tsësiobo iquec
tsësi-bo ic-e-c
 old.man-Pl be-Npast-Indic
 ‘There are old men present.’ [historical present]
- (011)¹⁴ ashic istuidondash istuidondash daca dëmushbo
adashic istuid-onda-sh istuid-onda-sh daca dëmushbo
 then find-Dist.Past-3 find-Dist.Past-3 umm Dëmushbo.Indians
 ‘And then they [the old men] found them, they found ...umm... the Dëmushbo.’
- (012)¹⁵ istuidshun mitsipaden nuqui ique
istuid-shun mitsipad-en nuqui ic-e-Ø
 find-after:S/A>A how-Manr:Tr 1+2 be-Npast-Interr:1/2
cuesquinda nuqui ique quiondash
cues-quin-da nuqui ic-e-Ø que-onda-sh
 kill-while:S/A>A-Uncert 1+2 be-Npast-Interr:1/2 say-Dist.Past-3
 ‘After finding them, they said: “What should we do? Should we kill them?”.’
- (013) padenquio bed tsidnu na quiondash
padenquio bed-Ø tsid-nu na-Ø que-onda-sh
 no grab-Imper gather-Intent:1 do-Imper say-Dist.Past-3
 ‘(Other Matses said) “No! Capture them! Lets join up with them”.’
- (014) tsidnu na bed quiondash
tsid-nu na-Ø bed-Ø que-onda-sh
 gather-Intent:1 do-Imper grab say-Dist.Past-3
 ‘“Lets join up with them. Capture them!”, they said.’
- (015) bed cainshun istuidshun
bed-Ø cain-shun istuid-shun
 grab-Imper wait-after:S/A>A find-after:S/A>A
 ‘Grab them, after waiting, after seeing them.’

¹⁴ The Matses denomination for this closely-related Panoan group refers to the palm leaflet veins that are inserted in holes pierced in the side of the nose, which look like jaguar whiskers (Matses women traditionally wore these, but not men; the Dëmushbo all wore them). The term Dëmushbo might be translated as “nose whisker people.”

¹⁵ A second speaker would change istuidshun to istuidash to match transitivity of quiondash.

- (016)¹⁶ podquied caimbudtsēcshun tantiac
podqued cain-bud-tsēc-shun tantia-ac
 path wait-Dur-Dim-after:S/A>A listen-when:O>S/A
toshcatuidondash tosh tosh
toshca-tuid-onda-sh imitation imitation
 make.cutting.sound-upon.arrival-Dist.Past-3 cutting.sound cutting.sound
 ‘After waiting out the path for a little while, they heard them arriving making cutting sounds [clearing the path]: tosh, tosh.’
- (017) adac cuesquindambi icpe chompianēn
adac cues-quin-da-mbi ic-pa-e-Ø chompian-n
 now kill-while:S/A>A-Uncert-1A be-Comment-Npast-Interr:1/2 shotgun-Inst
 ‘Now? Should I kill (them) with the shotgun?’
- (018) padenquio uidēnuata pudunquin pia
padenquio uidēnuata pudunquin pia
 no hold-Imper jump-while:S/A>A arrow
chiadsho pudunquin pia uidēnuashunta
chiad-sho pudun-quin pia uidēnuashunta
 carry.on.shoulder-when:S/A/O>O jump-while:S/A>A arrow hold-Appl-Imper
 ‘No, grab them by jumping (out from behind a tree), if they are carrying arrows, grab their arrow by jumping out.’
- (019)¹⁷ adnubic utsin dayunta utsin
ad-nuc-bi-c utsi-n dayun-ta utsi-n
 do.like.that-while:Diff.Ref-Emph-Separ other-Erg embrace-Imper other-Erg
taēno uesquin dayunta quiondash
taē-no ues-quin dayun-ta que-onda-sh
 foot-Loc finish.off-while:S/A>A embrace-Imper say-Dist.Past-3
 ‘“While one does that, another (of you) hold one (of the enemy), another (of you) hold one by the foot until they are all held,” they said.’
- (020) adnubien cainondash podqued nantan
ad-nuc-bi-en cain-onda-sh podqued nantan
 do.like.that-while:Diff.Ref-Emph-Advzr wait-Dist.Past-3 path within
 ‘Meanwhile, they waited for them on the path.’

¹⁶ I’m not sure if *-tsēc* means ‘a little while’ or ‘small/inferior path’ here. Note that the verb *cain* ‘wait’ in Matses can take people, animals, etc. as objects, as in English, but unlike English it can take a path, a watering hole, etc., where the person, game animal, etc., is expected to arrive.

¹⁷ The quotation refers to at least two different people’s speech.

- (021) chondash dēmushbo
cho-onda-sh dēmush-bo
 come-Dist.Past-3 Dēmushbo.Indian
 ‘The Dēmushbo people came.’
- (022) madebipambuec dēmush iquec ëctabëdte shëta
made-bi-pambo-ec dēmush ic-ec ëctabëdte shëta
 paca-like-Aug-Advzr:Intr nose.whisker be-while:S/A>S lip.whisker tooth
quëcaid chedo pësiuidec matses utsi iccondash
quëca-aid chedo pë-siuid-ec matses utsi ic-onda-sh
 string-Pat.Nzr too/etc arm-wear-while:S/A>S Indian other be-Dist.Past-3
 ‘With nose whiskers like a paca’s [a dog-sized rodent], and lip whiskers, and wearing strung monkey teeth on their upper arms, and other ornaments, they were another tribe of Indians.’
- (023) nëuëshi pudunquin cumpa padon
në-uësh-bi pudun-quin cun papa pado-n
 here-Ev.Init:Intr-Emph jump-while:S/A>A 1Gen father deceased-Erg
cunta bedquid chedon uidënu-aondash
cun tita bed-quid chedo-n uidënu-a-onda-sh
 1Gen mother grab-Agt.Nzr too/etc-Erg hold-Dist.Past-3
 ‘Jumping out from very near (to where the first Dēmushbo Indian was passing by), my late father who captured my mother, and his group, grabbed him.’
- (024) aduaquien cuaa cuaa cuaa
ado-ac-bi-en yell yell yell
 do.like.that-when:O>S/A-Emph-Contr distress.call distress.call distress.call
 ‘When they did that to him (the Dēmushbo yelled): “cuaa, cuaa cuaa”.’

- (025) adnubien aton utsi tdu
ad-nuc-bi-en aton utsi yell
do.like.that-while:Diff.Ref-Emph-Contr 3Gen brother chasing.away.yell
tdu tdu tdu ëëë
yell yell yell yell
chasing.away.yell chasing.away.yell chasing.away.yell chasing.away.yell
ëëë ëëë aac aac
yell yell yell yell
chasing.away.yell chasing.away.yell chasing.away.yell chasing.away.yell
aac aac camunën cun utsi aquec
yell yell camun-n cun utsi ac-e-c
chasing.away.yell chasing.away.yell jaguar-Erg 1Gen brother kill-Npast-Indic
ëëë aac aac
yell yell yell
chasing.away.yell chasing.away.yell chasing.away.yell
‘Meanwhile, his brother [who was coming behind the first Dëmushbo on the path]
(was saying): “tdu tdu tdu ëëë ëëë ëë aac aac aac aac [to frighten off the jaguar], a
jaguar is killing my brother, ëëë aac aac”.’
- (026) matses isanec aucbidi cuenondash aton chido
matses is-anec aucbidi cuen-onda-sh aton chido
Matses see-after:S/A>S back.again run.off-Dist.Past-3 3Gen woman
yacmi
ic-ac-mi
be-Act.Nzr -Dir
‘When he saw the Matses, he [the brother that was coming] ran back toward the
place where his wife was [back further on the path].’
- (027) cuenenda caoshi quiondash cun chido pado
cuen-enda ca-o-sh-i que-onda-sh cun chido pado
run.off-Neg.Imper say-Past-3-1O say-Dist.Past-3 1Gen woman deceased
‘“Don’t run off!” he [her ex-husband, the one who ran back] told me,” my late
wife said.’
- (028) aidën chido bedquin tauaondambi aidën
aid-n chido bed-quin taua-onda-mbi aid-n
that.one-Inst woman grab-while:S/A>A begin-Dist.Past-1A that.one-Gen
chido
chido
woman
‘That one’s wife was the first woman I captured...that one’s wife.’ [lit. With that
one’s wife, I started]

- (029) adnubien tsutsi ne tsutsi
ad-nuc-bi-en tsutsi ne-e-Ø tsutsi
do.like.that-while:Diff.Ref-Emph-Contr who be-Npast-Interr:1/2 who
ne mimbia chui mimbia chui
ne-e-Ø mimbi-ba chui-Ø mimbi-ba chui-Ø
be-Npast-Interr:1/2 2Erg-first tell-Imper 2Erg-first tell-Imper
quiondash tsutsi ne
que-onda-sh tsutsi ne-e-Ø
say-Dist.Past-3 who be-Npast-Interr:1/2
‘Then, “Who are you? Who are you? You tell first! You tell first!” they (the
Dēmushbo Indians) said... “Who are you?.’
- (030)¹⁸ nēidēn bēnē iso
nēid-n bēnē is-o-Ø
this.one-Gen husband see-Past-Interr:1/2
‘Have you seen this one’s [pointing to an old woman sitting in a room] husband?’
- (031) nēmbo choacsho
nē-mbo cho-ac-sho
here-Aug come-Infer-when:S/A/O>O
‘...when he came here?’
- (032)¹⁹ ai isondambi
ai is-onda-mbi
yes see-Dist.Past-1A
‘Yes, I saw him.’
- (033) aidēn ubi uaqui nec caondash
aid-n ubi uaqui ne-e-c ca-onda-sh
that.one-Erg 1Abs man’s.name be-Npast-Indic say-Dist.Past-3
‘That one (the one the speaker asked about) told [the Dēmushbo], “I am Uaqui”.’

¹⁸ Question addressed to David Fleck.

¹⁹ David Fleck’s response to the question.

- (034) ubi aquenda cun chuca uaqui nebi
ubi ac-enda cun chuca uaqui ne-e-bi
 1Abs kill-Neg.Imper 1Gen younger.namesake man's.name be-Npast-1S
aidi nebi ubi aquenda cun chuca ubi
aid-bi ne-bi ubi ac-enda cun chuca ubi
 that.one-Emph be-Emph 1Abs kill-Neg.Imper 1Gen younger.namesake 1Abs
aquenda cun chuca quiondash dëmushbo
ac-enda cun chuca que-onda-sh dëmush-bo
 kill-Neg.Imper 1Gen younger.namesake say-Dist.Past-3 Dëmushbo.Indians
ubi aquenda cun chuca
ubi ac-enda cun chuca
 1Abs kill-Neg.Imper 1Gen younger.namesake
 “Don’t kill me, younger namesake, I am (named) Uaqui, I am that same (name),
 don’t kill me younger namesake, don’t kill me younger namesake,” the
 Dëmushbo said, “don’t kill me younger namesake.’

- (035) ashshobic aquenquo iquembi
ad-sho-bi-c ac-en-quo ic-e-mbi
 do.like.that-when:S/A/O>O-Emph-Separ kill-Neg-Aug Aux-Npast-1A
caondash
ca-onda-sh
 say-Dist.Past-3
 ‘Then (the Matses) said to him, ‘I’m not going to kill you.’

- (036) tsidnu caondash
tsid-nu ca-onda-sh
 gather-Intent:1 say-Dist.Past-3
 “I want to join up (with you),” he told him.’

- (037) adashic mēdimbon tsusiodapabon tsutsi ne
adashic mēdin-bo-n tsēsio-dapa-bo-n tsutsi ne-e-Ø
 then:Intr deceased.person-Pl-Erg old.man-large-Pl-Erg who be-Npast-Interr:1/2
ubi bina nec ubi bina nec
ubi bina ne-e-c ubi bina ne-e-c
 1Abs man's.name be-Npast-Indic 1Abs man's.name be-Npast-Indic
cac ubi aquenda papa aidi cumpa
ca-ac ubi ac-enda papa aid-bi cun papa
 say-when:O>S/A 1Abs kill-Neg.Imper father that.one-Emph 1Gen father
ictennec cumpa uënēsondash aidi cumpa
ic-denne-c cun papa uënēs-onda-sh aid-bi cun papa
 be-Rem.Past-Indic 1Gen father die-Dist.Past-3 that.one-Emph 1Gen father
ictennec ubi aquenda papa quiondash
ic-denne-c ubi ac-enda papa que-onda-sh
 be-Rem.Past-Indic 1Abs kill-Neg.Imper father say-Dist.Past-3
 'Then, after doing that, the now deceased ones, the (great) old [Matses] men,
 (when they were asked) "Who are you?", one told them, "I am Bina, I am Bina,"
 and then he (the Dēmushbo) responded, "Don't kill me father! My father used to
 be that same (name), my father has died, my father used to be that (name), Don't
 kill me, father!'

- (038) ashic utsi chosho tsutsi ne ubi
adashic utsi cho-sho tsutsi ne-e-Ø ubi
 then:Intr other come-when:S/A/O>O who be-Npast-Interr:1/2 1Abs
tumi nec caondash
tumi ne-e-c ca-onda-sh
 man's.name be-Npast-Indic say-Dist.Past-3
 'Then, when another (Matses) came, (the Dēmushbo asked him): "Who are you?"
 and he (the Matses) told him "I am Tumi".'

- (039)²⁰ ashshobi ubi aquenda cucu
ad-sho-bi ubi ac-enda cucu
 do.like.that-when:S/A/O>O-Emph 1Abs kill-Neg.Imper cross.uncle
aidi cuncu iccosh quiondash dēmushbo
aid-bi cun cucu ic-o-sh que-onda-sh dēmushbo
 that.one-Emph 1Gen cross.uncle be-Past-3 say-Dist.Past-3 Dēmushbo.Indian
 'When he said that to him, the Dēmushbo told him, "Don't kill me, uncle! My
 uncle is that same (name)".'

²⁰ The final verb should be ca 'tell' (transitive) instead of que 'say/tell me' (intransitive) for the participant co-reference of ashshobi to work out.

- (040)²¹ aden naqui uëdënash
ad-en na-ac-bi uidën-ash
do.like.that-Advzr:Tr do-when:O>S/A-Emph hold-after:S/A>S
nidec moco nadopambuen
nid-ec moco nado-pambo-ec
stand-while:S/A>S ax do.thus-Adjzr:Aug-Advzr:Intr
dëdantiadpambo icsho bed quiondash
dëd-an-tiad-pambo ic-sho bed-Ø que-onda-sh
chop-Antpass-Abil-Adjzr:Aug be-when:S/A/O>O grab-Imper say-Dist.Past-3
bed uidënuquin moco mënchic
bed-Ø uidënu-quin moco mënchic-Ø
grab-Imper hold-while:S/A>A ax take.away.from-Imper
‘While they were doing that to him [to the Dëmushbo who came first], he [the other Dëmushbo man] was holding an ax like this [speaker makes gesture of holding an ax] wanting to cut us with it, so “Grab it!” they said, “Grab it,! Holding him, pull the ax out of his hands!”.’

- (041) mënchiccondash
mënchic-onda-sh
take.away.from-Dist.Past-3
‘They took it from him.’

- (042) ubi aquenda caondash mëdimbon cunta
ubi ac-enda ca-onda-sh mëdin-bo-n cun tita
1Abs kill-Neg.Imper say-Dist.Past-3 deceased.person-Pl-Erg 1Gen mother
bedquid mëdimbon
bed-quid mëdin-bo-n
grab-Agt.Nzr deceased.person-Pl-Erg
“‘Don’t kill me!’” said the now-deceased ones, the late ones that stole my mother (i.e., the Matses).’

- (043) ubi acanenquio mimbieni aquec
ubi ac-an-en-quio mimbi-en-i ac-e-c
1Abs do-Antpass-Neg-Aug 2Erg-Contr-1O kill-Npast-Indic
quiondash matses utsi
que-onda-sh matses utsi
say-Dist.Past-3 Indian other
“‘I am not going to kill, it is you who is going to kill me,” the non-Matses Indian said.’

²¹ Although this sentence does not make it clear (even the participant co-reference is not explicit), the speaker is here talking about two Dëmushbo men, the first (Uaqui) who came first and is being held, and his brother (Chema), who ran back and appears here again holding an ax. Only two Dëmushbo men are present in this scene, but there are several Matses there.

- (044) adembicquimbi uesquin
ad-en-bi ic-quin-bi ues-quin
do.like.that-Advzr:Tr-Emph be-while:S/A>A-Emph finish.off-while:S/A>A
chuibanondash
chui-ban-onda-sh
tell-Iter-Dist.Past-3
‘Doing it like that, they all told (their names).’
- (045) ubi dunu nec caondash cumpa
ubi dunu ne-e-c ca-onda-sh cun papa
1Abs man’s.name be-Npast-Indic say-Dist.Past-3 1Gen father
padobon cunta bedquidën
pado-bo-n cun tita bed-quid-n
deceased-Pl-Erg 1Gen mother grab-Agt.Nzr-Erg
‘‘I am Dunu,’’ said my dead father and parallel uncles, the ones who stole my mother.’
- (046) dunu nibëdosh nëid ted iccosh quiondash
dunu nibëd-o-sh nëid ted ic-o-sh que-onda-sh
man’s.name not.be-Past-3 this.one as.many.as be-Past-3 say-Dist.Past-3
‘‘There isn’t a Dunu (among my people), these (the following) are all there are,’’
he (the Dëmushbo) said.’
- (047) tudu yec mëo yec cocha
tudu ic-e-c mëo ic-e-c cocha
man’s.name be-Npast-Indic man’s.name be-Npast-Indic man’s.name
yec adaca tumi yec chemadapa
ic-e-c adaca tumi ic-e-c chema-dapa
be-Npast-Indic umm man’s.name be-Npast-Indic man’s.name-large
yec aid ted iccosh cun matses quiondash
ic-e-c aid ted ic-o-sh cun matses que-onda-sh
be-Npast-Indic that.one as.many.as be-Past-3 1Gen person say-Dist.Past-3
aidted iccosh
aid-ted ic-o-sh
that.one-as. many.as be-Past-3
‘There is a Tudu, there is a Mëo, there is a Cocha, there is a Tumi, there is a big Chema, that’s how many (names) there are among my people’’ he said, ‘‘That’s how many there are [lit. ‘were’]’’.
- (048) nidnu na baded min di nando caondash
nid-nu na-Ø baded min di nando-Ø ca-onda-sh
go-Intent:1 do-Imper quickly 2Gen hammock put.in-Imper say-Dist.Past-3
‘‘Let’s go! Quickly put your hammocks away!’’ they said.’

- (049)²² matses isambocquidën istuidquin
matses is-a-mbo ic-quid-n istuid-quin
 Indian see-Neg:Perf-Aug Aux-Agt.Nzr-Inst find-while:S/A>A
tauadondambi cumpa chedobëd capuquin
taua-do-onda-mbi cun papa chedo-bëd capu-quin
 begin-Incep-Dist.Past-1A 1Gen father too/etc-Com:S locomote-while:S/A>A
 ‘That’s when I first began finding unknown Indians, traveling around with my
 father and the other old men.’
- (050) aid matses uënësbud uënësbudac
aid matses redup uënës-bud-ac
 that.one Matses Distr die-Dur-Narr.Past
 ‘Those Matses have all died off one by one.’
- (051) abitedimbo uënësbudniac
abitedi-mbo uënës-bud-ne-ac
 all-Aug die-Dur-Distr-Narr.Past
 ‘Every single one of them has died.’
- (052) ubi abentsëqui bacuëbo iquec bacuëboudi
ubi abentsëc-bi bacuë-bo ic-e-c bacuë-bo-uid-bi
 1Abs one-Emph child-Pl be-Npast-Indic child-Pl-only-Emph
 ‘Only I (live)...there are kids (those younger than me), only kids.’
- (053) aduaquien cun chido pado në duchon
ado-ac-bi-en cun chido pado në ducho-n
 do.like.that-when:O>S/A-Emph-Contr 1Gen woman deceased here Lucho-Gen
tita tsutsi mibi ne caondambi cun chido
tita tsutsi mibi ne-e-Ø ca-onda-mbi cun chido
 mother who 2Abs be-Npast-Interr:1/2 say-Dist.Past-1A 1Gen woman
pado
pado
 deceased
 ‘Then, I asked my late wife, Lucho’s mother, “Who are you?”...my late wife.’
- (054) ubi dësi nec quiondash
ubi dësi ne-e-c que-onda-sh
 1Abs woman’s.name be-Npast-Indic say-Dist.Past-3
 ‘“I am Dësi,” she told me.’

²² Note: I haven’t been able to figure out the role of the -n on the first noun phrase. A second speaker judged it as correct, but could not elucidate role of the -n.

- (055) ma min champi nēid
ma min champi nēid
 how about 2Gen daughter this.one
 “How about your daughter, this one here?” (I asked).’
- (056) cun champi tupa nec quiondash
cun champi tupa ne-e-c que-onda-sh
 1Gen daughter woman’s.name be-Npast-Indic say-Dist.Past-3
 “My daughter is Tupa,” she said.’
- (057) auësh puduanequi chondash
a-uësh puduan-ec-bi cho-onda-sh
 there-Ev.Init:Intr set.out-while:S/A>S-Emph come-Dist.Past-3
 ‘Starting out from there, they came [eventually home].’
- (058) di nando caondash mēdimbon
di nando-Ø ca-onda-sh mēdin-bo-n
 hammock put.in-Imper tell-Dist.Past-3 deceased.person-Pl-Erg
 “Pack up your hammocks!” the now-deceased ones told them.’
- (059) di nandoash choec ushtuidondash
di nando-ash cho-ec ush-tuid-onda-sh
 hammock put.in-after:S/A>S come-while:S/A>S sleep-stop.&.do-Dist.Past-3
 ‘After putting their hammock away, as they came, they stopped to sleep.’
- (060) cuenenda tsidobique cuenenda
cuen-enda tsid-o-bi-que cuen-enda
 run.off-Neg.Imper gather-Past-Emph-so run.off-Neg.Imper
 “Don’t run off! We (1+3) have joined up (with you), so don’t run off!”.’
- (061) ushenquio databēdec
ush-en-quio databēd-e-c
 sleep-Neg-Aug sit.by-Npast-Indic
 ‘We watch them without sleeping.’ [historical present]

- (062) cuenenda inchëshën cuenenda min shubu isnu
cuen-enda inchësh-n cuen-enda min shubu is-nu
run.off-Neg.Imper dark-Loc run.off-Neg.Imper 2Gen house see-Intent:1
cun champi mibi menenu ashic min champi umbi
cun champi mibi mene-nu adashic min champi umbi
1Gen daughter 2Abs give-Intent:1 then 2Gen daughter 1Erg
bedec caondash matsesën
bed-e-c ca-onda-sh matses-n
grab-Npast-Indic say-Dist.Past-3 Matses-Erg
‘‘Don’t run off! Don’t run off at night! I plan to see your house; I’m going to
give you my daughter, and then I’m going to take your daughter,’’ the Matses told
them.’
- (063) ai caondash
ai ca-onda-sh
yes say-Dist.Past-3
‘‘Okay,’’ they said.’
- (064) adboedic uditsëc ushtuidec nidondash
adboedic uditsëc ush-tuid-ec nid-onda-sh
but a.bit.further.away sleep-stop.&.do-Purp:S/A>S go-Dist.Past-3
‘But he went to sleep a bit further away.’
- (065) auësh inchëshën niquiac niquiac
a-uësh inchësh-n nique-ac nique-ac
there-Ev.Init:Intr dark-Loc run.off-Narr.Past run.off-Narr.Past
‘They [a Dëmushbo man and his wife] ran off from there at night. They ran off!’
- (066)²³ anobida diade papa caondash
ano-bi-da diad-e-Ø papa ca-onda-sh
there-Emph-Uncert hang-Npast-Interr:1/2 father say-Dist.Past-3
‘He asked (the Dëmushbo), ‘‘Are you hanging there (in your hammock), father?’’.’
- (067) abentsëcuidi cuëdec nëbini diadec quec
abentsëc-uid-bi cuëd-e-c nëbi-ni diad-e-c que-ec
one-only-Emph call-Npast-Indic here-1S hang-Npast-Indic say-while:S/A>S
‘Only one answers back saying, ‘‘I’m hanging here’’.’

²³ Note: I’m not sure why *papa* ‘father’ is used here. Perhaps it is someone whose father was named Uaqui, and therefore in a father-son relationship with the Dëmushbo man named Uaqui.

- (068)²⁴ në cadpaic quiondash abentsëcuidi
në cad-pa-e-c que-onda-sh abentsëc-uid-bi
 here hang-Comment-Npast-Indic say-Dist.Past-3 one-only-Emph
 ‘Only one responded “I’m hanging here”.’
- (069) tabote tabo isnu abentsëcuidi cuëdeque
tabote tabo-Ø is-nu abentsëc-uid-bi cuëd-e-c-que
 torch light-Imper see-Intent:1 one-only-Emph call-Npast-Indic-because
 ‘“Light the torch! I want to see because only one answers”.’
- (070) ënden cuenac chema
ënden cuen-ac chema
 before run.off-Narr.Past man’s.name
 ‘Chema had run off earlier.’
- (071)²⁵ tupabëd auimbëd cuenac
tupa-bëd auin-bëd cuen-ac
 woman’s.name-Com:S 3Poss:wife-Com:S run.off-Narr.Past
 ‘He had run off with Tupa, with his wife.’
- (072)²⁶ acte nua cubudac uesnid bacuëuactapa
acte nua cubud-ac uesnid bacuë-ua-ac-dapa
 river large fill-Narr.Past curassow egg-Vzr:Tr-Act.Nzr-large
 ‘The river called uesnid bacuëuactapa [the Curuça River] had flooded very high.’
- (073) cusudac uquë yaquidana cuëmatsiuc
cusudac ëquë yaquidana cuëmatsiuc
 Curuça.River other.side Yaquerana.River other.bank
 ‘[Chema had crossed to] the other side of the Curuça River, on the other bank of
 the Yaquerana River [in Brazil].’

²⁴ Note: cad is not a Matses verb, it’s from the Dëmushbo language.

²⁵ At this point we know the identity of all five principal Dëmushbo of the story: two men, Chema and his brother Uaqui; two women, Tupa, Chema’s wife and Dësi, Uaqui’s wife (the speaker’s new wife), and one little girl, Dësi’s daughter, also named Tupa.

²⁶ The river name appears to not really be analyzable or translatable. A tentative translation would be: ‘big making of the curassow egg/chick.’

- (074) adashien atotsi quiash
ad-ash-bi-en atotsi que-ash
do.like.that-after:S/A>S-Emph-Contr what say-after:S/A>S
niquepac atotsi quiosh min utsi quiondash
nique-pa-ac atotsi que-o-sh min utsi que-onda-sh
run.off-Comment-Infer what say-Past-3 2Gen brother say-Dist.Past-3
‘After that, (the Matses) asked (Uaqui), “Why did he run off? What did your brother say?”.’
- (075) tsaodi ubi chiabi cuenac quiondash
tsaodi ubi chui-a-bi cuen-ac que-onda-sh
I don’t know 1Abs tell-Neg:Perf-Emph run.off-Infer say-Dist.Past-3
‘“I don’t know. He ran off without telling me,” [Uaqui] said.’
- (076) eee tsidnu caboquien
interjection tsid-nu ca-bo-ac-bi-en
Surprise gather-Intent:1 tell-Prior-when:O>S/A-Emph-Contr
niquepac quiondash
nique-pa-ac que-onda-sh
run.off-Comment-Infer say-Dist.Past-3
‘“Hey! I told him, ‘Let’s join up,’ but nevertheless he ran off,” he said.’
- (077) ashic nunte aquec nidnu nua actiamè nua
adashic nunte ac-ec nid-nu nua acte-amè nua
then:Intr palm.trunk.canoe do-Purp:S/A>S go-Intent:1 large river-large large
cuenoshe nunte aquec nidnu
cuen-o-sh-que nunte ac-ec nid-nu
pass.by-Past-3-so palm.trunk.canoe do-Purp:S/A>S go-Intent:1
‘Then, “I’m going to go make a palm trunk canoe, the big river is [lit. goes by] large [i.e., is flooded], so I’m going to make a palm trunk canoe.’
- (078)²⁷ acte potiacaccosh pote potiaccoshe
acte pote-ac-o-sh redup pote-ac-o-sh-que
river cross.river-Infer-Past-3 Distr cross-Infer-Past-3-so
nunte aquec nidnu quianec
nunte ac-ec nid-nu que-anec
palmcanoe do-Purp:S/A>S go-Intent:1 say-after:S/A>S
‘He crossed the river after saying, “They crossed the river, so I’m going to make palm canoe.’

²⁷ Reduplication here specifies that more than one person crossed the river (Chema and Tupa).

- (079)²⁸ nēmbo cumpa cunta bedquid caic
nē-mbo cun papa cun tita bed-quid ca-ec
 here-Aug 1Gen father 1Gen mother grab-Agt.Nzr say-while:S/A>S
cumpabēdi nidec nidnu caondambi
cun papa-bēd-bi nid-ec nid-nu ca-onda-mbi
 1Gen father-Com:S-Emph go-Purp:S/A>S go-Intent:1 say-Dist.Past-1A
 ‘Telling my father, the one who captured my mother, “I want to go with my
 father,” I said.’
- (080) tsusio mēdimbo cumpabēdi nidnu
tsēsio mēdin-bo cun papa-bēd-bi nid-nu
 old.man deceased.person-Pl 1Gen father-Com:S-Emph go-Intent:1
cac chiata nēmbobi nuquibi tsadnu
ca-ac chia-ta nē-mbo-bi nuqui-bi tsad-nu
 tell-when:O>S/A wait-Imper here-Aug-Emph 1+2-Emph be:Pl-Intent:1
quiondash
que-onda-sh
 say-Dist.Past-3
 ‘The (other) now-deceased old men said, “Wait! We are going to stay right here
 together”.’
- (081) aton chidobēta chiondash tsusiodapa cun chido
aton chido-bēta chui-onda-sh tsēsio-dapa cun chido
 3Gen woman-Com:O tell-Dist.Past-3 old.man-large 1Gen woman
padon bēnē
pado-n bēnē
 deceased-Gen male
 ‘They consulted the old man, the husband of my late wife, and his wife.’
- (082) atotsi quiash cuenosh caondash
atotsi que-ash cuen-o-sh ca-onda-sh
 what say-after:S/A>S run.off-Past-3 tell-Dist.Past-3
 “‘Why did they run off?’” they asked.’
- (083) tsaodi ubi chienquo nidanniac inchēshēn
tsaodi ubi chui-en-quo nid-an-ne-ac inchēsh-n
 I.don’t.know 1Abs tell-Neg-Aug go-Incep-Distr-Infer dark-Loc
niquiac quiondash
nique-ac que-onda-sh
 run.off:Pl-Infer say-Dist.Past-3
 ‘I don’t know, they took off without telling us, they ran off at night,’ they said.’

²⁸ nēmbo here means something like ‘that one.’

- (084)²⁹ cun chido pado caic nestan tita
cun chido pado ca-ec nes-tan-Ø tita
 1Gen woman deceased say-while:S/A>S bathe-go-Imper daughter-in-law
caondash
ca-onda-sh
 say-Dist.Past-3
 ‘They told my non-deceased wife saying, “Go bathe, daughter-in-law!”.’
- (085) aduaquic cun chido pado ubi acte
ado-ac-bi-c cun chido pado ubi acte
 do.like.that-when:O>S/A-Emph-Same 1Gen woman deceased 1Abs stream
nantanuësh nestiapimbo iquebi nēbi cun acte
nantan-uësh nes-tiapi-mbo ic-e-bi nē-bi cun acte
 on-Ev.Init:Intr bathe-Neg.Abil-Adjzr be-Npast-1S here-Emph 1Gen water
nidec quiondash
nid-e-c que-onda-sh
 stand-Npast-Indic say-Dist.Past-3
 ‘When they asked her that, my late wife responded, “I don’t want to bathe at the stream, my water is here,” she said.’
- (086) baded nestan
baded nes-tan-Ø
 quickly bathe-go-Imper
 “‘Quickly, go bathe!’ (they told her).’
- (087) aduaqui cun chido pado puduenondash matsu
ado-ac-bi cun chido pado puduen-onda-sh matsu
 do.like.that-when:O>S/A-Emph 1Gen woman deceased exit-Dist.Past-3 pot
bedanec acten umanucuësh nesnu
bed-anec acte-n umanuc-uësh nes-nu
 grab-after:S/A>S water-Inst outside-Ev.Init:Intr bathe-Intent:1
quec
que-ec
 say-while:S/A>S
 ‘Then, my now-deceased wife exited saying, “I’m going to get my pot and bathe with water outside the house”.’
- (088) tec tiin aton bënë cuessunniondash
imitation imitation aton bënë cuessunne-onda-sh
 shotgun.blast person.falling 3Gen husband kill-Dist.Past-3
 ‘Bang! Thud! (One of the Matses) killed her husband.’

²⁹ A second speaker would replace caic with caquin.

- (089) baded chido bed mado quiondash
baded chido bed-Ø mado que-onda-sh
 quickly woman grab-Imper son say-Dist.Past-3
 “‘Quickly, grab the woman, son!’ (the speaker’s uncle) said.’
- (090) aduac bedondambi bacuëcquin
ado-ac bed-onda-mbi bacuë ic-quin
 do.like.that-when:O>S/A grab-Dist.Past-1A child be-while:S/A>A
caniactsëcquin
cania ic-tsëc-quin
 young.man be-Dim-while:S/A>A
 ‘Then I took her (as my wife) even though I was a kid, a very young man.’
- (091) aduaqui chudmianenquio
ado-ac-bi chud-me-an-en-quio
 do.like.that-when:O>S/A-Emph copulate.with-Caus-Antpass-Neg-Aug
 ‘After that, she wouldn’t let me have sex with her.’
- (092)³⁰ bacuëbon chudtiapibi quiondash
bacuë-bo-n chud-tiapi-bi que-onda-sh
 child-Pl-Erg copulate.with-Neg.Abil-1S say-Dist.Past-3
 “‘I won’t let children have sex with me,” she said.’
- (093) bacuëbon chudtiapimbo iquebi quiondash
bacuë-bo-n chud-tiapi-mbo ic-e-bi que-onda-sh
 child-Pl-Erg copulate.with-Neg.Abil-Adjzr be-Npast-1S say-Dist.Past-3
 “‘I won’t let children have sex with me,” she said.’
- (094) adashic padpiden udibi chema cuenaid
adashic padpide-en udibi chema cuen-aid
 then:Intr again-Manr:Tr closer.than man’s.name run.off-Pat.Nzr
nibëmben nibëmbenash choash cumpa pado
redup nibën-ben-ash cho-ash cun papa pado
 Distr search-Dur-after:S/A>S come-after:S/A>S 1Gen father deceased
 ‘Then, after continuously searching all over for Chema’s trail close by, my late father came back.’
- (095) cuessunnequindaccosh mado
cuessunne-quin-da ic-o-sh mado
 kill-while:S/A>A-Uncert be-Past-3 son
 “‘Did they kill him, son?’” (he asked).’

³⁰ The form -tiapibi seems to be archaic speech.

- (096) ai cuessunniosh chido bed cac bedombi
ai cuessunne-o-sh chido bed-Ø ca-ac bed-o-mpi
 yes kill-Past-3 woman grab-Imper say-when:O>S/A grab-Past-1A
caondambi
ca-onda-mpi
 say-Dist.Past-1A
 “‘Yes, they killed him; they said, ‘Take the woman!’ so I took her,” I told him.’
- (097) bed cac bedombi caondambi
bed-Ø ca-ac bed-o-mpi ca-onda-mpi
 grab-Imper say-when:O>S/A grab-Past-1A say-Dist.Past-1A
 “‘They told me, ‘Take her!’ so I took her,” I told him.’
- (098) badedi potiaquec nidnu quiondash
baded-bi pote-ec nid-nu que-onda-sh
 quickly-Emph cross.river-Purp:S/A>S go-Intent:1 say-Dist.Past-3
 “‘I’m going to leave so I can cross the river quickly,” he said.’
- (099) nëmbobida mibentsëqui ushe
në-mbo-bi-da mi-ben-tsëc-bi ush-e-Ø
 here-Aug-Emph-Uncert 2-alone-Dim-Emph sleep-Npast-Interr:1/2
quiondash
que-onda-sh
 tell-Dist.Past-3
 “‘Are you going to sleep here alone?’” he asked me.’
- (100) ai ubentsëqui ushebi caondambi
ai u-ben-tsëc-bi ush-e-bi ca-onda-mpi
 yes 1-alone-Dim-Emph sleep-Npast-1S say-Dist.Past-1A
 “‘Yes, I’m going to sleep alone,” I said.’
- (101) chido cuessunnemenda cac ushenquio iquebi
chido cuessunne-me-enda ca-ac ush-en-quio ic-e-bi
 woman kill-Caus-Neg.Imper say-when:O>S/A sleep-Neg-Aug Aux-Npast-1S
papa caondambi cunta bedquid caquin
papa ca-onda-mpi cun tita bed-quid ca-quin
 father say-Dist.Past-1A 1Gen mother grab-Agt.Nzr say-while:S/A>A
 “‘Don’t let the woman kill you,” he said, and then I said, “I’m not going to sleep,
 father,” saying that to the one who captured my mother.’

- (102) ushenquio iquebi chidon cuessunnetiapimbo
ush-en-quo ic-e-bi chido-n cuessunne-tiapi-mbo
sleep-Neg-Aug Aux-Npast-1S woman-Erg kill-Neg.Abil-Adjzr
iquebi ushenquio iquebi caondambi
ic-e-bi ush-en-quo ic-e-bi ca-onda-mbi
Aux-Npast-1S sleep-Neg-Aug Aux-Npast-1S say-Dist.Past-1A
‘I’m not going to sleep, I will not be killed by the woman, I won’t sleep,’ I told him.’
- (103) ashic aid umbi bedboqui aton champi
adashic aid umbi bed-bo-ac-bi aton champi
then that.one 1Erg grab-Prior-when:O>S/A-Emph 3Gen daughter
nëctsec iccondash bacuëmpi në caputsec
në-tsëc ic-onda-sh bacuë-mpi në capu-tsëc-ec
here-Dim be-Dist.Past-3 child-small here locomote-Dim-Advzr:Intr
‘Also, that one, (the woman) whom I had just captured had a little daughter (like) this [holding hand at height of a small child’s head], a little kid (like) this [holding up hand again] that could already walk.’
- (104) cun champi bundoaque piush bëchi mëtetan
cun champi bundo-ac-que piush bëchi më-te-tan-Ø
1Gen daughter get.hungry-Infer-so tortoise fat branch-cut-go-Imper
quiondash
que-onda-sh
say-Dist.Past-3
‘My daughter is hungry, so go cut down some piush bëchi fruits!’ she said.’
- (105) ashsho mëteshunondambi
ad-sho më-te-shun-onda-mbi
do.like.that-when:S/A/O>O branch-cut-Appl-Dist.Past-1A
‘When she said that, I cut down some branches [with fruits] for her.’
- (106) aid chec tabadondash
aid che-ec tabad-onda-sh
that.one eat.unchewed-while:S/A>S stand:Pl-Dist.Past-3
‘They stayed there eating those.’
- (107) cuenenda min bënë utsi cuenac padec
cuen-enda min bënë utsi cuen-ac pad-ec
run.off-Neg.Imper 2Gen husband other run.off-Past.Act.Nzr same.as-Manr:Intr
caondambi
ca-onda-mbi
tell-Dist.Past-1A
‘Don’t run off just like your brother-in-law [lit. ‘other husband’] did,’ I told her.’

- (108) cuentiapimboquebi cun matsespenquio niosh
cuen-tiapi-mbo ic-e-bi cun matses-penquio ne-o-sh
 run.off-Neg.Abil-Adjzr be-Npast-1S 1Gen person-Neg be-Past-3
aidēmbi cun matses uesquin cuessunsecaondash
aid-n-bi cun matses ues-quin cuessunseca-onda-sh
 that.one-Erg-Emph 1Gen person finish.off-while:S/A>A kill:Pl-Dist.Past-3
ubi bedaid nec ashic mimbitsen ubi
ubi bed-aid ne-e-c adashic mimbi-tsen ubi
 1Abs grab-Pat.Nzr be-Npast-Indic then:Intr 2Erg-next 1Abs
bedoc quiondash
bed-o-c que-onda-sh
 grab-Past-Indic say-Dist.Past-3
 “I don’t want to run away, they were not my people, those same ones killed off
 all my people, I am a captured one, and then you’ve captured me next,” she said.’
- (109) cun matses cuessunsecaquin abitedimbo cuessunsecaquin
cun matses cuessunseca-quin abitedi-mbo cuessunseca-quin
 1Gen person kill:Pl-while:S/A>A all-Aug kill:Pl-while:S/A>A
bedondashi adembidi mimbitsen bedpobi
bed-onda-sh-bi adembidi mimbi-tsen bed-pa-o-bi
 grab-Dist.Past-3-Emph likewise:Tr 2Erg-next grab-Comment-Past-1O
quiondash
que-onda-sh
 say-Dist.Past-3
 “They captured me killing all my people, now you similarly have captured me,”
 she said.’
- (110) mimbi bedebi quiondash
mimbi bed-e-bi que-onda-sh
 2Erg grab-Npast-1O say-Dist.Past-3
 “Now you’re capturing me,” she said.’
- (111) ashsho chiondambi
ad-sho chui-onda-mbi
 do.like.that-when:S/A/O>O tell-Dist.Past-1A
 ‘When she said that, I told her...[uncompleted sentence].’

- (112) aduaquien cuëmatiucueësh aton
ado-ac-bi-en cuëmatiuc-uësh aton
do.like.that-when:O>S/A-Emph-Contr on.the.other.bank.of-Ev.Init:Intr 3Gen
chido nianaid shubiosh queshun nunten
chido nian-aid shubi-o-sh que-shun nunte-n
woman leave-Pat.Nzr cry-Past-3 say-after:S/A>A palm.trunk.canoe-Inst
potiac potiacondash nunten
redup pote-onda-sh nunte-n
Distr cross.river-Dist.Past-3 palm.trunk.canoe-Inst
‘Then, (the speaker’s father) after saying, “His wife whom he left behind was crying on the other side of the river,” they [the speaker’s father and the other old men] crossed the river (making several trips) in a palm trunk canoe.’
- (113) nëmbobi ushta mado mibentsëqui
në-mbo-bi ush-ta mado mi-ben-tsëc-bi
here-Aug-Emph sleep-Imper son 2-alone-Dim-Emph
chuibanequien dada cuenashe quiondash
chui-ban-ec-bi-en dada cuen-ash-e que-onda-sh
tell-Iter-Purp:S/A>S-Emph-Contr man run.off-Conjec-because say-Dist.Past -3
“‘Sleep here alone, son, because perhaps [Chema] ran off in order to tell his comrades,” he said.’
- (114) nuntan icquid chuibanec nidashe nëmbobi
nuntan ic-quid chui-ban-ec nid-ash-que në-mbo-bi
inside be-Agt.Nzr tell-Iter-Purp:S/A>S go-Conjec-so here-Aug-Emph
mibentsëqui ic-ta cuessunnemenda cunta
mi-ben-tsëc-bi ic-ta cuessunne-me-enda cun tita
2-alone-Dim-Emph be-Imper kill-Caus-Neg.Imper 1Gen daughter-in-law
quiondash
que-onda-sh
say-Dist.Past-3
“‘Perhaps he [Chema] went to inform the ones that are inside [the Dëmushbo communal house], so stay here alone, and don’t let my daughter-in-law [the newly-captured woman] kill you,” he said.’
- (115) cunta quiondash
cun tita que-onda-sh
1Gen daughter-in-law say-Dist.Past-3
“‘My daughter-in-law,” he said.’

- (116) umbi bedacsho isash cun madon chido
umbi bed-ac-sho is-ash cun mado-n chido
 1Erg grab-Infer-when:S/A/O>O see-after:S/A>S 1Gen son-Gen woman
quiash cunta quiondash
que-ash cun tita que-onda-sh
 say-after:S/A>S 1Gen daughter.in.law say-Dist.Past-3
 ‘After seeing that I had taken her, he said, “My son’s wife,” and then said, “My daughter-in-law”.’
- (117)³¹ matses umbi bedboed chido caic
matses umbi bed-boed chido ca-e-c
 Indian 1Erg grab-Past.Nzr woman say-Npast-Indic
 ‘He says that to the Indian that I had captured, the woman.’
- (118) cuenenda cunta quiondash
cuen-enda cun tita que-onda-sh
 run.off-Neg.Imper 1Gen daughter.in.law say-Dist.Past-3
 “Don’t run off, daughter-in-law!” he told her.’
- (119) ai cuenenquioquebi cun matses aidën
ai cuen-en-quio ic-e-bi cun matses aid-n
 yes run.off-Neg-Aug be-Npast-1S 1Gen person that.one-Erg
cuessunsecaondash abitedimbo pian siondash
cuessunseca-onda-sh abitedi-mbo pia-n se-onda-sh
 kill:Pl-Dist.Past-3 all-Aug arrow-Inst pierce-Dist.Past-3
abitedimbo cun matses quiondash
abitedi-mbo cun matses que-onda-sh
 all-Aug 1Gen person say-Dist.Past-3
 ‘Okay, I won’t run off, they killed my people, all of them, they shot with arrows all of my people,” she said.’
- (120) mimbi aden ubi chienquioccoc ënden
mimbi ad-en ubi chui-en-quio ic-o-c ënden
 2Erg do.like.that-Advzr:Tr 1Abs tell-Neg-Aug Aux-Past-Indic:1/2 before
cuessunnetsenombi caondash
cuessunne-tsen-o-mbi ca-onda-sh
 kill-almost-Past-1A tell-Dist.Past-3
 “You didn’t tell me so earlier, (otherwise) I would have killed him [Chema, who ran off] earlier [knowing that they were killers]” (the speaker’s father) told her.’

³¹ A second speaker does not consider this a well-formed sentence.

- (121) chienda quiosh quiondash
chui-enda que-o-sh que-onda-sh
 tell-Neg.Imper say-Past-3 say-Dist.Past-3
 ““They told me not to tell,” she said.’
- (122) min matsesi neque chienda quiosh
min matses-bi ne-e-c-que chui-enda que-o-sh
 2Gen person-Emph be-Npast-Indic-so tell-Neg.Imper say-Past-3
quiondash
que-onda-sh
 say-Dist.Past-3
 ““They are your own people, so don’t tell them,’ they told me,” she said.’
- (123) cun matses penquio nec isacmaid matses utsi
cun matses penquio ne-e-c is-acmaid matses utsi
 1Gen person Neg be-Npast-Indic see-Neg.Perf.Nzr people other
nec caondambi quiondash
ne-e-c ca-onda-mbi que-onda-sh
 be-Npast-Indic say-Dist.Past-1A say-Dist.Past-3
 ““They are not my (tribe’s) people, they are other people whom I have never
 before seen,’ I told them,” she said.’
- (124) cun matsesën onqueten onquec adquidi
cun matses-n onquete-n onque-ec ad-quid-bi
 1Gen person-Gen language-Inst talk-while:S/A>S do.like.that-Agt.Nzr-Emph
matses utsi nec caondambi quiondash
matses utsi ne-e-c ca-onda-mbi que-onda-sh
 Indian other be-Npast-Indic say-Dist.Past-1A say-Dist.Past-3
 ““They speak my people’s language, but those are another tribe of people,’ I told
 them,” she said.’
- (125) adnubien nidan nidanec
ad-nuc-bi-en redup nid-an-e-c
 do.like.that-while:Diff.Ref-Emph-Contr Distr go-Incep-Npast-Indic
nëmbobi ushta quianec
në-mbo-bi ush-ta que-anec
 here-Aug-Emph sleep-Imper say-after:S/A>S
 ‘Then, as they leave, they tell me, “(You stay and) sleep right here!”.’

- (126) nidan nidambocnoshombien titado
redup nid-an-boc-no-shun-bi-en titado
 Distr go-Incep-Act.Nzr.Rec.Past-Loc-Ev.Init.Tr-Emph-Contr peach.palm
pequid chema cuenaid nadancabanquimbic
pe-quid chema cuen-aid nandanca-ban-quin-bi-c
 eat-Agt.Nzr man's.name run.off-Pat.Nzr pursue-Iter-while:S/A>A-Emph-Separ
podqued utsinuësh choec nadec
podqued utsi-no-uësh cho-e-c nad-ec
 path other-Loc-Ev.Init.Intr come-Npast-Indic like.this-Manr:Intr
 “‘Then they follow Chema, who had run off, and come upon a place where many
 people who had gone to eat peach palm fruits had passed by the path, having
 come from another path like this [speaker makes a sweeping movement with
 hand]’.”
- (127) tabadtuidshun titado pequid istuidec
tabad-tuid-shun titado pe-quid istuid-e-c
 stand:Pl-stop.&.do-after:S/A>A peach.palm eat-Agt.Nzr find-Npast-Indic
cheman chienquiocquin datanaccosh
chema-n chui-en-quoio ic-quin datan-ac-o-sh
 man's.name-Erg tell-Neg-Aug Aux-while:S/A>A pass.by-Infer-Past-3
quiondash
que-onda-sh
 say-Dist.Past-3
 “‘We come upon the ones who had stopped to rest and were eating peach palm
 fruits, whom Chema had evidently passed by without informing them Chema [that
 the Matses may be coming],’ they told me.”
- (128) cumapenec chushcampadennedo
cumapen-ec chushca-an-pa-denned-o
 intensely-Manr:Intr reprimand-Incep-Comment-Dist.Past.Hab.Nzr-Pl
chuitiapiibi qeshun chienquiocquin
chui-tiapi-bi que-shun chui-en-quoio ic-quin
 tell-Neg.Abil-1S say-after:S/A>A tell-Neg-Aug be-while:S/A>A
datanaid cuesosh quiondash
datan-aid cues-o-sh que-onda-sh
 pass.by-Pat.Nzr kill-Past-3 say-Dist.Past-3
 “‘They killed the ones whom he (Chema) passed by without telling them [about
 the Matses] saying, ‘They are the ones that are always reprimanding me, I won’t
 inform them,’” they told me.”
- (129) chido bedac
chido bed-ac
 woman grab-Narr.Past
 ‘They captured a woman.’

- (130) adnubi abitedimbo
ad-nuc-bi abitedi-mbo
do.like.that-while:Diff.Ref-Emph all-Aug
‘Then they all... [last part of sentence intelligible].’
- (131) nuntambida nao
nuntan-bi-da na-o-Ø
inside-Emph-Uncert do-Past-Interr:1/2
“‘Did you do it (kill them) inside (their house)?’” [the ones who stayed back asked].’
- (132) podquied nantan naombi chomenu caidi
podqued nantan na-o-mbi cho-me-nu ca-aid-bi
path on do-Past-1A come-Caus-Intent:1 say-Pat.Nzr-Emph
isosh shuinte mapi podo bēpucte titado
is-o-sh shuinte mapi podo bēpucte titado
see-Past-3 two.toed.sloth head frond leaf peach.palm
sandonon tequidēn isosh ashsho
sando-nun te-quid-n is-o-sh ad-sho
put.in:Pl-Purp:S/A>A cut-Agt.Nzr-Erg see-Past-3 do.like.that-when:S/A/O>O
cuesosh matses utsi chema nidaccosh podquied utsin
cues-o-sh matses utsi chema nid-ac-o-sh podqued utsi-n
kill-Past-3 Indian other man’s.name go-Infer-Past-3 path other-Inst
quiondash
que-onda-sh
say-Dist.Past-3
“‘I did it right on the path, but one who I wanted to let come closer [lit. the one about whom I said “I’m going to let him get closer”] saw me, one that was cutting shuinte mapi palm fronds in order to put peach palm fruits on them saw me and I killed him, the other person, Chema, escaped via another path,” they said.’
- (133) adashic nidobi quiondash tsusio mēdimbo
adashic nid-o-bi que-onda-sh tsēsio mēdin-bo
then go-Past-1S say-Dist.Past-3 old.man deceased.person-Pl
“‘After that, we moved on,” said the non-deceased old men.’
- (134) abitedimbo uēnēsbudniac mēdimbo aid
abitedi-mbo uēnēs-bud-ne-ac mēdin-bo aid
all-Aug die-Dur-Distr-Narr.Past deceased.person-Pl that.one
‘All of them have died off, the now-deceased ones...those.’

- (135) nidobi quiondash isaquien tied
nid-o-bi que-onda-sh is-ac-bi-en tied
 go-Past-1S say-Dist.Past-3 see-when:O>S/A-Emph-Contr swidden
sedquec
sedque-e-c
 shine-Npast-Indic
 “We went,” they said, “and were surprised to see a swidden shining through.”’
- (136)³² puduedshun isaquien titado pequid
pudued-shun is-ac-bi-en titado pe-quid
 enter-after:S/A>A see-when:O>S/A-Emph-Contr peach.palm eat-Agt.Nzr
cuessunniondambi quiondash
cuessunne-onda-mbi que-onda-sh
 kill-Dist.Past-1A say-Dist.Past-3
 “After entering [the swidden hunt], we were surprised to find some people eating
 peach palm fruits, and we killed them,” they told me.’
- (137)³³ titado pequid chosho
titado pe-quid cho-sho
 peach.palm eat-Agt.Nzr come-when:S/A/O>O
cuessunneshumbidanec
cuessunne-shun-bidan-e-c
 kill-Appl-go.do.go:Tr-Npast-Indic
 “As the ones eating peach palm fruits are coming, we kill them and then keep on
 going”.’ [historical present]
- (138) chido bedbidanec
chido bed-bidan-e-c
 woman grab-go.do.go:Tr-Npast-Indic
 ‘We then capture a woman and keep on going.’
- (139) aton shubuno istuidac poshto codocaid dadpen
aton shubu-no istuid-ac poshto codoca-aid dadpen
 3Gen house-Loc find-when:O>S/A woolly.monkey boil-Pat.Nzr many
tabadec matsun pachid chedo codocac
tabad-e-c matsu-n pachid chedo codoca-ac
 sit:Pl-Npast-Indic pot-Loc manioc too/etc boil-Infer
 ‘We find their house and it has a lot of cooked woolly monkeys sitting in clay
 pots, and they’d cooked manioc, too.’

³² A second speaker considers this an ill-formed sentence (missing some words).

³³ Note that this is hearsay: in historical present evidential distinctions are not made. Cf. the preceding sentence, reported in the past tense, where the event *is* reported as hearsay.

- (140) niquiac toncasho tantiash
nique-ac tonca-sho tantia-ash
run.off-Narr.Past shoot.gun-when:S/A/O>O listen-after:S/A>S
‘They had run off after hearing the him shoot.’
- (141) aton utsi cuesquin toncasho
aton utsi cues-quin tonca-sho
3Gen brother kill-while:S/A>A shoot.gun-when:S/A/O>O
tantiash niquiac
tantia-ash nique-ac
listen-after:S/A>S run.off-Narr.Past
‘They ran off after hearing the gun shots when their brothers were being killed.’
- (142) ashic taë netanec chouac nidondash
adashic taë ne-tanec cho-ua-ac nid-onda-sh
then:Intr foot leave-after:S/A>S come-again-when:O>S/A go-Dist.Past-3
quiondash
que-onda-sh
say-Dist.Past-3
‘‘Then, losing his trail, he came back, (and then) they all left,’’ they said.’
- (143) nëmbo nidac podqued nibëdacno niquiac
në-mbo nid-ac podqued nibëd-ac-no nique-ac
here-Aug go-Infer path not.be-Act.Nzr-Loc run.off-Infer
‘‘They went this way, they ran off where there is no path’’.
- (144) ashic isnu nid nëid podquiedën nidshun
adashic is-nu nid-Ø nëid podqued-n nid-shun
then:Intr see-Intent:1 go-Indic this.one path-Inst go-after:S/A>A
queshun isaquien nadambo cain cainac
que-shun is-ac-bi-en nadambo redup cain-ac
say-after:S/A>A see-when:O>S/A-Emph-Contr much Distr wait-Narr.Past
‘Then, after saying, ‘‘Let’s search by this path,’’ after leaving, we were surprised to find that they were waiting for us.’
- (145) cainaye nidnu cho senushe quianec
cain-ac-que nid-nu cho-Ø se-nushe que-anec
wait-Infer-so go-Intent:1 come-Imper pierce-Fut.Poten:3 say-after:S/A>S
chondash abitedi
cho-onda-sh abitedi
come-Dist.Past-3 all
‘After saying, ‘‘They are waiting for us, so come, let’s leave because they may shoot us,’’ they all came.’

- (146) chondash abitedimbo
cho-onda-sh abitedi-mbo
 come-Dist.Past-3 all-Aug
 'Every one of them came.'
- (147) cun chido pado umbi bēondac
cun chido pado umbi bē-onda-c
 1Gen woman deceased 1Erg bring-Dist.Past-Indic:1/2
 'I brought my late wife.'
- (148) nadquid daəd chido bedac nēid ted
nad-quid daəd chido bed-ac nēid ted
 like.this-Agt.Nzr two woman grab-Narr.Past this.one as.many.as
 'Thus, we captured two women, this many [speaker holds up two fingers].'
- (149) ēmbibic machodapa cun madon tita
umbi-bi-c macho-dapa cun mado-n tita
 1Erg-Emph-Separ old.woman-large 1Gen son-Gen mother
machodapambo bedondambi
macho-dapa-mbo bed-onda-mbi
 old.woman-large-Aug grab-Dist.Past-1A
 'I, myself, captured a very old woman, a very old woman, the mother of my son.'
- (150) aidic chudnu cac bacuēbon
aid-bi chud-nu ca-ac bacuē-bo-n
 that.one-Emph copulate.with-Intent:1 tell-when:O>S/A child-PI-Erg
chudtiapimbo iquebi min bacuē utsidabi
chud-tiapi-mbo ic-e-bi min bacuē utsi-da-bi
 copulate.with-Neg.Abil-Adjzr be-Npast-1S 2Gen child other-Uncert-1S
ne quiondash
ne-e-Ø que-onda-sh
 be-Npast-Interr:1/2 say-Dist.Past-3
 'When I told that one, "I'm going to have sex with you now," she responded "I won't have sex with children, do you think I'm your age-mate or something?" she said [speaker laughs].'
- (151) min bacuē utsidabi ne quiondash
min bacuē utsi-da-bi ne-e-Ø que-onda-sh
 2Gen child other-Uncert-1S be-Npast-Interr:1/2 say-Dist.Past-3
 "'Do you think I'm your age-mate?" she said.'
- (152) adequi nuntambi chondabi
ad-ec-bi nuntan-bi cho-onda-bi
 do.like.that-Advzr.Intr-Emph inside-Emph come-Dist.Past-Emph
 'In that deplorable state of affairs we came home.'