

TOPICS IN THE NEZ PERCE VERB

A Dissertation Presented

by

AMY ROSE DEAL

Submitted to the Graduate School of the
University of Massachusetts Amherst in partial fulfillment
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I and this mystery here we stand.

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This little artifact stands for a process. I would like to express my thanks to many people who have contributed along the way.

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ABSTRACT

TOPICS IN THE NEZ PERCE VERB

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This dissertation investigates several topics in the morphology, syntax and semantics of the Nez Perce verb and verbal clause.

The first part of the dissertation focuses on the morphological segmentation of the Nez Perce verb and on the semantic description of the verb and clause. Chapter 1 provides a grammar sketch. Chapter 2 discusses the morphology, syntax and semantics of verbal suffix complexes for tense, space, aspect and modality. Chapter 3 investigates the modal suffix *o'qa*, which is variously translated *can*, *could (have)*, *would (have)*, *should*, *may*, and *must*, and used to make circumstantial, deontic and counterfactual claims. I argue that this suffix has only a non-epistemic possibility meaning, and that apparent necessity meanings are artifacts of translation. Chapter 4 investigates the future suffix *u'*, generally translated *will*. Based on evidence from truth-value judgment tasks, conjunctions of *u'* sentences describing incompatible states of affairs, and negation, I argue that *u'* sentences have non-

modal truth conditions. I also discuss challenges to this analysis from free choice licensing and from certain acceptable conjunctions of incompatible *u'* sentences.

The second part of the dissertation explores the syntax of the verb and clause as revealed by the system of case-marking. Nez Perce case follows a tripartite pattern, with no case on intransitive subjects, and both ergative and objective cases in transitive clauses. Transitive clauses may alternatively surface with *no* case, however. I show that caseless transitive clauses in Nez Perce come in two syntactically and semantically distinguished varieties. In one variety, the subject binds a possessor phrase within the object. Chapter 6 takes up this construction together with possessor raising, which I analyze as involving movement to a θ -position. I argue that the absence of case under possessor-binding reflects an anaphor agreement effect. In the other variety of caseless clause, the object is a weak indefinite. Chapter 7 concludes that such objects are not full DPs. In chapter 8, I propose a morphological theory of case-marking which captures the cased/caseless distinction for transitive clauses. Both ergative and objective cases are analyzed as morphological results of the syntactic system of agreement.

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INTRODUCTION

This dissertation investigates several topics in the morphology, syntax and semantics of the Nez Perce verb and verbal clause. The topics chosen here reflect ways in which Nez Perce grammar casts light on cross-linguistic investigation and on the process of integrating understudied languages into linguistic theories and typologies.

Structure of the dissertation

The chapters to follow center around two major themes.

Overview of part I: morphemes, meaning and structure

The first part of the dissertation works to segment the verb and to locate, to the degree possible, cross-linguistically familiar structures and categories. This process is a somewhat elaborate one, given that Nez Perce is a highly synthetic language where words can reach considerable complexity. The following single-word sentences provide some initial exemplification of this complexity; boxes show the root morpheme.

- (1) captoktaka'ykt'ipáacwisinmqa

ceptukte-ka'yk-t'ipeec-wi-siin-m-qa

crawl-move-DESID-VERBALIZER-IMPERF.PL-CIS-REC.PAST

We wanted to come crawling (Aoki, 1994, 208)

- (2) píiwapciy'awnaq'iya

píi-wep-ci-y'aw-naq'i- \emptyset -ye

RECIP-with.hand-be.violent-finish-P-REM.PAST

The war was over (Aoki, 1994, 469)

lit. The mutual killing ended.

(3) 'eneescutkuptece

'e-nees-cu-tukup-te-ce-∅

3OBJ-O.PL-with.pointed.object-set.fire-go.away-IMPERF-PRES

I am going away to set fire to them (Aoki, 1994, 794)

The first part of the dissertation is made up of four chapters. Chapter 1 provides an introduction to the language and its verbal system, outlining the morphological make-up of the verb in areas where this can be done in a straightforward fashion. Chapter 2 then grapples with the morphological, syntactic and semantic treatment of inflectional suffixes for aspect, mood, tense and space marking, whose segmentation, categorization and interpretation pose non-trivial challenges.

Chapters 3 and 4 take up two of the inflectional suffixes from a semantic point of view. Chapter 3 studies the modal meaning of suffix *o'qa*, and works to situate it in a larger space of modal expressions in natural languages. This proves an interesting task in view of the quite large range of modal interpretations available to verbs with this suffix.

(4) wihne-**no'qa** watiisx

go-QA.PROSP 1.day.away

a. I should go tomorrow.

b. I could have gone yesterday.

I argue that suffix *o'qa* should be classified as a *non-epistemic possibility* modal. It is used for pure circumstantial, deontic and counterfactual modalities; it cannot be used as an epistemic modal. Although *o'qa*-marked verbs are occasionally translated with English necessity modals, e.g. *should* in (4), I argue that this is an artifact of translation only. Evidence for a true necessity meaning for *o'qa*, particularly where it falls in the scope of negation, proves conspicuously absent.

Chapter 4 studies the meaning of future suffix *u'*.

- (5) taʔc hi-tqiik-u' huusus
soon 3SUBJ-land-PROSP head
It's going to land on heads.

The analysis of future sentences in *u'* poses a puzzle regarding modal truth-conditions. Sentences like (5) are judged true or false depending purely on actual events, suggesting a non-modal truth condition; but in certain cases, reference to modality in the treatment of *u'* sentences seems unavoidable.

Overview of part II: ergative case and clausal architecture

The second part of the dissertation explores the syntax of verb and clause through the window of case-marking. Case-marking in Nez Perce follows a *three way* or *tripartite ergative* pattern. In a clause with one argument, no case is marked.

- (6) ciq'aamqal hi-wahoo-ca-∅
dog 3SUBJ-howl-IMPERF-PRES
The dog is howling.

Clauses with two arguments show one of two behaviors: either case is marked on *both* arguments with distinct markers, *ergative* and *objective*, or case is marked on no arguments at all.

- (7) Case marked on both arguments
pit'iin-**im** paa-'yaʔ-n-a picpic-**ne**.
girl-ERG 3/3-find-P-REM.PAST cat-OBJ
The girl found the cat.

- (8) No case marked at all
a. pit'iin' hi-'yaaʔ-n-a picpic.
girl 3SUBJ-find-P-REM.PAST cat
The girl found a cat.

- b. pit'iin' hi-'yaaŋ-n-a ['ip-nim picpic]
 girl 3SUBJ-find-P-REM.PAST [3SG-GEN cat]
 The girl_i found her_i cat

The overall goal of chapters 5-8 is to come to an understanding of why and how case should be marked on the particular arguments it is.

Chapter 5 presents some first steps on the issue. I try out – unsuccessfully – criteria of transitivity, thematic role, and object referentiality to distinguish sentences where ergative and objective are marked (e.g. (7)) from those where they are not (e.g. (6), (8)). The major challenge comes from *caseless clauses* like (8), which have two arguments but no marking for case. In section 5.2, I show that caseless transitive clauses come in two structurally distinguished types: in one type, the object must be indefinite, and in the other, a possessor phrase within the object must be bound by the subject.

Why should ergative and objective cases fail to be marked in caseless clauses, as in (8)? The answer I work to develop in chapters 6, 7 and 8 accords a starring role to locality effects and syntactic agreement dependencies constrained by them. I argue that objective and ergative case-marking in (7) are conditioned by syntactic object agreement; caselessness in sentences like (8) comes about where the syntactic process of object agreement fails. This analysis crucially builds from investigation of our two caseless clause types in chapters 6 and 7, which takes us some ways in elucidating the workings of agreement in the Nez Perce clause.

Chapter 6 delves deep into the structure of possessive constructions and binding, with an eye toward explaining the caselessness of sentences like (8b). Possessor phrases within objects turn out to have a special status in Nez Perce on two counts. First, when a genitive possessor phrase within an object is locally bound, as in (8b), the clause must be caseless. Second, when a genitive possessor phrase within an object is *not* locally bound, it must undergo *possessor raising*, as in (9). Here 'aayatona 'the woman' is marked with objective case, rather than the expected genitive.

- (9) tewliki-nm pe-wiw-likeec-e'n-yu' 'aayat-ona 'iniit
 tree-ERG 3/3-fall[of trees]-on.top-APPL:AFF-PROSP woman-OBJ house
 The tree is going to fall on the woman's house

The distribution of possessor raising turns out to match quite exactly the distribution of caselessness conditioned by binding of the object possessor, as in (8b). Therefore, a major part of chapter 6 is devoted to an analysis of the possessor raising construction. I argue that possessor raising sentences like (9) should be given a movement analysis. The possessor DP moves from within the object DP to an applicative specifier position. Positioning movement in this scenario comes with consequences for the structure of possessive objects in Nez Perce, as well as for the theory of movement. Movement must be able to connect θ -positions; and it must be able to target a DP within the specifier position of another DP, without incurring locality violations. I propose that this latter possibility reflects an overall structure for possessive objects in Nez Perce which puts possessor phrases in a position of asymmetric c-command over possessum phrases. This asymmetry has consequences both for movement dependencies and for agreement dependencies. Given the asymmetry in structure, object agreement in sentences like (8b) is forced to target the bound possessor pronoun, rather than the overall possessum DP. But this poses a problem in view of the featural specification of locally bound pronouns. Locally bound pronouns in Nez Perce – and perhaps universally – are not able to agree. Object agreement fails in (8b), therefore.

Chapter 7 turns to the structure of indefinite objects in Nez Perce, with an eye toward explaining the caselessness of sentences like (8a). The indefinite objects of such clauses are crucially *weak indefinites*. They must take narrow scope with respect to negation, as in (10), and be interpreted opaquely in the complement of an intensional verb like *'ipeewi* 'look for', as in (11).

- (10) A: 'ee we'np-u' puute'ptit we'nipt
 you sing-PROSP 100 song
 You will sing 100 songs.

B: weet'u cuukwe-ce- \emptyset puute'ptit we'nipt

NEG know-IMPERF-PRES 100 song

I don't know 100 songs!

✓ $\neg > \exists_{100}$: It is not the case that there are 100 songs that I know

✗ $100 > \neg$: There are 100 songs such that I don't know them

(11) 'ipeew'i-se- \emptyset ciiciyele picpic

look.for-IMPERF-PRES purple cat

I'm looking for a purple cat

look for $> \exists$

Following much cross-linguistic research, I propose that caseless weak indefinite objects in Nez Perce are semantically predicative. Syntactically, they are not full DPs. They can include many, though not all, of the nominal subconstituents that full DPs allow. I propose that caseless weak indefinite objects in Nez Perce are minimally functional impoverished: they lack *only* the DP projection. The presence of DP, however, proves crucial for agreement in this language; and so weak indefinite caseless objects cannot agree.

Chapter 8 puts these pieces of the caselessness puzzle together into a theory of morphological case. The two types of caseless clauses have in common that the object does not participate in syntactic agreement. The object marks case if and only if it agrees. On the basis of evidence from causative constructions, I argue that the ergative subject, too, must participate in agreement in order to receive its case-marker. I then develop a mechanism whereby morphological case is calculated as part of the PF interpretation of agreement dependencies. Objective case spells out object agreement on a nominal. Ergative case spells out object agreement *and subject agreement* on a nominal. Case-markers in Nez Perce are in an important way *structurally* determined, and the ergative case is crucially *dependent* on the syntax of the object. At the same time, the mechanism proposed for sharing features between subject and object also brings ergative under the umbrella of *inherent* cases. In virtue of its base position in a syntactic structure, the subject DP is uniquely positioned to

receive agreement information from both a high source – the subject agreement head, in this language Asp(ect) – and a low source – the object agreement head, *v*.

The remainder of this introductory chapter presents the prologue to these investigations: the state of the language, its literature, and the means by which the data in this dissertation were collected.

State of the language

Nez Perce is a Sahaptian language, forming this family together with several Sahaptian languages spoken farther west in the Columbia River plateau region of present-day Washington and Oregon. Sahaptian has been classified as Penutian; see Sapir (1929), Aoki (1963a, 1970), Rigsby (1965), and Rude (1985, 1987). Within Nez Perce, two dialects, Upriver and Downriver, have been documented in previous work; documented dialect differences are phonological and lexical (Aoki 1970, 6-7, Rude 1985, Crook 1999). Fieldwork for this dissertation was conducted on the Upriver dialect of Lapwai, ID, building on work on this dialect by Aoki (1970, 1979, 1994; Aoki and Walker 1989) and Crook (1999). Speakers of Upriver Nez Perce call themselves *niimúpuu* and their language *niimiipuutímt*; Downriver speakers call themselves *nuumúpuu* and their language *nuumiipuutímt* (see Aoki 1994, 489).

Nez Perce is spoken today on reservations in Idaho (Nez Perce Tribe of Idaho), Washington (Confederated Tribes of the Colville Reservation) and Oregon (Confederated Tribes of the Umatilla Reservation). The number of fluent Nez Perce speakers was estimated in 1997 to be between 100 and 300 in an ethnic population of 2,700 (Ethnologue 2005), yet in 1999 at only 75 (Crook, 1999). Still more recent assessments from the Nez Perce Language Program in Lapwai estimate the number of fluent speakers at around 35, with the youngest around 65 years of age (Harold Crook, p.c. April 2008). All Nez Perce speakers are bilingual in English and many, if not most, are English-dominant.

State of the literature

There are several previous sketches of Nez Perce verbal morphology which have begun to map the complex structure and meaning of the verbal complex. Aoki 1970 provides examples of almost every type of verbal inflection and derivation. Rude 1985 discusses the inflectional prefixes and several kinds of derivational morphology in depth, and provides a brief discussion of various morphemes making up the inflectional suffix complex (in particular tense, aspect and space marking). Crook 1999 is an invaluable resource on the complex morphophonology of the verb, adding besides this more discussion of the form and meaning of both derivational and inflectional verbal morphology. These authors' work, in addition to Aoki's excellent dictionary (Aoki, 1994), lay the groundwork for the present study.

Beyond these sketches, the bulk of previous linguistic studies have focused on documentation, primarily of traditional narrative, and on description and some analysis of morpho-phonological, morpho-syntactic and discourse-pragmatic aspects of the grammar. Documentary work is collected in Phinney (1934) and Aoki and Walker (1989), both substantial compilations of mythological narrative, and in Aoki (1979), which in addition to myth texts contains "true tales", ethnographic texts and historical accounts, as well as the lyrics to a number of Nez Perce language songs. Descriptive work dates to the missionary period of the 19th century, with a Latin-language grammar (Morvillo, 1891) and a dictionary (Morvillo 1895, n.d.) produced during this time, in addition to a number of translations of Christian texts (Spalding 1871, Ainslie 1876a, 1876b, Cataldo 1914).

Modern descriptive investigations begin with the seminal work of Haruo Aoki on Nez Perce morphology, phonology and genetic affiliation. Aoki's investigation of Nez Perce vowel harmony (1966) opened the door to theoretical consideration of Nez Perce phonological patterns, with much discussion following within theoretical linguistics (Zimmer 1967, Chomsky and Halle 1968, Jacobsen 1968, Rigsby and Silverstein 1969, Zwicky 1971, Hall and Hall 1977, Crook 1999, Bakovic 2000, Mackenzie and Drescher 2004). Subsequently

Aoki produced a grammar (Aoki, 1970) and an extensive dictionary (Aoki, 1994). Further work by Noel Rude (1985, 1986a, 1986b, 1992, 1997, 1999) provided descriptive and discourse-analytic material on the case and agreement system and on clause-level word order patterns informed by the theoretical work of Talmy Givon (Givon, 1983). This work also sparked some debate in the theoretical literature, with several papers appearing on the subject of Nez Perce case (Woolford 1997, Carnie and Cash 2006). The most recent in-depth works on Nez Perce grammar are the dissertation of Harold Crook (Crook, 1999), containing a sizable grammatical sketch focusing on phonological characteristics, followed by a discussion of segmental and metrical phonological processes in Optimality Theory (Prince and Smolensky, 1993); and an unpublished article by Phillip Cash (Cash, 2004) on verbal morphology and syntax in the framework of distributed morphology (Halle and Marantz, 1993).

Field research and data sources

The Nez Perce words and sentences analyzed here come from my field research and from both published and unpublished prior scholarship.

The primary data come from original fieldwork conducted with four Nez Perce elders, totaling about 16 weeks of intensive recording and discussion. In working with these speakers, my primary method was elicitation. Speakers provided translations between English and Nez Perce as well as commentary and judgments on pictures, proposed Nez Perce sentences and proposed translations between English and Nez Perce. Elicitation prompts took the form of spoken English and Nez Perce sentences, pictures (with or without accompanying text), on occasion written Nez Perce sentences, and even more rarely, written English sentences presented without graphics. When semantic data was sought, prompts were presented with contexts described orally or depicted graphically. Some elicitation prompts used in preparing this research are shown in figures I.1 and I.2.

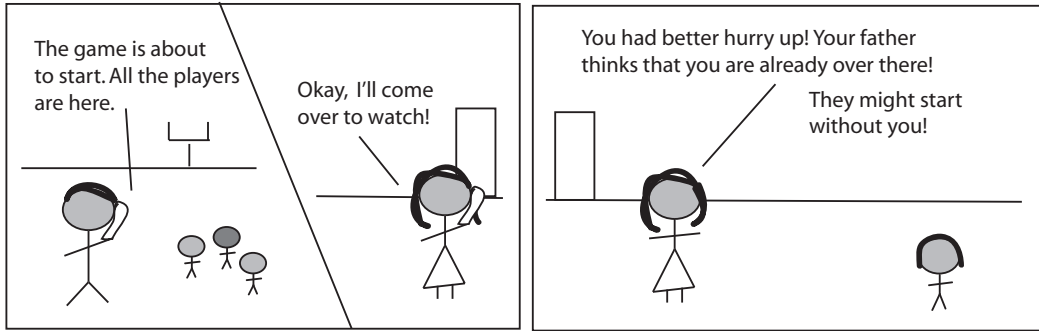


Figure I.1. Sample graphical context for translation

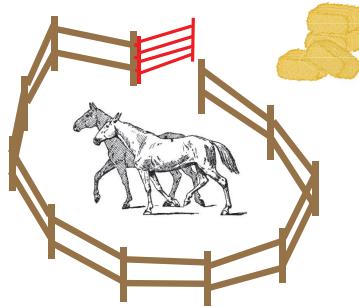


Figure I.2. Sample graphical context for description by consultant

Translation prompts frequently served as springboards for discussion and judgment tasks. Consultants' comments were recorded as sources of data about meaning, to be considered together with their judgments and their translations. The following conversation shows the kind of question asked and data collected in this way.

(12) a. ARD:

How about, *When the girl is ten, she will be allowed to drink coffee?*

b. Consultant:

ke kaa pit'in hi-wcee-yu' tim'ay'
 when girl 3SUBJ-become-PROSP teenage.girl

kawá hi-'iqcuup-nu' lalx̂
 then 3SUBJ-drink-PROSP coffee

c. ARD:

Could you say it this way?

ke kaa pit'in hi-wcee-yu' tim'ay'
 when girl 3SUBJ-become-PROSP teenage.girl

kawá hi-'iqcuup-no'qa lalx̂
 then 3SUBJ-drink-QA.PROSP coffee

d. Consultant:

It doesn't sound right in that sentence ...*hi'iqcuupno'qa* ... for a reason, it's more like for a reason that she will be allowed, he or she will be allowed, like if something was wrong, that's the way it sounds to me, like it was something was wrong and then it was better and then they could.

Frequently, more than one speaker attended an elicitation session, and data was collected from all present. Sometimes elicitation sessions were attended by other students of the Nez Perce language who also had questions for the speakers present. Data was recorded in field notes and as digital audio files.

Additional data were drawn from corpora. I am grateful to have been given a computer-searchable version of Aoki and Walker 1989 by Phillip Cash and of portions of Phinney 1934 by Harold Crook. For questions of translation, I frequently also consulted biblical fragments from the missionary period, in particular Cataldo (1914) and Spalding (1871).

**PART I. MORPHEMES, MEANING
AND STRUCTURE**

CHAPTER 1

A SKETCH OF NEZ PERCE GRAMMAR

This chapter provides a basic orientation in selected aspects of Nez Perce grammar. I aim to build on but not to replace previous sketches by Aoki (1970), Rude (1985) and Crook (1999). Beyond basic background information, the discussion here is concentrated on the the verb and on previously un- and under-described aspects of the language. The tone of this chapter is almost entirely descriptive; certain of the topics touched on here are treated in a more theoretical way in the chapters following. In particular, verbal markers of tense, aspect and space are taken up in chapters 2-4; the syntax of agreement is treated in section 5.3; case is treated in chapter 8.

I begin with a very short presentation of the phonological inventory and several phonological processes. I then provide some typological background on basic morphological properties of the language, word order patterns, and the makeup of the noun phrase. Subsequently I discuss the relative construction and a few of its complexities. Finally I turn to a series of topics in the grammar of the verb.

In drafting this sketch I have made some analytical choices that are revisited in the chapters that follow. Most prominently, I have in certain cases refrained from glossing null morphemes here. This includes present tense (see chapter 2) and 1st and 2nd person verbal agreement.

	labial	dental	alveolar	velar	post-velar	glottal
<i>plain</i>						
stops	p	t		k	q	ʔ
affricates			c			
fricatives		ʃ	s	x	χ (x̂)	h
nasals	m	n				
glides	w		y			
liquids		l				
<i>glottalized</i>						
stops	p'	t'		k'	q'	
affricates			c'			
nasals	m'	n'				
glides	w'		y'			
liquids		l'				

Table 1.1. Consonant inventory (orthographic convention)

1.1 Phonemic inventory and orthographic representation

Nez Perce consonant and vowel inventories are given in tables 1.1 and 1.2, following Aoki (1970) and Crook (1999). These tables represent phonemic contrasts only; they do not represent the contrast between, e.g., [i] and [ɪ], or [æ] and [ə].

(13) 'iwepne [ʔi'wæpnə] 'wife'

(14) hipt'ipɛc [hɪp't'ɪpɛc] 'liking to eat'

Orthographic conventions that differ from standard American phonetic usage are given in parentheses in the tables. An overview of various spelling conventions that have at one time or another been in use for Nez Perce is given by Crook (1999, 35-47). The orthography used here is that of the Nez Perce Language Program in Lapwai, ID.

1.2 Major phonological processes in brief

Harmony. Nez Perce vowel harmony operates on a dominant-recessive pattern and is both progressive and regressive. Words with dominant vowels include only /i/, /a/, /o/;

Short				Long			
	front	central	back		front	central	back
high	i		u	high	i: (ii)		u: (uu)
mid			o	mid			o: (oo)
low	æ (e)	a		low	æ: (ee)	a: (aa)	

Table 1.2. Vowel inventory (orthographic convention)

those with recessive vowels include only /i/, /e/, /u/. There is no obvious acoustic difference between dominant and recessive /i/. Vowel harmony has been documented in depth by Aoki (1970) and Crook (1999); the interested reader is referred to these sources and to the extensive secondary literature, e.g. Zimmer 1967, Chomsky and Halle 1968, Jacobsen 1968, Rigby and Silverstein 1969, Zwicky 1971, Hall and Hall 1977, Crook 1999, Bakovic 2000, Mackenzie and Drescher 2004.

Present speakers of Nez Perce do not always produce full vowel harmony. Of my main consultants, one rarely used harmony, one frequently used harmony, and two others were more variable. The consultant who rarely used harmony showed an absence of harmony even in single morphemes like *u'qa* (the topic of chapter 3), expected to harmonize to *o'qa*.

- (15) hi-msem-uu-yu'-qa
 3SUBJ-lie-APPL:GOAL-QA.PROSP
 He could lie to you

In terms of both quality and length, I have transcribed the vowels in this work as I heard them. More work is needed to understand the ways that vowel harmony may be changing in this highly endangered language.

Coalescence. Coalescence occurs across glides. Phinney (1934) noted that sequences of /ewe/ and /awa/ coalesce to /uu/ and /oo/ respectively, with certain exceptions; Crook (1999) notes that exceptions to this process are linked to stress assignment.

(16)	hiwepeecece	'uupeecece
	h-wepeece-see	'e-wepeece-see
	3SUBJ-touch-IMPERF	3OBJ-touch-IMPERF
	He touches	I touch it

Further discussion can be found in Crook (1999, §3.2).

Fricativization. Aoki (1970) noted that /k/ and /q/ fricativize to /x/ and /χ/ respectively, word-finally and when followed by a sonorant. Affricate /c/ fricativizes to /s/ only before a sonorant.

(17)	'iyaaqca	'iyaaχna
	'iyaaq-cee	'iyaaq-n-e
	find-IMPERF	find-P-REM.PAST
	I am finding (mine)	I found (mine)

Additional examples may be found in Aoki's discussion and in Crook (1999, §3.3).

Epenthesis. Epenthesis occurs to break up various illicit sequences of segments; a treatment of epenthesis and hiatus resolution is provided by Crook (1999, §3.2). We will see two kinds of epenthesis in this dissertation. When vowel hiatus is created by inflectional suffixation, glide [y] is epenthesized. This happens whenever prospective *u'* is suffixed to a vowel-final stem.

(18)	haniyo'	haniisa
	hanii-u'	hanii-sa
	make-PROSP	make-IMPERF
	I will make (something)	I am making (something)

Illicit consonant clusters are generally repaired by epenthesis of [i]. Departing from Crook (1999) and Aoki (1970, 1994), I analyze the 3rd person subject marker, which typically surfaces as *hi*, as underlyingly just [h], with the [i] provided by epenthesis:

(19)	pit'iinine	hipayno'
	pit'iin-ne	h -pay-u'
	girl-OBJ	3SUBJ-arrive-PROSP
		She will arrive

Spreading. The analysis of the 3rd person subject marker is motivated by spreading, which occurs across glottal segments [h] and [ʔ] to repair illicit onsets, in lieu of epenthesis.

(20)	ha'ac'o'	hehetewise
	h-'ac'-u'	h-hetewi-see
	3SUBJ-enter-PROSP	3SUBJ-love-IMPERF
	She will enter	She loves (her own)

There is no general process in Nez Perce that requires vowels flanking a glottal segment to be identical, as the examples below show.

(21)	piihexnu'	wekey'ke'i
	pii-hek-nu'	we-ke'ey-k-e'i
	RECIP-see-PROSP	fly-go-SF-INST
	We will see each other	airplane

The differences between these cases and the spreading examples lie in the need for onset repair in the latter but not the former.

1.3 Typological background

1.3.1 Morphology and morphological typology

Nez Perce morphology involves both head- and dependent-marking. In example (22) we see dependent marking in the form of objective case on *'ituu* 'what' and ergative case on *ʔepʔep* 'butterfly', and head marking in the form of portmanteau 3rd person subject / 3rd person object verbal prefix *pee*.

- (22) 'ituu-**ne** ʔepʔep-**nim** pɛe-p-tetu?
 what-OBJ butterfly-ERG 3/3-eat-HAB.PRES
 What does a butterfly eat?

In example (23) we see head marking in the form of verbal prefixes 'e '3rd person object' and *nees* 'plural object', and dependent marking in the form of objective case on *yoŋme* 'those ones'.

- (23) 'e-**nees**-cuukwe-ce yoŋ-me-**ne**
 3OBJ-O.PL-know-IMPERF that-PL-OBJ
 I know those ones

Case marking on core arguments does not appear in all clauses. The conditions on case marking and connections to agreement are explored in chapters 5-8.

Verbal morphology, as we see in the examples above, is both prefixing and suffixing. (I am not aware of any circumfixes or infixes in the language, with the possible exception of the re-reduplication cases shown in (28)-(29) below.) Nominal morphology is primarily suffixing. Example (24) contains a reduplicative plural prefix, a deverbalizing participial suffix, a case marker, and a suffix meaning 'only'.

- (24) ki-k'omay-ni's-nim-cim
 PL-be.sick-PART3-GEN-only
 Only the sickened's (Spalding, 1871, 32)

The initial Ci- reduplication seen here, which marks plural, is the most common prefix on Nez Perce nouns.

- (25) a. k'omay-niin'
 sick-PART3
 sick, sickened, a sick one (sg)
- b. **ki**-k'omay-niin'
 PL-sick-PART3
 sick, sickened, sick ones (pl)

The marking of plurality is discussed further in section 1.4.2.

Reduplication is common in Nez Perce and has been discussed by Aoki (1963b). Some stems are inherently reduplicative in form.

(26) picpic

cat (there is no word *pic*)

(27) kuckuc

small (there is no word *kuc*)

Initial Ci- reduplication (marking plurality) applies to a small class of uncontroversial nouns as well as to a large class of property-concept words that may belong to a separate class of adjectives. In some cases, when plural reduplication applies to a reduplicated stem, the plural prefix is re-reduplicated. The following color words are fully reduplicated in the singular; in the plural, Ci- reduplication applies to both pieces of the reduplicated stem.

(28) a. cimoux-cimux

black (sg)

b. ci-cimoux-ci-cimux

black (pl)

(29) a. yoos-yoos

blue (sg)

b. yi-yoos-yi-yoos

blue (pl)

Provided such cases are analyzed as involving prefixation to each half of a reduplicated stem, reduplication in Nez Perce is exclusively prefixing. Alternatively, these reduplicants could be analyzed as the language's only infixes.

1.3.2 Order of sentential constituents

The order of major sentential constituents is fairly free. Rude (1985) has shown on a textual basis that information structure plays an important role in determining constituent order in simple sentences.

The following examples show SV and VS order in an intransitive.

(30) hi-k'omay-ca Sue
 3SUBJ-be.sick-IMPERF Sue
 Sue is sick.

(31) Sue hi-k'omay-ca
 Sue 3SUBJ-be.sick-IMPERF
 Sue is sick.

In simple transitives, every word order was volunteered on at least one occasion.

(32) hi-wewluq-se haacwal ciq'aamqal
 3SUBJ-want-IMPERF boy dog
 The boy wants a dog [VSO]

(33) haacwal hi-wewluq-se ciq'aamqal
 boy 3SUBJ-want-IMPERF dog
 The boy wants a dog [SVO]

(34) lepit ki-kuckuc picpic haacwal hi-wewluq-se
 two PL-small cat boy 3SUBJ-want-IMPERF
 The boy wants two little cats [OSV]

(35) lepit ki-kuckuc picpic hi-wewluq-se haacwal
 two PL-small cat 3SUBJ-want-IMPERF boy
 The boy wants two little cats [OVS]

(36) Caan-im la'am nuku-ne pee-p- \emptyset -e
 John-ERG all meat-OBJ 3/3-eat-P-REM.PAST
 John ate all the meat [SOV]

- (37) ku'nu weet pee-his-nu' Clinton-ne Obama-nim
 DUNNO Y.N 3/3-win.over-PROSP Clinton-OBJ Obama-ERG
 Obama might or might not win out over Clinton. / Dunno whether Obama will win
 out over Clinton. [VOS]

Systematic tests of information structure variation are needed to ascertain which of these options might qualify as the "neutral" word order. Though word order was not my primary concern in this study, I did observe that word order patterns are not totally free from grammatical constraints; one constraint is noted in section 5.2.1.

1.3.3 Argument drop

Nez Perce quite freely allows sentences in which one or more arguments are not expressed by overt nominal phrases. This freedom of omission extends to both subjects and objects of all persons.

- (38) a. Omission of 1st person subject
 'a-waamsi-yu' haacwal-a sik'em
 3OBJ-borrow-PROSP boy-OBJ horse
 I'll borrow a horse from a boy
- b. Omission of 1st person object
 Meeli hi-pay-noo-∅-ya
 Mary 3SUBJ-come-APPL:GOAL-P-REM.PAST
 Mary came over to me
- (39) a. Omission of 2nd person subject
 manaa wee-s-∅
 how be-P-PRES
 How are you?
- b. Omission of 2nd person object

hi-weqi-yuu-yu'
 3SUBJ-rain-APPL:GOAL-PROSP
 It's gonna rain on you

- (40) a. Omission of 3rd person subject

hi-pay-tat'a-siix
 3SUBJ-come-LOW.FUT-IMPERF.PL
 They're about to arrive

- b. Omission of 3rd person object

'ilexni-nm pee-'cimx-tee'nix
 many-ERG 3/3-dislike-HAB.PRES.PL
 A lot of people don't like him

Freedom of argument drop is interesting in relation to the person inflection paradigm. As we will see below in more detail, verbal person inflection marks 3rd person arguments only; 1st and 2nd person verb forms are identical. (Out of context, the forms in (38) and (39) are ambiguous between 1st and 2nd person interpretations of the missing argument.) Nevertheless, arguments of all persons are omissible. Within the person paradigm, there is no correlation between inflectional richness or informativeness and the possibility of argument drop.

1.4 Nominals

The nominal phrase in Nez Perce minimally consists of a bare noun or nominal sub-constituent. Bare nouns are common in texts and elicitation. The following sentence shows three bare nominals. (On the interpretation of clauses with three bare nominals, see section 5.2.1.)

- (41) 'aayat hi-kiwiyik-se picpic cuuy'em
 woman 3SUBJ-feed-IMPERF cat fish
 The woman is feeding fish to her cat

Besides the head noun, the nominal phrase may contain demonstratives, genitive phrases, number words and a class of words corresponding to English adjectives. (I call these adjectives henceforth, though this is only a descriptive convenience; it remains to be established that they form a word-class separate from nouns for any grammatical phenomenon.) Each of these may also appear as the only (overt) constituent in a nominal phrase.

(42) Bare demonstrative

c'alawi **yoŋ-ma** hi-pe-cuukwe-nu' kine 'iskit-pe 'ee wee-s-Ø,
 if those-PL 3SUBJ-S.PL-know-PROSP here road-LOC 2SG be-P-PRES

 'imaa-'nahci'wat-k-o' 'ee
 2SG.REFL-get.in.trouble-SF-PROSP 2SG

If they find out you are here in the road, you will get in trouble!

(43) Bare demonstrative

Q: 'isii-nm hi-nees-tecukwe-nu'
 who-ERG 3SUBJ-O.PL-teach-PROSP
 Who will teach them?

A: **ki-nm**
 this-ERG
 This (one)

(44) Bare adjective

hinaq'i-yo'qa **kuckuc**
 finish-QA.PROSP small
 I can finish a small one

(45) Bare numeral

hi-wawa-siix **lep-u'**
 3SUBJ-fish-IMPERF.PL two-HUM
 Two people are fishing.

(46) Bare genitive

'im-im 'iniit 'iitq'o 'iin-im

2SG-GEN house or 1SG-GEN

your house or mine

There are no definite or indefinite articles. This makes it hard to discern on a morphological basis whether Nez Perce nominals are DPs. Following much typological and theoretical work, reviewed in section 7.2, I will be using semantic properties as a general heuristic for the discovery of nominal structure. In general, I will be assuming that referential nominals in Nez Perce belong to the category of DP.

There is a question of whether relative constructions are part of nominal constituents; I postpone discussion of relative constructions to section 1.6.

1.4.1 Word order in nominals

The subconstituents of nominal phrases are to some degree permutable. However, most examples produced by consultants show the following ordering.

(47) DEM > ADJ > N

NUM / QUANT > ADJ > N

GEN > ADJ > N

The head noun is generally final in the noun phrase. Demonstratives and adjectives are typically prenominal. (Some of these examples contain case concord; see section 1.4.3.)

(48) yoʔ ki-kuckuc laatis

that PL-small flower

those small flowers

(49) himeeqiis-nim 'atamooc-nim poo-yawq-n-a kuckuc-ne 'atamooc-na

big-ERG car-ERG 3/3-wreck-P-REM.PAST little-OBJ car-OBJ

The big car wrecked the little car

- (50) ki-nm 'aayat-om pee-nek-se yoŋ 'aayat hii-we-s-∅ kuhet
 this-ERG woman-ERG 3/3-think-IMPERF that woman 3SUBJ-be-P-PRES tall
 This woman thinks that woman is tall
- (51) yu'c-me yiyeewi'c ma-may'ac he-'etŋew-cix
 poor-PL miserable PL-child 3SUBJ-be.sad-IMPERF.PL
 The poor, miserable children are sad. (Aoki and Walker, 1989, 596)

Numerals and quantifiers as well precede the noun.

- (52) 'ee we'np-u' puute'ptit we'nipt
 2SG sing-PROSP 100 song
 You will sing 100 songs.
- (53) Caan-nim pee-nkek'uup-∅-e 'uynept sooŋ-ne
 J-ERG 3/3-break-P-REM.PAST 7 spoon-OBJ
 John broke 7 spoons
- (54) 'ilexni xi-xayx-xi-xayx 'aatamoc
 many PL-white(reredup) car
 A lot of white cars
- (55) lep-u' ha-ham hi-caap-kil'aax-siix lepit 'ite-tp'es
 two-HUM PL-man 3SUBJ-with.hand-pick.up-IMPERF.PL two load-NMLZR
 Two men are lifting two boxes
- (56) 'ilŋni-we titooqan hi-pa-pay-no' weyeecet-x
 many-HUM person 3SUBJ-S.PL-arrive-PROSP dance-to
 Many people will come to the dance

Genitives are also prenominal. The genitive construction is semantically very flexible; it can be used for both alienable and inalienable possession as well as for relations beyond strict possession.

- (57) 'iin-im 'aatamoc
 1SG-GEN car
 my car

- (58) 'iin-im pehet
 1SG-GEN older.sister
 my older sister
- (59) kicuy-nim taam'am
 money/gold-GEN egg
 egg of gold / golden egg
- (60) 'etke pexu'uye pee-cukwe-six
 because thief 3/3-know-IMPERF.PL
- kine kicuy-nim 'iinit 'e-w-siix 'ilexni kicuy
 here money-GEN house 3GEN-be-IMPERF.PL a.lot money
 because thieves, they know that here in the bank (lit. money's house) they have a
 lot of money
- (61) kee-me-x qaqsa-nm weeyux hani-yaay'-t'a.
 REL-2-1 hardwood-GEN leg make-APPL:AFF-OPT
 Let me make you a leg of hardwood. (Aoki and Walker, 1989, 183)

In addition to their semantic variety, genitive constructions vary syntactically; see section 7.2.3.

1.4.2 Number and classification

Some nouns and most adjectives inflect for plural. Adjectives usually show initial Ci-reduplication for plural. Nouns mark plural with suffix *me* or initial Ci-reduplication, depending on the noun; those marked with *me* seem to be a subset of the human-denoting nouns.

- (62) Plural in *-me*
- a. lawtiwaa 'friend'
 lawtiwaa-ma 'friends'

- b. yoʔ ‘that (one)’
yoʔ-me ‘those (ones)’
- c. ’isii ‘who’
’isii-me ‘who (pl)’
- d. yu’c ‘poor, pitiful’
yu’c-me ‘poor, pitiful (pl)’

(63) Plural reduplication

- a. pit’iin’ ‘girl’
pi-pit’in’ ‘girls’
- b. kuckuc ‘small’
ki-kuckuc ‘small (pl)’

Deverbal nominals pluralize by initial reduplication.

- (64) a. tamtay-naat
report-AGT
preacher
- b. ti-tamtay-naat
PL-report-AGT
preachers

- (65) a. ʔalp-niin’
close-PART3
closed (sg)
- b. ʔi-ʔalp-niin’
PL-close-PART3
closed (pl)

Adjectives and nouns with an initial glottal consonant (ʔ or h) take a special plural prefix, *he-*.

- (66) 'aayat 'woman'
 ha-'aayat 'women'
- (67) 'oqsooqs 'rude (sg)'
 ha-'oqs-ha-'ooqs 'rude (pl)'
- (68) heey'c 'weak (sg)'
 he-hey'c 'weak (pl)'

Many nouns show no morphology of number at all. These examples show invariant nouns with number-inflected modifiers.

- (69) ki-kuckuc ci-cimux-ci-cimux picpic
 PL-small PL-black(reredup) cat
 small black cats
- (70) 'ilexni xi-xayx-xi-xayx 'aatamoc
 many PL-white(reredup) car
 A lot of white cars

Plural marking is found on both attributive and predicative adjectives.

- (71) hiteme-ne'weet hi-w-siix wi-weepcux
 read-AGT 3SUBJ-be-IMPERF.PL PL-smart
 The students are smart
- (72) ci-cel'ey hi-w-siix
 PL-late 3SUBJ-be-IMPERF.PL
 They are late
- (73) paaʔat lehey-pe yoʔ ki-kuckuc laatis hi-lati-si-ne
 five day-LOC that PL-small flower 3SUBJ-flower-IMPERF.PL-REM.PAST
 Five days ago those little flowers were flowering

Nouns with no plural morphology may nevertheless trigger plural agreement on the verb. The following examples show that this holds for both subjects and objects.

- (74) sik'em hi-pe-'et'ilp-u'
horse 3SUBJ-S.PL-go.crazy-PROSP
The horses will go crazy
- (75) 'e-nees-hex-ce sik'em-ne
3OBJ-O.PL-see-IMPERF horse-OBJ
I see the horses.
- (76) 'e-nees-wi-cukwe-nipeec-wi-se titooqan-a
3OBJ-O.PL-DIST-know-DESID-VBLZR-IMPERF person-OBJ
I want to know people / each person individually

There is a limited classifier system with numerals and some quantifiers, which inflect specially for human-denoting nouns. The most frequent allomorph of the human classifier is *we*.

- (77) a. 'ilx̂ni-we titooqan
 many-HUM person
 many people
- b. 'ilex̂ni tiim'es
 many book
 many books
- (78) a. lep-u' lawtiwaa-ma
 two-HUM friend-PL
 two friends
- b. lepit picpic
 two cat
 two cats
- (79) lep-u' ha-ham hi-caap-kil'aax-six lepit 'ite-tp'es
 two-HUM PL-man 3SUBJ-with.hand-pick.up-IMPERF.PL two load-NMLZR
 Two men are lifting two boxes

The universal quantifiers *'oykala* and *la'am*, which generally appear with no overt restriction, also take a classifier.

(80) a. *'oykala*
everything

b. *'oykal-o*
all-HUM
everyone

(81) a. *la'am*
everything

b. *la'am-wa*
all-HUM
everyone

Apart from this corner of the grammar, there is no gender system or systematic human/nonhuman classification. Even in numeral and quantificational phrases, it appears that the use of classifiers is not entirely systematic; Aoki (1994) notes that forms without the human classifier may nevertheless be used for humans.

(82) *kaa la'am-nim 'e-w-siix* *pist*
and all-ERG 3GEN-be-IMPERF.PL father
and everyone has a father (Aoki and Walker, 1989, 327)

(83) *'ilexni-nm pee-'cimx-tee'nix*
many-ERG 3/3-dislike-HAB.PRES.PL
A lot of people don't like him

1.4.3 Inflection of nominals

Nominals are inflected for a range of cases. This includes both an ergative case and an objective case, which appear together in transitive clauses.

- (84) ki-**nm** picpic-**nim** pee-p-u' cu'yeem-**ne**
 this-ERG cat-ERG 3/3-eat-PROSP fish-OBJ
 This cat will eat the fish

There is no case marking on intransitive subjects.

- (85) hi-pnim-se picpic
 3SUBJ-sleep-IMPERF cat
 The cat is sleeping.

- (86) laaqac he-eyeq-ce
 mouse 3SUBJ-be.hungry-IMPERF
 The mouse is hungry.

Thus Nez Perce is classified as a language with what Dixon (1994) calls a *tripartite* case system. The case pattern and its derivation is discussed in chapters 5-8.

The major cases are listed below with their forms and major allomorphs. Names follow Crook (1999).

- (87) a. ergative: *m, nm, nim, om*
 b. objective: *ne, na, a*
 c. genitive: *m, nm, nim, om*
 d. instrumental: *ki*
 e. benefactive: *'ayn*
 f. allative / to: *x, px, kex*
 g. locative /at, on: *pe*
 h. ablative / from: *kin'ix, pkin'ix, me*
 i. comitative / with: *hiin, iin, niin*
 j. vocative: *e, e'*

It is nearly always the case that ergative and genitive forms are identical, leading previous authors to describe these as a single case ("nominative-possessive" for Aoki 1994). The paradigms come apart for the primary 1st and 2nd person pronouns, however, which lack ergative forms but which have genitive forms. The following examples contrast a 1SG transitive subject, which is unmarked (no ergative), with a 1SG possessor, which is marked for genitive.

- (88) **'iin** 'a-lawlimq-sa piskis-ne.
 1SG 3OBJ-fix-IMPERF door-OBJ
 I am fixing a door.
- (89) 'ee **'iin-im** 'iniit-pe pay-no'qa
 2SG 1SG-GEN house-LOC come-QA.PROSP
 You should come over to my house.

Some of the examples above demonstrate case concord between nouns and modifiers (e.g. (49), (50)). This concord is optional. The following near-minimal pair shows noun-adjective concord and its absence.

- (90) 'e-pewi-tx yoosyoos wixsilikeecet'es-ne
 3OBJ-look.for-IMPER.PL blue chair-OBJ
 Look for the blue chair!
- (91) 'e-pewi-se yoosyoos-**na** wixsilikeecet'es-**ne**
 3OBJ-look.for-IMPERF blue-OBJ chair-OBJ
 I am looking for the blue chair.

Concord also occurs optionally with numerals and with genitives.

- (92) Numerals
- a. lepit-**ipe** lehey-**pe** hi-lati-ca-na
 two-LOC day-LOC 3SUBJ-flower-IMPERF-REM.PAST
 Two days ago it was flowering.

person	number	intrans subject	trans subject	objective
1st person	singular	'iin	'iin	'iine
	plural inclusive	kiye	kiye	kiye
	plural (neutral)	nuun	nuun	nuune
2nd person	singular	'iim	'iim	'imene
		'ee	'ee	'ee
	plural	'ime	'ime	'imuune
		'eetx	'eetx	'eetx
3rd person	singular	'ipi	'ipnim	'ipne
	plural	'ime	'imeem	'imuune

Table 1.3. The pronominal system

b. lepit lehey-pe hi-weqi-se-ne

two day-LOC 3SUBJ-rain-IMPERF-REM.PAST
Two days ago it rained.

(93) Genitives

a. ciilyex 'iin-im-pe 'aatim-pa hii-we-s-0

fly 1SG-GEN-LOC arm-LOC 3SUBJ-be-P-PRES
There's a fly on my arm.

b. ciilyex 'iin-im 'aatim-pa hii-we-s-0

fly 1SG-GEN arm-LOC 3SUBJ-be-P-PRES
There's a fly on my arm.

Further discussion of the case system at a clausal level is postponed to chapters 5-8.

1.4.4 Pronouns

The pronominal system for core arguments is summarized in table 1.3.

As in many other languages, less than a full case paradigm is found for first and second person pronouns. In Nez Perce these pronouns fall into two classes: those which inflect for OBJ but not for ERG, e.g. *'iin* 1SG and *'iim* 2SG, and those which do not decline at all, e.g. *'ee* 2SG and *kiye* 1PL.INCL. These classes are exemplified in (94) and (95) respectively.

- (94) a. **'iin** lilooy-ca
 1SG be.happy-IMPERF
 I'm happy
- b. **'iin** weet'u 'ituu-ne 'aa-p-sa-qa
 1SG NEG what-OBJ 3OBJ-eat-IMPERF-REC.PAST
 I didn't eat anything
- c. ciq'aamqal-m hi-ke'nip-Ø-e **'iin-e**
 dog-ERG 3SUBJ-bite-P-REM.PAST 1SG-OBJ
 The dog bit me
- (95) a. **kiye** hip-te-ciix
 1PL.INCL eat-go.away-IMPERF.PL
 We are going off to eat.
- b. **kiye** 'a-kat'a'w-cix lalaχ-na 'etke
 1PL.INCL 3OBJ-drink.up-IMPERF.PL coffee-OBJ because
 hi-yaw'ic-wi-yo'
 3SUBJ-cold-VBLZR-PROSP
 We should finish (are finishing) the coffee because it will get cold
- c. 'inpe'weet-um **kiye** hi-naas-pay-noo-yo'
 police-ERG 1PL.INCL 3SUBJ-O.PL-arrive-APPL:GOAL-PROSP
 The cops might come upon us!

Indeclensable pronouns frequently co-occur with pronouns from the declensable series.

- (96) 'oykal-o hi-nek-siix **'iim 'ee** 'e-nees-his-nu'
 all-HUM 3SUBJ-think-IMPERF.PL 2SG 2SG 3OBJ-O.PL-win.over-PROSP
 Everyone thinks you're going to win
- (97) **'imee 'eetx** 'e-pe-nees-hex-nu'
 2PL 2PL 3OBJ-S.PL-O.PL-see-PROSP
 You will see them

- (98) kii **kiye** wi-siix **nuun-im**
 this 1PL.INCL be-IMPERF.PL 1PL-GEN
 This is ours (yours and mine) (Aoki, 1994, 232)

The indeclensible pronouns are, impressionistically, akin to clitic pronouns in European languages: they are phonologically light and are limited in the positions they may occupy in the clause. The order in (100) was rejected.

- (99) 'iim 'ee hanii- \emptyset -ya
 2SG 2SG.INDECL make-P-REM.PAST
 You made something
- (100) * 'iim hanii- \emptyset -ya 'ee
 2SG make-P-REM.PAST 2SG.INDECL
 You made something

We observe that all three indeclensible pronouns include a 2nd person feature (assuming that a 1st person inclusive bears both first and second person features).

Note that the declensible 2nd person plural and the 3rd person plural are syncretic with the exception of the transitive subject form. (They are also syncretic in the genitive.) The following examples show as transitive subjects 2nd plural *'ime* and 3rd plural *'imeem*. Only the 3rd person pronoun bears ergative case. (Note that the examples are further disambiguated by verbal agreement, which registers 3rd persons but not 2nd persons.)

- (101) 2PL transitive subject: no ergative
- a. **'imee** 'e-sepe-pi-tx
 2PL 3OBJ-CAUSE-eat-IMPER.PL
 You feed them. (Spalding, 1871, 59)
- b. **'imee** 'eetx 'e-pe-nees-hex-nu'
 2PL 2PL 3OBJ-S.PL-O.PL-see-PROSP
 You will see them
- (102) 3PL transitive subject: ergative

- a. **'imee-m** hi-pe-nees-hex-nu' 'imuu-ne
 3PL-ERG 3SUBJ-S.PL-O.PL-see-PROSP 2PL-OBJ
 They will see you
- b. pee-'nehne-ce-ne **'imee-m**
 3/3-take-IMPERF-REM.PAST 3PL-ERG
 They took him (Aoki and Walker, 1989, 606)

As previous authors have treated ergative and genitive as a single case, this distinction in transitive subject marking has not been explicitly noted, though Rude (1985) hints at it.

1.5 Indeterminate pronouns

A special class of pronoun-like elements deserves mention in addition to referential pronouns. These are items used as question words, as negative polarity items, and as free choice items. Borrowing a label from the literature on similar phenomena in Japanese (e.g. Kratzer and Shimoyama 2002), I call these *indeterminate pronouns*. They are listed below with *wh*-glosses.

(103) Indeterminate pronouns

<i>'ituu</i>	what	<i>mac</i>	how many
<i>'isii</i>	who	<i>malaham</i>	how many times
<i>manaa</i>	how/why	<i>mast</i>	how long
<i>mine / me</i>	where	<i>miniku</i>	which one
<i>mawa</i>	when	<i>minma'i</i>	in what way/how

Certain of the indeterminates appear to be related to forms starting with *k-*, the initial consonant of most demonstratives. The following are some potential correspondences.

(104)	<i>mine</i>	where	<i>kine</i>	here
	<i>mawa</i>	when	<i>kawa</i>	then
	<i>mac</i>	how many	<i>kala</i>	that many
	<i>malaham</i>	how many times	<i>kalaham</i>	that many times
	<i>masł</i>	how long	<i>kasł</i>	thus big
	<i>miniku</i>	which one	<i>kin'ike</i>	"one of two choices" (Aoki, 1994, 228)

Indeterminates are used in *wh*-questions, where they appear clause-initially.

- (105) **'itu-nm** pee-p-tetu ɬepɬep-ne
 what-ERG 3/3-eat-HAB.PRES butterfly-OBJ
 What eats butterflies?
- (106) **'ituu-ne** ɬepɬep-nim pee-p-tetu?
 what-OBJ butterfly-ERG 3/3-eat-HAB.PRES
 What does a butterfly eat?
- (107) **mana** wee-s-∅
 how be-P-PRES
 How are you?
- (108) **mine** 'ee week-∅-e
 where you be-P-REM.PAST
 Where were you?
- (109) **mawa** picpic-nim pee-p-u' cu'yeem-ne
 when cat-ERG 3/3-eat-PROSP fish-OBJ
 When will the cat eat the fish?
- (110) **miniku-nm** pee-p-∅-e cu'yeem-ne picpic-nim
 which-ERG 3/3-eat-P-REM.PAST fish-OBJ cat-ERG
 Which cat ate the fish?
- (111) **minma'i** picpic-nim pee-p-u' cu'yeem-ne
 how cat-ERG 3/3-eat-PROSP fish-OBJ
 How will the cat eat the fish?

When a *wh*-question meaning is desired, consultants usually reject sentences where the indeterminate does not appear initially.

(112) * ʔepʔep-nim pee-p-tetu **'ituu-ne**

butterfly-ERG 3/3-eat-HAB.PRES what-OBJ

Intended: What do butterflies eat?

(113) * picpic-nim pee-p-u' cu'yeem-ne **mawa**

cat-ERG 3/3-eat-PROSP fish-OBJ when

Intended: When will the cat eat the fish?

Apart from the fronted indeterminate, there is no overt question morpheme in *wh*-questions. I have not been able to discern any distinct question intonation.

Indeterminates are also used in a group of contexts familiar from the domain of negative polarity: in the scope of negation, in questions and in antecedents of conditionals. The negation can be clausal negation *weet'u*, or the negation of a negative verb like *siw'e* 'not recognize' (cf. English *lack*; *They lacked any money*).

(114) weet'u **'isii-ne** kine 'e-nee-suk-ce

not who-OBJ here 3OBJ-O.PL-recognize-IMPERF

I don't recognize anyone here.

(115) 'e-nees-siw'e-ce **'isii-ne**

3OBJ-O.PL-not.recognize-IMPERF who-OBJ

I don't recognize anyone.

The indeterminate must follow clausal negation, if licensed by it.

(116) Negation must precede indeterminate

a. weet'u **'ituu-ne** 'a-p-sa-qa

not what-OBJ 3OBJ-eat-IMPERF-REC.PAST

I didn't eat anything

b. * **'ituu-ne** weet'u 'a-p-sa-qa

This ordering pattern suggests that surface order is at least to some degree indicative of scope in Nez Perce. The indeterminate is only licensed if it falls in the scope of negation, hence to its right.

The situation is more complicated with yes/no questions, marked with initial particle *weet*. Here the indeterminate generally follows the licensing particle, but is sometimes permitted to precede it.

(117) *weet* 'e-suki-ce **'isii-ne**
 Y.N 3OBJ-recognize-IMPERF who-OBJ
 Do you recognize anybody?

(118) *weet* **minma'i** ha-'ac-o'kom?
 Y.N how 3SUBJ-enter-K.PROSP
 Will she be able to come in? (lit. Will she come in in any way?)

(119) a. *weet* **'ituu-ne** 'e-p-u'
 Y.N what-OBJ 3OBJ-eat-PROSP
 Are you going to eat anything?

b. **'ituu-ne** *weet* 'e-p-u'
 what-OBJ Y.N 3OBJ-eat-PROSP
 Are you going to eat anything?

It could be that where the indeterminate precedes the question particle, it is licensed by a silent piece of higher structure (perhaps found in content questions as well).

The following examples show indeterminates in clauses headed by *c'alawi* 'if'.

(120) *c'alawi* **'isii-me** hi-kuu-siix payniwaas-x,
 if who-PL 3SUBJ-go-IMPERF.PL payniwas-to
 'e-nees-tiw'ix-nipeec-wi-se
 3OBJ-O.PL-follow-DESID-VBLZR-IMPERF
 If anyone goes to the Pii-Nii-Waus (cafe), I want to go too.

(121) c'alawi **'ituu-ne** 'ee 'e-npi-se 'itamyaanwas-pa,
 if what-OBJ 2SG 3OBJ-get-IMPERF store-LOC
 'e-hex-nipeec-wi-ye'-se
 3OBJ-see-DESID-VBLZR-APPL:AFF-IMPERF
 If you get anything at the store, I want to see it.

(122) c'alawi **'isii-nm** 'ee pay-noo-yo' haama-nm
 if who-ERG 2SG come-APPL:GOAL-PROSP man-ERG
 kaa yoq-o' haama 'ee wic'ee-yu'
 then that-EMPH husband 2SG become-PROSP
 If any man comes to you, that one will become your husband. (Aoki and Walker,
 1989, 52)

These three environments recall the distribution of negative polarity items like English *any*.

A last group of environments license indeterminates on free choice readings. Such indeterminates may be found in imperatives:

(123) ku-y **mi-px**
 go-IMPER where-to
 Go someplace! Get lost!

(124) muu-nim **mawa**
 call-IMPER.CIS when
 Call me anytime!

They may also be found in optatives headed by *'iin'a* 'I wish':

(125) 'iina \hat{x} **'isii-nm** hi-pay-noo-s- \emptyset hiwewciwet-x 'isiwe-px
 I.wish who-ERG 3SUBJ-come-APPL:GOAL-P-PRES cut.up-to butcher-to
 'isiwe-px
 butcher-to

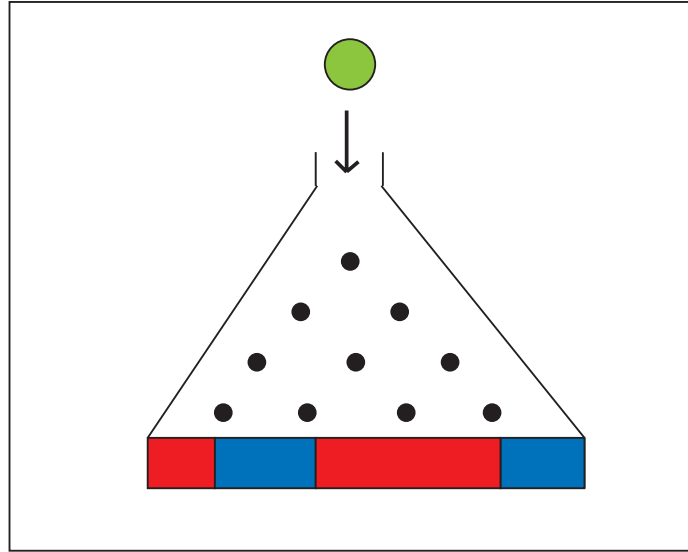


Figure 1.1. Drop-ball scenario

(As explained to the consultant, the dark circles represent pegs that the ball will bounce off of on its way to landing on either red or blue.)

I wish someone will come to cut it up, to butcher, to butcher! (Aoki and Walker, 1989, 472)

(126) 'iin'aâ 'ituu-ki himaq'iis-qoq'alâ wew'siwee

I.wish what-INST big-bison butcher

I wish to butcher the big bison with something. (Aoki and Walker, 1989, 112)

Finally, they are found in clauses marked with prospective portmanteaux.

(127) Context: Drop ball picture (Figure 1.1); sentence volunteered by speaker

k'apapk'apap hi-tqew-yu' mi-px

ball 3SUBJ-fall-PROSP where-to

The ball could fall anywhere.

Speaker comment: "Whichever direction."

(128) Context: discussion of things to worry about concerning driving in the winter.

B: 'itu-wecet timneenek-se?

what-reason worry-IMPERF

Why are you worried?

A: \hat{x} uys-nu' iskit-kinix mawa

slide-PROSP road-from when

(postulated: I might slide from the road at any time)

Consultant: "just might at any time"

These examples are discussed in chapter 4.

1.6 Relative constructions

There is a family of relative constructions in Nez Perce. The internal structure of the most common type of relative clause is schematized as follows.

(129) C(agr) DEM [clause (gap)]

The left periphery of the relative clause hosts a complementizer or relativizer *ke*, which agrees with 1st and 2nd person arguments in the relative clause. The paradigm is shown in Table 1.4. Interestingly, complementizer inflection is not sensitive to subject/object distinctions; relative clauses corresponding to both 'that saw me' and 'that I saw' take complementizer *kex* 'REL-1SG'. It is also worth noting that only 1st and 2nd person arguments agree overtly with the complementizer. As we will see in section 1.7.2.1, this is the opposite of what happens in verbal inflection, where only 3rd person arguments agree overtly for person.

The complementizer is immediately followed by a (distal) demonstrative. When an argument is relativized, the demonstrative bears the case of the argument. The following minimal pair contrasts subject and object relativization. The difference is seen in the case marking of the demonstrative.

(130) Subject relative

mine hii-wee-s- \emptyset haama

where 3SUBJ-be-P-PRES man

		Exponents				
		person	singular	plural		
		1	(e)x	(e)x		
		2	m	pe-m		
		1+2 (inclusive)		nm		
		3	-	-		
		Inflected forms				
	1sg S	1+2 S	2sg S	2pl S	3 S	
no obj	kex	kenm	kem	kepem	ke	
1 sg O	-	??	kemex	kepemex	kex	
1+2 O	??	-	??	??	kenm	
2sg O	kemex	??	-	-	kem	
2pl O	kepemex	??	-	-	kepem	
3 O	kex	kenm	kem	kepem	ke	

Table 1.4. Inflection of relative complementizer *ke*

ke-x **kon-im** ha-ak-ca-qa kii meeywi

REL-1SG that-ERG 3SUBJ-see-IMPERF-REC.PAST this morning

Where is the man that _ saw me this morning?

(131) Object relative

mine hii-wee-s-∅ haama

where 3SUBJ-be-P-PRES man

ke-x **kon-ya** 'a-ak-ca-qa meeywi

REL-1SG that-OBJ 3OBJ-see-IMPERF-REC.PAST morning

Where is the man that I saw _ this morning?

Possessor relativization is also possible, as the following example shows.

(132) mine hii-wee-s-∅ haama

where 3SUBJ-be-P-PRES man

ke **ko-nim** ciq'aamqal-m hi-ke'nip-∅-e

REL that-GEN dog-ERG 3SUBJ-bite-P-REM.PAST

Where is the man whose dog bit me?

Relativization is not restricted to arguments and possessors. In the following examples, demonstratives of location, time and manner follow the complementizer.

(133) Location relative

hi-neec-'ipeewi-se ke **kona** hi-tkuliix-ne'nix-ne.

3SUBJ-O.PL-look.for-IMPERF REL there 3SUBJ-hunt-HAB.PAST.PL-REM.PAST
He is looking for them where they used to hunt (Aoki and Walker, 1989, 16)

(134) Time relative

pinmix-sa-qa ke **kaa** Meeli hi-pay-n-a

sleep-IMPERF-REC.PAST REL then Mary 3SUBJ-arrive-P-REM.PAST
I was sleeping when Mary arrived

(135) Manner relative

weet'u-mi's hi-tqe-lehne-n-e

not-at.all 3SUBJ-quickly-go-P-REM.PAST

ke **ku'us** piyee-me hi-ko-sii-qa

REL thus older.brother-PL 3SUBJ-do-IMPERF.PL-REC.PAST

Not at all did he run down like his older brothers had been doing. (Aoki and Walker, 1989, 557)

These are free adjunct relatives; what look like headed adjunct relatives are also possible.

(136) kiimet weet'u mine paa-'yaŋ-n-a **ta'c wic'eenwees**

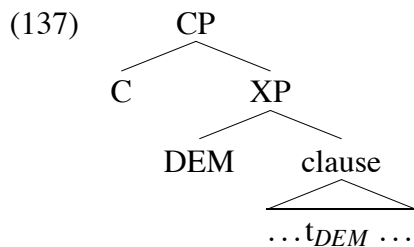
there not where 3/3-find-P-REM.PAST good home

ke kona hi-pa-wc'aa-yo'qa hi-pa-p'im-no'qa

REL there 3SUBJ-S.PL-remain-QA.PROSP 3SUBJ-S.PL-grow-QA.PROSP

He didn't find anywhere a good home where they should remain, should grow.
(Aoki and Walker, 1989, 395)

The internal syntax of this relative construction is interesting in that the complementizer and demonstrative together look like the decomposed pieces of a relative pronoun—*relative* on account of C and a *pronoun* on account of the demonstrative. The placement of the demonstrative clause-initially suggests movement to the C domain to form this structure. Vowel harmony shows that in argument relatives, these pieces have not combined to form a single lexical item, a relative pronoun. Complementizer *ke* contains recessive vowel /e/. Note that the dominant vowels of the demonstratives *konim* and *konya* do not cause the complementizer to harmonize to *ka* in (130)-(132); this is the general pattern of argument relatives. (It holds both for my consultants and in corpora representing the speech of older speakers.) The lack of harmony suggests that for argument relatives, the structure resembling a relative pronoun is more structurally articulated than a simplex relative pronoun would be. Assuming the demonstrative attains its position in the left periphery via movement, the structure could be as follows.



XP is presumably part of the articulated CP domain in the sense of Rizzi (1997).

The situation is different for adjunct relatives. Here, vowel harmony between complementizer and demonstrative may optionally occur.

(138) *ke* + *kona* ‘there’ = *kakona* ‘where’

waaqo’ ’e-nees-kiy-uu-se

now 3OBJ-O.PL-go-APPL:GOAL-IMPERF

ka-kona hi-wsa’mk-ciix hi-weece-siix

REL-there 3SUBJ-camp-IMPERF.PL 3SUBJ-dance-IMPERF.PL

Now I am going over to them where they are camped together dancing (Aoki and Walker, 1989, 571)

(139) *ke + koniix* ‘from there’=*ka koniix* ‘wherefrom’; *ke + kawa* ‘then’=*kakawa* ‘when’

ka-kon-iix hi-wc’ee- \emptyset -ye

REL-there-from 3SUBJ-become-P-REM.PAST

ka-kawa hi-lo’ \hat{x} -no’qa

REL-then 3SUBJ-get.warm-QA.PROSP

q’o’ yoq’o’ yawnyaaya la’am hi-’leyu’k-se

quite that cold.people all 3SUBJ-melt-IMPERF

’etke haswalaya paa-ni-sa-na

because slave 3/3-make-IMPERF-REM.PAST

From that it came to pass that when it can get warm, freezing people melt away, because they [Warmweather people] conquered them [Coldweather people] (Aoki and Walker, 1989, 332)

(140) *ke + kala* ‘that many’ = *kakala* ‘as many as’

pa-myoo \hat{x} atoo-yoo- \emptyset -ya la’am-na wuuliwteliki-ne

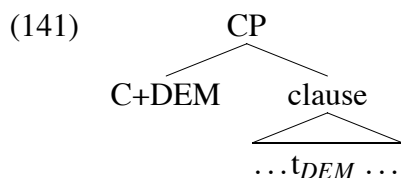
3/3-be.chief-APPL:GOAL-P-REM.PAST all-OBJ animal-OBJ

ka-kala ’imes hii-we-s- \emptyset penne \hat{x} sep.

REL-that.many deer 3SUBJ-be-P-PRES different

He ruled over all the animals and as many deer as there are. (Aoki and Walker, 1989, 243)

This suggests that for adjunct relatives, another analysis is possible:



The relativizer and the demonstrative come together to form a true relative pronoun. The relative pronoun formation strategy is restricted to positions low on the relativization accessibility hierarchy of Keenan and Comrie (1977). (It does not seem to occur with genitives, which Keenan and Comrie rank below obliques; however, very few examples of relativized genitives are available.) This strategy is available in both free adjunct relatives, shown above, and adjunct relatives with apparent external heads.

- (142) kawo' hi-pe-quyim-n-e **teχsem ka kona**
 then 3SUBJ-S.PL-climb-P-REM.PAST ridge REL there
 hi-tkuliik-ci-ne
 3SUBJ-hunt-IMPERF.PL-REM.PAST
 kon-o' ti-teχsem hi-pa-tyoox-nayi-k-∅-a
 there-EMPH PL-ridge 3SUBJ-S.PL-holler-go.around-SF-P-REM.PAST
 Then they went up the ridge where they had been hunting, right there they hollered
 around the ridges. (Aoki and Walker, 1989, 552)

The external syntax of the relative construction is more difficult to pin down. Argument relatives sometimes occur immediately following nouns they appear to modify, as in (130)-(132), (136), (142). This suggests that the relative construction could be analyzed as externally headed (with N-RC order).

Sometimes, argument relatives appear without any overt external head.

- (143) watiisx hi-pe-p-u' **ke yoχ** ha-ani-yo' Gus
 1.day.away 3SUBJ-S.PL-eat-PROSP REL that 3SUBJ-make-PROSP G
 Tomorrow we'll eat what Gus makes
- (144) tuxsu'met kaa **ke ko-nim** paa-p'al'a-n-a cixcixicim-ne
 oh then REL that-ERG 3/3-reject-P-REM.PAST Cixcixicim-OBJ
 qoqooχ-na pee-kiy-uu-∅-ye
 Raven-OBJ 3/3-go-APPL:GOAL-P-REM.PAST

She who rejected Cixcixicim had married Raven.

In these examples, a bare relative clause functions like an argument. It is tempting to posit a covert nominal or nominal-like constituent in these cases to assimilate them to (130)-(132). The covert piece of structure could be an external head. Where the bare relative clause behaves like an object, the structure might be:

(145) Externally headed RC hypothesis

S V [_{DP-obj} *t* <N> [_{RC} C DEM clause]]

A covert *t* operator and covert nominal augment the visible relative clause and render it an ordinary object DP.

Another possibility is that Nez Perce relative constructions are correlatives. In this case, relative clauses might never form constituents with external heads. It could be that what look like external heads typically contain covert determiners or pronouns that are anaphoric (or, more properly, cataphoric) to the relative clause material.

(146) Correlative hypothesis

[_{MC} S V [_{DP-obj} anaphor (N)]] [_{RC} C DEM clause]

MC = main clause

RC = correlative clause

It is very common in Nez Perce for anaphoric argument pronouns to be null. This analysis is less plausible for the adjunct relatives seen in (133)-(135), as temporal, locative and manner anaphora typically does not make use of null anaphors in Nez Perce. Adjunct relatives do sometimes appear in what looks like a cataphoric correlative structure; note that the cataphoric demonstrative *kona* is overt.

(147) kawo' ta'c 'iceyeeye kona hi-ipi-se

then good coyote there 3SUBJ-eat-IMPERF

ke kona hi-wyaakaa'aw-ca

REL there 3SUBJ-spend.days-IMPERF

Then coyote is eating well there where he is living. (Aoki and Walker, 1989, 326)

A few variations on the relative construction are also worth mentioning. Relative constructions sometimes appear with the distal demonstrative to the left of *ke*, rather than to its right.

(148) hi-kinewi-sa-qa **yoŋ** ke hi-twilixnix-sa-qa
3SUBJ-taste-IMPERF-REC.PAST that REL 3SUBJ-mix-IMPERF-REC.PAST
She was tasting what she was mixing

(149) hi-toola-s-∅ **yoŋ** ke mii'lac niimiipuutimt
3SUBJ-forget-P-PRES that REL little.bit Nez.Perce.language
hi-cuukwe-ce-ne
3SUBJ-know-IMPERF-REM.PAST
She forgot the Nez Perce that she knew / what little Nez Perce she knew

(150) watiisx tim'e-nu' c'iiqin **yoŋ** ke-x watiisx cuukwe-n-e
1.day.away write-PROSP word that REL-1SG 1.day.away know-P-REM.PAST
Tomorrow I'll write the words I learned yesterday

It could be that this order is derived from the *ke*-demonstrative order by further movement; or it could represent another type of relative construction (perhaps one where a main clause anaphor, rather than a correlative clause pronoun, is realized overtly). That the former analysis is at least a possibility is supported by examples like (151), where the case-marking of material to the left of *ke* is determined internal to the relative clause.

(151) Yoŋ-nim pit'iin-im ke 'e-wuyi-n-e picpic, mine
that-GEN girl-GEN REL 3GEN-run.away-P-REM.PAST cat, where
hii-we-s-∅ pit'iin?
3SUBJ-be-P-PRES girl
That girl whose cat ran away, where is that girl?

Here the genitive case of *yoânim pit'iinim* 'that girl' is expected of the genitive subject of the relative clause's verb.¹

Relative constructions also sometimes make use of a personal pronoun rather than a demonstrative.

- (152) *sepe-x-nim* *ke 'ip-ne* *pe-'eny-Ø-e* *ciickan*
 CAUSE-show-CIS.IMPER REL 3SG-OBJ 3/3-give-P-REM.PAST blanket
 'aayat-om
 woman-ERG
 Show me the one who the woman gave the blanket (to)

- (153) *'e-wewkuni-t'ipeec-wi-se* *kon-ya* *haama-na*
 3OBJ-meet-DESID-VBLZR-IMPERF that-OBJ man-OBJ

ke 'ipi *hi-tiim'e-n-e* *hiteeme-ne's tiim'es*
 REL he 3SUBJ-write-P-REM.PAST read-PART2 paper
 I want to meet that man who wrote a book.

The meanings of such relatives appear to be similar to those formed with demonstratives.

In at least one case, a relative construction appears internally headed.

- (154) *naaqc 'aatway-nim* *hi-nees-kewye-qa-na*
 one old.woman-ERG 3SUBJ-O.PL-feed-HAB.PAST-REM.PAST

ke *yoâ-ma picpic* *hi-wii-se-ne* *ki-k'omay-niin'*
 REL that-PL cat 3SUBJ-be-IMPERF-REM.PAST PL-be.sick-PART3
 That old lady used to feed the cats that were sick

A final class of relative constructions worth mentioning are universal relatives, formed by an indeterminate pronoun following the complementizer.

¹In the relative clause, this is an instance of subject possessor raising, discussed by Rude (1986a).

- (155) ke **'isi-nm** pee-wewluq-tetu lalaŋ-na
 REL who-ERG 3/3-want-HAB.PRES coffee-OBJ
 hi-ku-tee'nix payniwaas-x
 3SUBJ-go-HAB.PRES.PL Payniwas-to
 Whoever wants coffee goes to Payniwas (cafe)
- (156) paa-himkasayq-s-∅ ke **'ituu-ne** Caan-nim paa-p-sa-qa
 3/3-be.tasty-P-PRES REL what-OBJ John-ERG 3/3-eat-IMPERF-REC.PAST
 It's tasty to him, whatever John ate

Indeterminate pronouns, like demonstratives, can show harmony with the complementizer. This is observed for adjunct relatives only, as with demonstratives.

- (157) *ke + mac* 'how many/much' = *kamac* 'however much'
- hi-'neh-cikliik-∅-e cuuy'em **ka-mac**
 3SUBJ-carry-go.home-P-REM.PAST fish REL-how.much
 hi-tquupee'nik-∅-e
 3SUBJ-be.left.over-P-REM.PAST
 He brought home fish, however much was left over. (Aoki, 1994, 628)
- (158) *ke + mawa* 'when' = *kamawa* 'whenever'
- ka-mawa** qiiwn lu'qyeeye 'iweepn-iin
 REL-when old.man warm.people wife-with
 hi-waaw'-a'nix-na
 3SUBJ-fish-HAB.PAST.PL-REM.PAST
 kaa c'alawi poo-wa-lp-a'nix-na
 then if 3/3-fishhook-catch-HAB.PAST.PL-REM.PAST
 kaa yoqopi puu-tkuyk-e'nix-ne.
 then those 3/3-take.away-HAB.PAST.PL-REM.PAST.

Whenever the Warmweather old man and his wife fished, anything they caught, the Coldweathers would take away. (Aoki and Walker, 1989, 326)

However, the restriction to adjuncts is not as informative in the case of indeterminate relatives, as argumental forms *'itu* 'what' and *'isi* 'who' do not contain any dominant vowels that could possibly cause harmony in the complementizer.

1.7 The structure of the verb

1.7.1 Categories of the verb

The verb word is made up of morphemes that can be grouped into a large number of distinct categories by distributional and morphological tests. The pieces of the verb appear in the following order.

(159) pers agr - S num agr - O num agr - DIST - CAUSE - MOD* - root - MOD* - APPL*
- MOD* - low fut - ASP - S num agr - Space - Tense

The categories here are, in order: person agreement, subject number agreement, object number agreement, distributive, causative, modifiers, the root, modifiers, applicatives, modifiers, low future, aspect, subject number agreement, space and tense.

To simplify this picture, we can group the leftmost affixes listed above into a category of *argument markers* and the rightmost affixes into a category of *inflectional suffixes*. The middle of the verb plays host to valence augmenting morphology and modifiers of various types.

(160) argument marking - mid-verb - inflectional suffixes

The discussion below moves through the pieces of the verb in approximate left-to-right order, structured by the breakdown into three zones.

1.7.2 The argument marking zone

Linearly first in the verbal word is the argument marking zone, the locus of agreement in person and number for subject and object, as well as reflexive and reciprocal marking. These categories make up a coherent system in Nez Perce grammar in that they are in complementary distribution. Agreement markers co-occur with one another, but not with reciprocal or reflexive (which encodes its own form of agreement).

All argument markers are sensitive to subjecthood and direct objecthood. The agreement system directly encodes this distinction. Reflexive and reciprocal mark identity or symmetry between subject and direct object only.

Their complementary distribution notwithstanding, argument markers differ along two lines. Reflexive and reciprocal marking, but not agreement marking, appears in participles; reflexive also forms idioms and combines non-compositionally with verb stems in ways that agreement does not. This suggests a derivational/inflectional distinction among argument markers: only agreement markers are truly inflectional.

1.7.2.1 Agreement

The verb agrees with both subject and object in terms of person and number. Marked overtly are third persons and plurals; there is no overt agreement for 1st/2nd person or singular. (Person agreement with 1st/2nd arguments is found in the complementizer system, however; see the discussion of relative complementizer *ke* in section 1.6.)

The subject of a Nez Perce verb is picked out in typologically familiar ways. The subject is the sole argument of an intransitive. In a transitive, the subject is generally an agent, causer or experiencer (though there are exceptions, see section 1.7.3.1). The subject is never introduced by overt applicative morphology. Third person subjects take prefix *h* (which surfaces either as *hi*, with epenthesis, or *hV*, where *V* spreads over a following glottal segment; see the discussion of spreading and epenthesis in section 1.2). First and second person subjects receive no overt subject person agreement.

(161) hi-pay-n-a
3SUBJ-arrive-P-REM.PAST
He/she/it arrived

(162) pay-n-a
arrive-P-REM.PAST
I / you arrived

The marking of subject number is sensitive to aspect/mood. In the prospective, optative, and an aspectual category I call *p aspect* (see chapter 2), subject number is marked in the argument marking zone: plural subjects, regardless of person, take prefix *pe*. Plural marking follows 3rd person *h*. Singular is unmarked.

(163) hi-pa-pay-n-a
3SUBJ-S.PL-arrive-P-REM.PAST
They arrived

(164) pa-pay-n-a
S.PL-arrive-P-REM.PAST
We / you (pl.) arrived

In the imperfective, the imperative, and the notional habitual (which I will break into two distinct aspectual categories in chapter 2), subject number marking is expressed in the inflectional suffix complex and not in the argument marking zone.

(165) hi-pay-siix
3SUBJ-arrive-IMPERF.PL
They are arriving

(166) pay-siix
arrive-IMPERF.PL
We / you (pl) are arriving

Subject person and number marking are *not* sensitive to transitivity. As we see directly below, both 3rd person subject marker *h* and subject plural marker *pe* appear in transitives as well as intransitive forms. Thus *h* indexes both a transitive subject, marked with ergative case, and an intransitive subject, which bears no case marking.

The direct object of a Nez Perce verb is generally the theme or patient in a simple transitive. In a ditransitive, the direct object is the goal argument, never the theme; in an applicative construction, the direct object is always the applicative object. (See the discussion of ditransitives in section 1.7.3.1 and applicatives in section 1.7.4.2.) The direct object is always the nominal that bears objective case marking. In the agreement system, third person direct objects are marked by *'e*, except when the subject is also third person; then rather than *h* '3subj' plus *'e* '3obj', we find a single, portmanteau form *pee*. First and second person objects are unmarked. The verb takes the same form as in an intransitive.

(167) *'e-hex-n-e*

3OBJ-see-P-REM.PAST

I saw him/her/it.

(168) *pee-x-n-e*

3/3-see-P-REM.PAST

He/she/it saw him/her/it.

(169) *he-hex-n-e*

3SUBJ-see-P-REM.PAST

He/she/it saw me/you.

Plural object marking, unlike plural subject marking, is always expressed in the argument marking zone. Verbs with plural direct objects prefix *nees*; this prefix follows subject person marker *h* '3subj' and subject plural marker *pe*.

- (170) *nees-ex-n-e*
 O.PL-see-P-REM.PAST
 I saw you (pl). / You (sg) saw us.
- (171) *pe-nees-ex-n-e*
 O.PL-see-P-REM.PAST
 We saw you (pl). / You (pl) saw us.
- (172) *hi-nees-ex-n-e*
 3SUBJ-O.PL-see-P-REM.PAST
 He/she/it saw you (pl) / us / them.
- (173) *hi-pe-nees-ex-n-e*
 3SUBJ-S.PL-O.PL-see-P-REM.PAST
 They saw you (pl) / us / them
- (174) *'e-pe-nees-ex-n-e*
 3OBJ-S.PL-O.PL-see-P-REM.PAST
 We / you (pl) saw them

While subject plural and object plural markers co-occur (e.g. (172), (173)), person markers never co-occur. In simple cases, this follows simply from the way the system is set up: *h* marks 3rd person subjects, *'e* marks 3rd person objects, and *pee* marks the combination of 3rd person subject and 3rd person object. However, in certain cases the *pee* '3/3' portmanteau is unavailable, and in these instances, only subject marker *h* appears. Plural prefixation for subject and object interferes with the portmanteau form. When a verb marks subject plural with prefix *pe*, neither *pee* '3/3' nor *'e* '3obj' may appear. The object person is simply unmarked. Thus the following form does not distinguish the person of the object at all.

- (175) hi-pe-hex-n-e
 3SUBJ-S.PL-see-P-REM.PAST
 They saw me / you / him / her / it

Note that this is not because the plural prefix *pee* ‘3/3’ encodes singular subject number. When the plural is expressed outside of the argument marking zone, as happens in the imperfective, habitual and imperative, the portmanteau form reappears.

- (176) pee-k-cix
 3/3-see-IMPERF.PL
 They see him / her / it (*me/you)

Object plural prefix *nees* likewise is incompatible with *pee* ‘3/3’, and once again, *h* ‘3subj’ appears instead of ‘*e* ‘3obj’ as the sole person marker.

- (177) hi-nees-ex-n-e
 3SUBJ-O.PL-see-P-REM.PAST
 He saw them / us / you (pl)

The agreement marking system is summarized in table 1.5.

1.7.2.2 Reciprocal

The reciprocal prefix *pi* is invariant in form and always occurs leftmost in the verb. The reciprocal clause behaves like an intransitive in that ergative case does not appear on the subject.

- (178) pi-hex-n-e haacwal kaa pit’iin’
 RECIP-see-P-REM.PAST boy and girl
 The boy and the girl saw each other
- (179) qo’c kiye pi-hex-nu’ halxpawinaqit-pa
 later 1PL.INCL RECIP-see-PROSP Monday-LOC
 We’ll see each other on Monday (said in parting)

Prefixal subject number: prospective / optative / p aspect

		O		B	J	
		no obj	1/2 sg	1/2 pl	3 sg	3 pl
S	1/2 sg	-	-	nees	'e	'enees
U	1/2 pl	pe	pe	penees	'epe	'epenees
B	3 sg	hi	hi	hinees	pee	hinees
J	3 pl	hipe	hipe	hipenees	hipe	hipenees

Suffixal subject number: imperfective (shown) / notional habitual / imperative

		O		B	J	
		no obj	1/2 sg	1/2 pl	3 sg	3 pl
S	1/2 sg	-...se	-...se	nees...se	'e...se	'enees...se
U	1/2 pl	-...siix	-...siix	nees...siix	'e...siix	'enees...siix
B	3 sg	hi...se	hi...se	hinees...se	pee...se	hinees...se
J	3 pl	hi...siix	hi...siix	hinees...siix	pee...siix	hinees...siix

Table 1.5. Agreement prefixes

In these examples, the reciprocal intransitivizes otherwise transitive *heki* 'see'. The arguments of the reciprocal relation are always the subject and the direct object (the object that would receive objective case marking and enter into object agreement in a transitive). The following example uses ditransitive verb *wetkuy'k* 'take away forcibly'. The goal argument of this verb is always the direct object, rather than the theme; the reciprocal relation holds between the subject and the goal argument.

- (180) ka-kaa pii-wetkuy'k-six yoq'opi 'imes
REL-then RECIP-take.away-IMPERF.PL that deer
when they took away the deer from each other (Aoki and Walker, 1989, 190)

In the following cases, the direct object is introduced by an applicative; the reciprocal relation holds between the subject and the applicative argument.

- (181) cu'u kuu-m-tx
now go-CIS-IMPER.PL

'eetx silu pii-txc'a'k-a'n-yo'-Ø

2PL eye RECIP-poke-APPL:AFF-FUT-PRES

Now, come over, you might poke out each other's eyes! (Aoki and Walker, 1989, 33)

- (182) kal'a ku'us hi-kiy-a'nii-qa nuun-im pisit-me na-'toot kaa
just thus 3SUBJ-do-HAB.PL-REC.PAST 1PL-GEN father-PL 1SG-father and
'im-'toot
2SG-father

kaa pii-tqe-'nept-ey'-six yoq'opi k'aplaç
and RECIP-quickly-hold-APPL:AFF-IMPERF.PL that billy.club

Thus our fathers used to do, my father and your father: they hold the club for each other (Aoki and Walker, 1989, 156)

- (183) pi-kiy-aapii-k-six
RECIP-go-APPL:AWAY-SF-IMPERF.PL
We are competing to get there. We are going as we interfere with each other. (Aoki, 1994, 244)

The reciprocal appears in participles.

- (184) pii-'ni-t
RECIP-give-PART I
gift ('mutual giving')

- (185) pii-'amki-n
RECIP-gather-PART I
meeting ('mutual gathering')

This is unlike the agreement prefixes with which it is in complementary distribution; agreement prefixes never appear in participles.

Person	Singular	Plural
1	'inee	nemee
2	'imee	'imemee
3	'ipnee	'imemee

Table 1.6. Reflexive prefixes

1.7.2.3 Reflexive

The reflexive prefix indicates that the subject also holds whatever thematic role would be accorded to a direct object. The prefix varies in form according to the person and number of the subject. It always occurs leftmost in the verb. The following examples contrast transitive and reflexive verb forms.

(186) a. 'e-tewyek-se.

3OBJ-feel-IMPERF
I feel it, I sense it.

b. ta'c 'inee-tewyek-se.

good 1SG.REFL-feel-IMPERF
I feel good.

(187) a. pee-yyew-n-e.

3/3-pity-P-REM.PAST
She pitied him.

b. 'ipnee-yyew-n-e.

3SG.REFL-pity-P-REM.PAST
He pitied himself.

The forms of the reflexive prefix are given in Table 1.6. The syntax of reflexivization is treated in section 5.3.4.

1.7.3 Mid-verb I. Roots and prefixes

The "middle field" of the verb is made up of the root plus modifiers and argument-structural operators. To the left of the root are root prefixes, the causative, and the distribu-

tive; to the right of the root are applicatives and modifier suffixes. We will first look at the root and its prefixes: first root argument structure, then the formation of complex stems via root prefixes, and then the causative and distributive prefixes.

1.7.3.1 Root argument structure.

Basic intransitive verbs allow subjects of a variety of thematic roles: agents, experiencers, undergoers, state holders and natural forces.

(188) Agents

- a. misqoyii-sa
trade-IMPERF
I am trading
- b. timmiyu-ce
plan-IMPERF
I am making a plan
- c. hipi-se
eat-IMPERF
I am eating

(189) Experiencers, state holders

- a. lilooy-ca
be.happy-IMPERF
I am happy
- b. cikaaw-ca
fear-IMPERF
I am afraid
- c. tisqa'w-sa
be.fat-IMPERF
I am fat

(190) Undergoers, natural forces

a. tin'ki-ce

die-IMPERF

I am dying

b. wiliik-se

fall-IMPERF

I am falling

c. hi-weqi-se

3SUBJ-rain-IMPERF

It's raining

The subjects of intransitive verbs, regardless of role, are never marked for case.

Some verb stems may be used transitively or intransitively. The following are transitive versions of some of the intransitive examples listed above. Note that transitivity is marked only in agreement prefixes; there is no overt valence marking in these sentences.

(191) paa-lloy-ca-na

3/3-be.happy-IMPERF-REM.PAST

He was glad about him. (cf. intransitive (189a))

(192) 'a-ckaaw-ca

3OBJ-fear-IMPERF

I am afraid of it (cf. intransitive (189b))

(193) 'a-p-sa-qa

3OBJ-eat-IMPERF-REC.PAST

I was eating it (cf. intransitive (188c))

Like intransitives, transitive verb stems allow subjects of a variety of roles. Third person transitive subjects generally mark ergative case, and always participate in subject agreement; transitive objects generally both mark objective and participate in object agreement.

(The conditions under which subjects mark ergative and objects agree and mark case are the subject of chapters 5-8.) Importantly for our discussion of ergative case in chapter 5, there is no special connection between transitive subjects, ergative marking, and agency. Transitive subjects marked with ergative may be agents; experiencers; non-agentive causers; or undergoers.

(194) Agent subjects

a. pit'iin-im paa-yaŋ-n-a picpic-ne.

girl-ERG 3/3-find-P-REM.PAST cat-OBJ

The girl found the cat.

b. ki-nm picpic-nim pee-p-u' cu'yeem-ne.

this-ERG cat-ERG 3/3-eat-PROSP fish-OBJ

This cat will eat the fish.

(195) Experiencer subjects

a. 'imee-m hi-pe-nees-hex-nu' 'imuu-ne

3PL-ERG 3SUBJ-S.PL-O.PL-see-PROSP 2PL-OBJ

They will see you.

b. paa-ckaw-ca ciq'aamqal-na picpic-nim

3/3-fear-IMPERF dog-OBJ cat-ERG

met'u pee-tewi-se ciq'aamqal-nim picpic-ne.

but 3/3-like-IMPERF dog-ERG cat-OBJ

The cat is afraid of the dog but the dog likes the cat.

c. pit'iin-im pee-ciceqe-ce titwatii-ne.

girl-ERG 3/3-be.interested-IMPERF story-OBJ

The girl is interested in the story.

d. weet'u konix 'aatway-nim pee-cimx-n-e t'ext'ex-ne.

NEG thenceforth old.woman-ERG 3/3-hate-P-REM.PAST locust-OBJ

The old woman didn't hate the (young woman) Locust anymore. (Phinney, 1934, 115)

(196) Non-agentive causer subjects

a. puu-ye-sitk-en'- \emptyset -ye weeyux hopoop-nim.

3/3-quickly-entangle-APPL:AFF-P-REM.PAST leg moss-ERG

The moss entangled her legs. (Phinney, 1934, 16)

b. Context: discussion of a car wreck atop Lewiston Hill. In dense fog, a small car crashed into a large truck hauling cars to a dealership.

himeeqiis-nim 'atamooc-nim poo-yawq-n-a kuckuc-ne

big-ERG car-ERG 3/3-wreck-P-REM.PAST little-OBJ

'atamooc-na.

car-OBJ

The big car wrecked the little car.

Comment: "caused him to get in a wreck"

(197) Undergoers

a. piswe-m 'inii-ne pee-tqe-likeece- \emptyset -ye.

rock-ERG house-OBJ 3/3-suddenly-on.top-P-REM.PAST

A rock fell on the house.

The objects of these verbs also hold a variety of thematic roles: undergoers, themes, locations.

In addition to transitives and intransitives, there is also a class of morphologically simplex ditransitives. In a ditransitive, the subject marks generally ergative case, and always participates in subject agreement. The subject nominal generally holds the role of agent. Of the two objects, only one marks objective case and participates in object agreement. This is always what we might think of, on the model of European languages, as the “dative object”: the goal or source. Since this object receives objective case, rather than a special dative, I call it simply the direct object. The theme argument receives no case marking and does not agree with the verb. Borrowing a term from Relational Grammar, I call an argument of this profile a *chômeur*.

In the following examples, the direct object denotes a goal.

- (198) 'ip-nim pee-ken'wi- \emptyset -ye qeqepe' Meri-ne
 3SG-ERG 3/3-knit-P-REM.PAST corn.husk.bag Mary-OBJ
 She knitted Mary a corn husk bag (Aoki, 1994, 206)
- (199) 'ip-nim pe-'eny- \emptyset -e nukt ciq'aamqal-a
 3SG-ERG 3/3-give-P-REM.PAST meat dog-OBJ
 He gave meat to a dog (Aoki, 1994, 1035)
- (200) kii sit'eqs pe-tkuytuu'-se-ne haacwal-a
 this liver 3/3-toss-IMPERF-REM.PAST boy-OBJ
 They tossed the boy this liver (Rude, 1985)

With other ditransitive verbs, the direct object denotes a source.

- (201) âââas-na 'aatim puu-tkuy'k- \emptyset -e
 grizzly-OBJ arm 3/3-take.away-P-REM.PAST
 He took away the arm from grizzly bear. (Aoki and Walker, 1989, 122)
- (202) yoâ ke hi-ip-sa-qa, timaanit sik'em-ne
 that REL 3SUBJ-eat-IMPERF-REC.PAST apple horse-OBJ
 'oo-lapsk- \emptyset -a
 3OBJ-snatch-P-REM.PAST
 I snatched the apple from the horse that was eating
- (203) 'e-nees-peâwi- \emptyset -ye nukt 'imuu-ne
 3OBJ-O.PL-steal-P-REM.PAST meat 3PL-OBJ
 I stole meat from them. (Aoki, 1994, 530)

Note that none of these examples contain applicative morphology overtly introducing a second object.

The semantic roles associated with subject, object and chômeur arguments in the absence of valence-augmenting morphology are summarized in Table 1.7.

Intransitive	Subject	Agent Experiencer Undergoer State holder Natural force
Transitive	Subject	Agent Experiencer Causer Undergoer
	Object	Theme Location
Ditransitive	Subject	Agent
	Object	Goal Source
	Chômeur	Theme

Table 1.7. Stem argument structure

1.7.3.2 Root prefixes

Nez Perce verb stems are frequently formed from verb roots plus root or "lexical" prefixes. There are a great number of root prefixes; Aoki (1970, 84-86) lists 167. The morphosemantics of root prefixes in Nez Perce is part of an areal pattern that DeLancey (1996) called the "bipartite stem belt". Delancey characterizes root prefixes as follows.

In all of the languages which have this category some or all of the members can have reference to the shape of an instrument, and the category is traditionally referred to as "instrumental prefixes". But in all languages for which I have data some members of the category can also refer to the shape of a Theme argument, and in the more elaborated systems characteristic of our area bound stems referring to manner of motion also occupy this same positional slot. In the core languages the positional category also includes a motley set of bound stems with no discernable semantic connection to any of these fields.

Lexical prefixes in Nez Perce indicate instruments, sometimes by shape, as well as more abstract notions of the means of accomplishing an action (by smell, by throwing); the manner in which the agent carries out an action; in a limited number of cases, the nature of

the object²; and a variety of other notions including time of day. The following prefixes on the stem *'iyaaq* 'find' illustrate some of the range of prefixes. (Data are from Aoki 1994, 1092-1093.)

(204) Instrument and means

- a. *wicxo-'oyaqi-n-∅*
with.buttocks-find-P-PRES
I just found it by sitting on it
- b. *kipi-yaqi-n-∅*
by.tracking-find-P-PRES
I just found (e.g., deer) by tracking
- c. *nooxc-'yaqi-n-∅*
by.smell-find-P-PRES
I just found it by the smell

(205) Manner

- a. *tisqi-'yaqi-n-∅*
backward-find-P-PRES
I found (mine) while I walked backward.
- b. *wiyaa-'yaqi-n-∅*
as.one.goes-find-P-PRES
I just found as I was going.
- c. *woola-'yaqi-n-∅*
riding-find-P-PRES
I just found as I was riding (a horse)

²Object prefixes are not a form of noun incorporation, at least not synchronically; e.g. the prefix 'fish' is *leew*, whereas the nominal is *cuu'yem*.

- d. waya-'yaaqi-n- \emptyset
quickly-find-P-PRES
I was just running around and found (mine)

(206) Object

- a. laaw-'yaqi-n- \emptyset
fish-find-P-PRES
I just found fish.

(207) Other

- a. 'iyaa-'yaqi-n- \emptyset
water-find-P-PRES
I found it in water.
- b. tiw'ala-'yaaqi-n- \emptyset
rain.snow-find-P-PRES
I just found (mine, e.g., a horse) in rain.
- c. waam'o-'yaqi-n- \emptyset
in.bed-find-P-PRES
I just found when I lay down to sleep.

Note that the classification of prefixes into instrument-oriented, manner-oriented, object-oriented and so on is rather slippery. Many of the prefixes are quite flexible about the semantic role of the content they introduce. We see this for *wewte* 'head', though the difficulty of classification is quite general.

- (208) a. wawta-'yaqi-n- \emptyset
head-find-P-PRES
I just found (mine) with my head (e.g., under my pillow) (Aoki, 1994, 1093)

b. wewte-ke'y-k-se
head-move-SF-IMPERF
I move my head. (Aoki, 1994, 214)

c. wewte-luu-se
head-be.underwater-IMPERF
I stick my head in water. (Aoki, 1994, 407)

The first example favors an instrumental analysis of the prefix, while the latter two seem more object-oriented.

In addition to appearing with the prefixes shown above and others, the verb root *'iyaaq* also appears as a simple stem.

(209) *'iyaaqi-n-∅*
find-P-PRES
I just found (mine)

Some verb roots, however, only appear in prefixed forms. These include roots such as *lehne* 'down', *lixnik* 'move around', *luu* 'be underwater', and *ke'ey* 'move'. Examples of the wide range of prefixes used with each of these roots are available in Aoki (1994).

Some verb stems contain multiple root prefixes.

(210) a. *'iyee-wik-se*
water-downriver-IMPERF
I am floating down. (Aoki, 1994, 887)

b. *tew-'yee-wik-se*
ice-water-downriver-IMPERF
I am floating down pushed by ice (Aoki, 1994, 887)

(211) a. *hi-pa-taw-pay-n-a*
3SUBJ-S.PL-night-come-P-REM.PAST
They came at night (Aoki, 1994, 517)

- b. hi-taw-tiw'ala-pay-k-sa-qa
 3SUBJ-night-rain.snow-come-SF-IMPERF-REC.PAST
 He came last night in rain (Aoki, 1994, 517)

As these examples demonstrate, root prefixation can be used to create stems of considerable semantic complexity from roots contributing only rather general meanings. While these meanings often seem to be at least partially compositional, they sometimes appear to be idiomatic or lexicalized.

- (212) 'ineh-wile-ke'y-k-se
 accompany-run-move-SF-IMPERF
 I am running to inform someone. I am running carrying the news. (Aoki, 1994, 216)
- (213) wele-k-ce
 in.captivity-see-IMPERF
 I look after / watch / study (mine) (Aoki, 1994, 113)
- (214) waap-ciy'aw-ca
 with.hand-be.violent-IMPERF
 I am killing (Aoki, 1994, 46) (not necessarily with hands)
- (215) mic-'kuuy-nek-se
 hear-true-think-IMPERF
 I believe (Aoki, 1994, 474) (not necessary because of something I heard)

1.7.3.3 Causative

The causative construction, recognized morphologically by the prefix *sepee*, adds a causer argument to a transitive or intransitive verb stem. In the following cases, the causative transitivizes an intransitive verb stem. The causer nominal is marked with ergative case and the causee nominal, the subject of the basic verb, is marked with objective case. The causer

nominal participates in subject agreement; the causee nominal participates in object agreement.

- (216) a. hi-ck'aaw-ca
 3SUBJ-be.afraid-IMPERF
 He is afraid
- b. ciq'aamqal-nim hi-nees-epe-ck'aw-n-a ma-may'ac-na
 dog-ERG 3SUBJ-O.PL-CAUS-be.afraid-P-REM.PAST PL-child-OBJ
 The dog scared the kids
- (217) a. sik'em hi-pe-'et'ilp-u'
 horse 3SUBJ-S.PL-go.crazy-PROSP
 The horses will go crazy
- b. pee-sepe-'t'ilp-u' star-thistle-nim pe'tuu-ne
 3/3-CAUS-go.crazy star.thistle-ERG things-OBJ
 Star thistle [a toxic plant] will make things of various types go crazy
- (218) a. hi-wwlik-Ø-e tewlikt
 3SUBJ-fall[of trees]-P-REM.PAST tree
 The tree fell
- b. haatya-nm pee-sepe-wlik-Ø-e tewliki-ne
 wind-ERG 3/3-CAUS-fall[of trees]-P-REM.PAST tree-OBJ
 The wind blew over the tree [made the tree fall]

In the following cases, the causative is added to a stem that is already transitive. In this case, the causer nominal marks ergative, the causee nominal marks objective and the underlying verbal object may mark objective as well. Object agreement prefixes index only the causee nominal, however, not the underlying object.

- (219) a. 'e-tim'e-n-e 'oykala wen'iki-ne hiteeme-n'es-peme
 3OBJ-write-P-REM.PAST all name-OBJ read-PART2-from
 I wrote down all the names from the book.

- b. Payton-ne pee-sepe-tim'e-n-e we'niki-ne.
 Payton-OBJ 3/3-CAUSE-write-P-REM.PAST name-OBJ
 She made Payton write a/the name.
- (220) a. 'e-nees-tiwik-ce siisel kaa marsi-na
 3OBJ-O.PL-accompany-IMPERF Cecil and Marcie
 I am accompanying Cecil and Marcie (Crook, 1999, 180)
- b. siisel kaa marsi-na 'e-nee-sepe-twik-ce ceeki-ne.
 Cecil and Marcie-OBJ 3OBJ-O.PL-CAUSE-accompany-IMPERF Jackie-OBJ
 I make Cecil and Marcie accompany Jackie. (Crook, 1999, 180)
- c. marsi-na 'e-sepee-twik-ce geyb kaa ceeki-ne
 Marcie-OBJ 3OBJ-CAUS-accompany-IMPERF Gabe and Jackie
 I make Marcie accompany Gabe and Jackie. (Crook, 1999, 180)

In Crook's examples (220), we see that the causativized verb shows plural object agreement when the causee is plural (220b), but not when the causee is singular and the underlying object is plural, (220c).

An approach to the syntax of causative formation is proposed in chapter 8.

1.7.3.4 Distributive

The distributive prefix *wi-* appears to express universal quantification. A simple intransitive clause with a distributive-marked verb can be used to express quantification over a plurality picked out by the subject.

- (221) a. ha-hacwaal hi-pe-wi-wece-0-ye sik'eem-pe.
 PL-boy 3SUBJ-S.PL-DIST-mount-P-REM.PAST horse-LOC
 The boys each got on a horse.
- b. 'eete hi-pe-wi-ti'nx-n-e 'ilxnii-we titooqan.
 INFER 3SUBJ-S.PL-DIST-die-P-REM.PAST many-HUMAN person
 Surely many people have each died. (Phinney, 1934, 21)

In a transitive clause with case-marked arguments, the distributive can be used to indicate quantification over a plurality picked out by the objective-marked object. We see this pattern in a simple transitive in (222) and in a ditransitive in (223).

(222) nuun 'e-nees-**wi**-kiwyek-six sik'eem-ne.
 we 3OBJ-O.PL-DIST-feed-IMPERF.PL horse-OBJ
 We fed each of the horses.

(223) 'e-nees-**wii**-wetkuyk-six tuhuc mamay'ac-na.
 3OBJ-O.PL-DIST-take.away-IMPERF.PL match children-OBJ
 We are taking matches away from each of the children. (Crook, 1999, 135)

The interpretation of these examples suggests a conception of the distributive as a quantifier that associates in some way with various arguments of the verb. Previous descriptions of the meaning of the distributive construction have proposed different constraints on this type of association. Crook (1999, 135) suggests that the distributive associates with whatever nominal holds the thematic role of *theme*. This approach does not seem well suited to ditransitive examples like (223), however, where there is distribution over the source direct object rather than the theme *chômeur* object. A different generalization was advanced by Rude (1985, 42), who proposed that the distributive operates on an 'absolute' basis. This generalization captures the interpretation of (221), where there is quantification over the intransitive subject, and of (222)-(223), where there is quantification over the transitive direct object. Rude's Generalization also takes into account a curious restriction in transitive clauses: the distributive may not express quantification over the transitive subject.

(224) Taaqc ti-teeqis-nim hi-nees-**wi**-wewkuni-se hitemenewetuu-ne.
 today PL-elder-ERG 3SUBJ-O.PL-DIST-meet-IMPERF student-OBJ
 Today the elders are meeting with each student.
 NOT: Today the elders are each meeting with (the) students.

Where distributive quantification over the object is not semantically plausible—for instance, where the object denotes a single individual—distributive-marked transitive sentences become unacceptable.

- (225) Taaqc ti-teeqis-nim pee-(*wi-)wewkuni-siix Harold-ne.
 today PL-elder-ERG 3/3-(*DIST-)meet-IMPERF.PL Harold-OBJ
 Today the elders are (*each) meeting with (*each) Harold.

An attempt to deal with the pattern of quantification reported by Rude was made in Deal (2010). Subsequently, however, various corpora have yielded examples where distributive-marked verbs express quantification over something other than intransitive subject or transitive direct object. These counterexamples to the absolute generalization come in two varieties. The first we might call *wrong argument* cases. Such cases do not call into question the underlying assumption that the distributive quantifier associates in some way with a nominal element, but do call into question the generalization that a distributive associates only with an intransitive subject or transitive object. The clearest wrong argument cases come from applicative constructions, where the distributive may indicate distribution over the *chômeur* theme argument rather than the applicative object, which is direct object in these constructions.

- (226) From *Cut-out-of-Belly Boy*, Aoki and Walker (1989, 378). Cut-out-of-Belly Boy is rescuing the people that Owl has enslaved. When Owl comes in, Cut-out-of-Belly Boy grabs him.

pe-wi-k'uup-e'n-Ø-ye helqelx
 3/3-DIST-break-APPL:AFF-P-REM.PAST wing
 He broke each of his wings.

lit. He broke him (applicative argument) each wing (*chômeur* theme argument).
 He broke each wing on him.

- (227) From *Coyote's Trip to the East*, Aoki and Walker (1989, 479). Coyote has agreed to help the old buffalo bull by making him new horns.

waaqi kaa 'iceyeeye ha-ani- \emptyset -ya teewis.

now then coyote 3SUBJ-make-P-REM.PAST horn.

Now coyote made horns.

paa-ny-a'n- \emptyset -ya qo' ta'c xi-xawic siseqiy-nim.

3/3-make-APPL:AFF-P-REM.PAST very good PL-sharp syringa-GEN

He made them for him good and sharp out of syringa wood.

kaa paa-wi-hany-a'n- \emptyset -ya kaa pee-n-e

and 3/3-DIST-make-APPL:AFF-P-REM.PAST and 3/3-say-P-REM.PAST

and he made each one for him and he said ...

These examples call into question the association of the distributive with the direct object in transitive constructions.

The second, even more problematic set of counterexamples we might call *non-argument* cases. The clearest non-argument cases come from reflexive verbs with singular subjects. Such verbs make morphologically clear that their subject is singular and that there is no independent direct object nominal. We might expect, on the model of (225), that the distributive would be simply ungrammatical in such cases; there is no plural subject or direct object over which to quantify. However, various examples contravening this prediction are found in corpora. In the following cases, the distributive appears on the denominal verb *'ilepqiti* (formed from nominal *'ileepqet* 'shoe' by suffixation of the bound verbalizer *hi* 'put on'). If the distributive associates with a nominal in these examples, the nominal in question must be found inside the morphologically complex verb.

(228) 'ipnee-wi-'lepqit-i- \emptyset -ye pit'iin' timaay'

3SG.REFL-DIST-shoe-put.on-P-REM.PAST girl young.woman

The girl put on each of her shoes. (Aoki and Walker, 1989, 239)

(229) ka-x-kaa 'inee-wi-'lepqet-i-t'e

REL-1SG-then 1SG.REFL-DIST-shoe-put.on-OPT

Let me put (each of) my moccasins on. (Aoki and Walker, 1989, 239)

lit. Let me each-shoe myself.

An example not formed from a denominal verb is given below.

(230) kaa ha-'ac- \emptyset -a 'ipnee-wi-sepe-sq'ep- \emptyset -e
then 3SUBJ-enter-P-REM.PAST 3SUBJ.REFL-DIST-CAUSE-scratch-P-REM.PAST

payoopayo-ki mastay la'am hi-wi-sepe-sq'ep- \emptyset -e.

bird-INST face all 3SUBJ-DIST-CAUSE-scratch-P-REM.PAST

Then she came in, she scratched herself, she scratched her face all over with the bird.

Aoki (1994, 635) translates the reflexive verb form found in this example as 'He caused himself to be scratched in various places'. The 'various places' interpretation is found both with the reflexive verb and with the following non-reflexive verb, which forms part of an extended reflexive clause in the sense of chapter 5. It is also found with a transitive form of this verb, as in the following sentence from the same story.

(231) yo \hat{x} ku'us mastay hi-wii-sq'ep-e'n- \emptyset -ye
that thus face 3SUBJ-DIST-scratch-APPL-P-REM.PAST
That one scratched me on the face in several places thus.

These examples call into question the premise upon which both Crook's and Rude's generalizations are based—that the distributive associates with some nominal argument over whose denotation there is quantification. These sentences do not provide appropriate nominal arguments, but the distributive is nevertheless licit. The interpretation assigned by the translators suggests that quantification in these sentences may be over some domain other than that of entities – events, perhaps, or locations or even times.

Further non-argument cases suggestive of distribution over non-entities can be found in passages like the following. Here the distributive is used to suggest that tears flowed in many directions, rather than together in a single stream.

(232) From *Cold and Warm Brothers Wrestle*, Aoki and Walker (1989, 328).

kaa kona hi-'liws-teqe-likece- \emptyset -ye hi-wii-n-e
and there 3SUBJ-lay.on.stomach-P-REM.PAST 3SUBJ-cry-P-REM.PAST
and there he laid on his stomach, he cried.

kaa sip'us 'e-wii-wele-n-e
and tear 3GEN-DIST-flow-P-REM.PAST
And his tears flowed out.

q'o' taaqca-px ko'sannix hii-we-s- \emptyset 'uuyiikem
quite today-to exactly 3SUBJ-be-P-PRES loose.rock

hekipe kal'a 'iske 'ituu hi-wii-wele-ce.
appearance just like what 3SUBJ-DIST-flow-IMPERF

To this day there is a loose rock that looks as though something is running down it.

There is also some suggestion of distributives that indicate quantification over events/situations or times. The dictionary entry below renders a distributive verb both with quantification over individuals and with quantification over times/situations.

(233) **wii**-nk-eex-n-e

DIST-pull-see-P-REM.PAST
I aimed at each of them. I aimed many times. (Aoki, 1994, 114)

Having considered a wider range of examples of the distributive than in previous descriptions, we can see that its behavior in several ways diverges from that of a VP-quantifier like English *each* (e.g. *The children often each eat a pear*). The heart of the challenge for any future analysis is to account for the various challenges to Rude's generalization—the “wrong-argument” and “non-argument” cases—while still providing an explanation for why distribution over a transitive subject should not be possible.

1.7.4 Mid-verb II. Suffixes

The remainder of the mid-verb zone is made up of the root and its suffixes. While there are some modificational suffixes, they are fewer in number than root prefixes. Suffixes generally express manner or direction. By contrast to what we find with prefixation, I am not aware of any roots that require root suffixes.

Linearly intermingled with directional and manner suffixes are applicative suffixes. I will discuss these separately. I also separately discuss a suffix for ‘low future’ which appears rightmost among suffixes that precede the inflectional suffixes.

1.7.4.1 Root suffixes and stem class

All suffixal categories, from root suffixes rightward, are sensitive to verb class. Nez Perce verbs divide into two morphological classes, which Aoki (1970) dubbed C-class and S-class. The names derive from the allomorphy of the imperfective aspect marker (discussed in chapter 2). In the present singular imperfective, C-class verbs take imperfective allomorph *ce* and S-class verbs take allomorph *se*. Verb roots are specified for class lexically. The following are some examples of simplex verbs from each category.

(234) C-class verbs

- a. paay-**ca**
come-IMPERF
I am coming / arriving
- b. hi-**ce**
say-IMPERF
I am saying
- c. heki-**ce**
see-IMPERF
I am seeing (mine).

d. ha-hatya-ca
3SUBJ-wind-IMPERF
It's windy

(235) S-class verbs

a. kuu-se
go-IMPERF
I am going

b. hipi-se
eat-IMPERF
I am eating

c. hanii-sa
make-IMPERF
I am making

d. hi-weqi-se
3SUBJ-rain-IMPERF
It's raining

Suffixes interact with verb class in two ways. First, the form of certain suffixes is affected by the class of the material to the left. Second, all suffixes are themselves specified for class. The class of a suffixed stem is determined by the rightmost suffix, not by the root. The following examples from Aoki (1970, 1994) illustrate these two interactions. Consider the suffix *te* 'go away to V', which is of class C. This suffix takes the same form on a C-root or an S-root, but produces stems only of class C.

(236) hip-te-ce
eat_S-go.away_C-IMPERF
I am going off to eat.
cf. *hipi-se*, 'I am eating'

- (237) hek-te-ce
 see_C-go.away_C-IMPERF
 I am going off to see.
 cf. *heki-ce*, ‘I am seeing’

The suffix *toq* ‘back to previous place’ is S-class.

- (238) ’ac-toq-sa
 enter_S-back_S-IMPERF
 I am going back in.
 cf. *’ac-sa*, ‘I am entering’

- (239) pay-toq-sa
 arrive_C-back_S-IMPERF
 I am returning home.
 cf. *pay-ca*, ‘I am arriving’

The suffix *qaaw* ‘without interruptions, straight through’ is C-class and changes its form depending on the class of the root to which it attaches. On a S-root like *’inipi* ‘seize’, it has the form *qaaw*; on a C-root like *la’am* ‘exhaust, finish’, it has the form *naqaaw*. (The presence of an /n/ following a C-class item is a common pattern.)

- (240) ’inp-qaaw-ca
 seize_S-straight.through_C-IMPERF
 I am grabbing as I go.
 cf. *’inpi-se*, ‘I am grabbing’

- (241) la’am-naqaw-ca
 finish_C-straight.through_C-IMPERF
 I am emptying (it) right through.
 cf. *la’am-ca*, ‘I am finishing (it)’

The suffix *eeyik* ‘move around’ is S-class and takes the form *neeyik* after a C-class root.³

(242) *hi-weeyik-eyik-six*

3SUBJ-cross.over_S-move.around_S-IMPERF.PL

They are crossing back and forth (Aoki, 1994, 872)

cf. *hi-weeyik-six*, ‘They are crossing’

(243) *peley-neeyik-se*

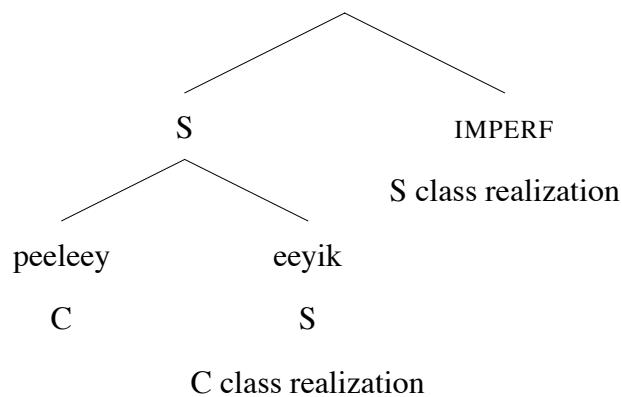
be.lost_C-move.around_S-IMPERF

I am going here and there lost.

cf. *peeleey-ce*, ‘I am getting lost’

This pattern can be described in linear terms: each suffix is realized according to the class of the morpheme to its left. A structural approach could also be given; the leftward-lookingness of class realization could be treated as indicative of right-headed structure in the suffix complex at the point of morphological realization. The suffix, not the root, is the head of the stem; only the suffix projects its class information to the stem constituent.

(244) Structure of (243)



The right-headed pattern persists in the occasional examples where more than one root suffix is found. In the following case, both S-class *toq* and C-class *ta* are suffixed to a root;

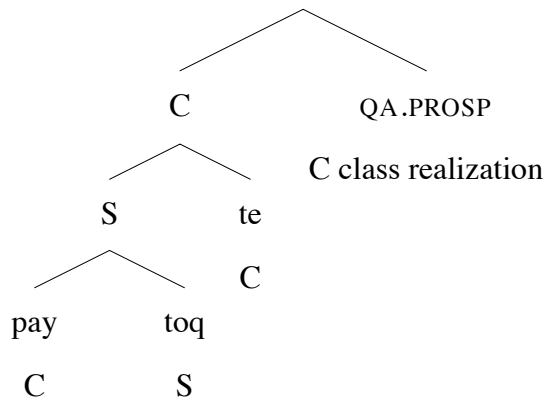
³Aoki (1994) analyzes this suffix as *eeyi* plus stem formative *k* of uncertain meaning. The analysis as monomorphemic *eeyik* follows Aoki (1970).

the rightmost suffix determines the root class, conditioning the C-class allomorph of the inflectional suffix.

(245) pay-toq-ta-no'qa

arrive-back-go.away-QA.PROSP

I can return back (down) (Aoki and Walker, 1989, 14)



1.7.4.2 Applicatives

Root suffixes also include applicative suffixes, which augment the argument structure of the root. The applicative suffixes are:⁴

(246) aapii ‘V away from X’

aat ‘V as X passes’

⁴Rude (1985) reports three additional applicative suffixes (in his terms, suffixes that encode the semantic role of promoted direct objects): *su* ‘in competition’, *c’a* ‘over’, and *tiwee* ‘with’. He notes that the first, *su* ‘in competition’, is very rare; Aoki (1994, 821) remarks that this suffix occurs only with four verb stems, where its meaning is either ‘toward’ or ‘against’. The second, *c’a* ‘over’, also quite rare, is listed by Aoki (1994, 58) both as a suffix and as a verb root. This suggests that cases where *c’a* appears to the right of another verb root may be V-V compounds. The final candidate, *tiwee* ‘with’, is listed by Aoki (1994, 766) simply as a verb. This again suggests V-V compounding in forms like Rude’s:

- (i) a. lawtiwaa-yiin miyooʔat hi-tuuqi-six
friend-with chief 3SUBJ-smoke-IMPERF.PL
The chief is smoking with a friend (Rude, 1985, 181)
- b. lawtiwaa-na miyooʔat-om pee-tuuqi-twee-ce
friend-OBJ chief-ERG 3/3-smoke-be.with-IMPERF
The chief is smoking with a friend (Rude, 1985, 181)

It is not unusual for Nez Perce verbs to encode what we might consider preposition-like meanings, as appears to be the case with *twee* ‘(be) with’.

'ey 'V affecting X'

uu 'V toward X'

All applicatives are S-class and appear with both transitive and intransitive verb stems. The following are examples of the applicatives above on intransitive stems. The applicative transitivizes the verb; the applicative object acts as direct object, receiving objective case and participating in object agreement.⁵

(247) Applicative *aapii* 'away'

a. hi-wee-ke'ey-k- \emptyset -e

3SUBJ-fly-go-SF-P-REM.PAST

She flew away. (Aoki, 1994, 213)

b. hi-nas-wa-ka'y-k-aapii-k- \emptyset -a

3SUBJ-O.PL-fly-go-SF-APPL:AWAY-SF-P-REM.PAST

She flew away from us (Aoki and Walker, 1989, 135)

(248) Applicative *aat* 'as the object passes'

a. hi-wehi-cix

3SUBJ-bark-IMPERF.PL

They are barking. (Crook, 1999, 170)

b. pee-wah-naat-k-six

3/3-bark-APPL:BYPASSER-SF-IMPERF.PL

They are barking at it as it goes by. (Crook, 1999, 170)

(249) Applicative 'ey 'benefactive/malefactive'

a. hi-siisisi-qa-na

3SUBJ-make.soup-HAB.PAST-REM.PAST

She used to make soup (Aoki, 1994, 647)

⁵Some of these examples include the suffix *k*, a "stem formative" (Aoki, 1994). The contribution of this morpheme is unknown.

- b. 'e-nees-sisi-ye'nii-Ø 'istuk'ees-ne
 3OBJ-O.PL-make.soup-APPL:AFF-IMPER guest-OBJ
 Make soup for the guests (Aoki and Walker, 1989, 519)

(250) Applicative *uu* 'toward'

- a. haacwal hi-kuu-Ø-ye Harold-px
 boy 3SUBJ-go-P-REM.PAST Harold-to
 The boy went over to Harold

- b. haacwal-nim pee-k-yuu-Ø-ye Harold-ne
 boy-ERG 3/3-go-APPL:GOAL-P-REM.PAST Harold-OBJ
 The boy went over to Harold

An analysis of the applicative construction is proposed in section 5.3.

The *'ey* applicative introduces an argument that is affected in some way by the event described by the sentence. This effect may be positive or negative. In (251), the most natural interpretation is benefactive: the mean one benefits from the people's work. In (252), the most natural interpretation is malefactive: when the geese spread out, Coyote will drop into the water and presumably drown.

- (251) [From *Cut-Out-of-Belly Boy*, Aoki and Walker 1989, 375.] Cut-Out-of-Belly Boy comes across people who have been enslaved and are pounding sunflower seeds. They explain:

'e-kiy-ee'y-six cika'wiis-na.
 3OBJ-do-APPL:AFF-IMPERF.PL mean-OBJ
 We are doing this for the mean one.

- (252) [From *Warmweather and Coldweather*, Aoki and Walker 1989, 55.] The goose brothers are carrying Coyote (who has married their sister) on their wings as they cross the water. After Coyote insults them, the eldest goose says:

kawo' cik'iiw-ne k'ay'ax 'e-kiy-ee'ni-x.
 then brother.in.law-OBJ spread.out 3OBJ-do-APPL:AFF-IMPER

Then spread out on the brother-in-law!

In keeping with the possibility of both benefactive and malefactive interpretations, I interpret the *ey'* applicative as introducing an argument which only need be *affected*. Cross-linguistically, it is very common for affectedness requirements to crop up in possessor raising or external possession constructions (Payne and Barshi 1999, O'Connor 2007), and indeed, the *ey'* applicative plays an important role in object possessor raising in Nez Perce. That construction and the *ey'* applicative's role is discussed in section 6.2.

The *aat* applicative introduces an argument that is a "bypasser" of the event the sentence describes. The specificity of the semantics of this applicative is quite remarkable. There is also an interesting interaction of this applicative with transitive verbs, described below.

There appear to be two facets to the meaning of the *aapii* applicative, which is somewhat more difficult than other applicatives to elicit. On one hand, its meaning appears similar to that of English *away*. On a motion verb, this applicative introduces an argument that is the source of a motion event; on a non-motion verb, the applicative introduces an argument that is distant from the event the sentence describes.

(253) wa-ka'y-k-aapii-k-sa weetes
fly-move-SF-APPL:AWAY-SF-IMPERF land
I am flying away from my land (Aoki, 1994, 213)

(254) k'omay-naapii-k-sa miya'c
sick-APPL:AWAY-SF-IMPERF child
My sickness took me away from my child. I, being sick, am kept away from my child. (Aoki, 1994, 285)

The directional meaning of the *aapii* applicative is the opposite of the directional meaning of the *uu* 'toward' applicative.

(255) a. hi-q'ilaw-naapi-k-sa
3SUBJ-turn.head-APPL:AWAY-SF-IMPERF
He is turning away from me

b. hi-q'ilaw-noo-sa

3SUBJ-turn.head-APPL:GOAL-IMPERF

He is turning toward me (e.g., he is sitting in front of me and turning back to look at me)

On the other hand, there is a malefactive component to the meaning of *aapii*, sometimes to the apparent exclusion of a locative or directional meaning.

(256) 'a-kiy-aapii-k-o'

3OBJ-go-APPL:AWAY-SF-PROSP

I will go, and by doing so, will interfere with someone's activity. (Aoki, 1994, 244)

(257) tin'x-naapii-k-sa

die-APPL:AWAY-SF-IMPERF

I am dying (leaving someone behind) (Aoki, 1994, 750)

Sentences like (257) suggest that the basic meaning of *aapii* may be purely malefactive, not directional at all. Alternatively, this example may be metaphorical, incorporating both a malefactive and a (non-literal) "away" meaning.

When suffixed to a transitive, the suffixes *aapii* 'against', 'ey 'benefactive / malefactive' and *uu* 'toward' increase valence by adding an argument which acts as direct object. Unlike in a causative, the underlying object never acts as a direct object (by participating in object agreement or marking objective case) in the presence of an applicative. (On causatives, see 1.7.3.3.)

(258) Applicative *aapii* 'away'

a. 'e-'npi-se nuku-ne

3OBJ-take-IMPERF meat-OBJ

I am taking the meat. (Crook, 1999, 172)

b. 'a-'np-aapii-k-sa nukt toni-na

3OBJ-take-APPL:AWAY-SF-IMPERF meat Tony-OBJ

I grab away the meat from Tony (Crook, 1999, 172)

(259) Applicative 'ey 'for'

a. 'e-hiteeme-ce tiim'es-ne

3OBJ-read-IMPERF book-OBJ

I'm reading the book (Crook, 1999, 178)

b. 'e-hiteeme-nee'y'-se siisel-ne tiim'es

3OBJ-read-APPL:AFF-IMPERF Cecil-OBJ book

I'm reading Cecil the book (Crook, 1999, 178)

(260) Applicative *uu* 'toward'

a. 'e-'npi-se naco'oĥ-na

3OBJ-take-IMPERF salmon-OBJ

I am taking the salmon. (Crook, 1999, 175)

b. 'e-'np-uu-se naco'oĥ

3OBJ-take-APPL:GOAL-IMPERF salmon

I am taking the salmon on his behalf (Crook, 1999, 175)

The applicative *aat* 'as the object passes' behaves exceptionally with transitive verbs. Recall that in an intransitive, this suffix introduces an argument, which is interpreted as an entity that passes by.

(261) Applicative *aat* 'as the object passes'

a. hi-wehi-cix

3SUBJ-bark-IMPERF.PL

They are barking. (Crook, 1999, 170)

b. pee-wah-naat-k-six

3/3-bark-APPL:BYPASSER-SF-IMPERF.PL

They are barking at it as it goes by. (Crook, 1999, 170)

In a transitive, the *aat* applicative does not introduce an argument that is distinct from the verb's own argument. The direct object picks out *both* the entity that passes by and the object of the verbal action.

(262) a. 'e-'pt'ee-se

3OBJ-hit-IMPERF

I hit it (Crook, 1999, 170)

b. 'a-'pt'-aat-sa

3OBJ-hit-APPL:BYPASSER-IMPERF

I hit it as it passes by (Crook, 1999, 170)

(263) a. 'a-amool-ca pipic-ne

3OBJ-pet-IMPERF cat-OBJ

I am petting the cat

b. 'a-amol-aat-k-sa pipic-ne

3OBJ-pet-APPL:BYPASSER-SF-IMPERF cat-OBJ

I am petting the cat as it goes by

c. * 'a-amol-aat-k-sa ciq'aamqal-na picpic

3OBJ-pet-APPL:BYPASSER-SF-IMPERF dog-OBJ cat

intended: I am petting the cat as the dog goes by

This quirk of the *aat* applicative is discussed further in §6.2.

Applicative suffixes co-occur to some extent. The goal applicative *uu* precedes the benefactive/malefactive applicative 'ey. In this case the direct object is the object of 'ey; the goal argument is a *chômeur*.

(264) hi-weqi-yuu-'ey-se 'iniit

3SUBJ-rain-APPL:GOAL-APPL:AFF-IMPERF house

It's raining on my house. It's raining on the house, affecting me.

(265) kaa pee-kiy-uu-'ey'-se sam'x̂

then 3/3-go-APPL:GOAL-APPL:AFF-IMPERF shirt

Then he went over to his clothes. Then he_i went over to the clothes on him_j. (Aoki and Walker, 1989, 76)

The restitutive suffix *toq* 'back' occurs between the goal applicative *uu* and the affected party applicative 'ey.

- (266) 'a-pay-noo-toq-a'ny- \emptyset -a 'iniit pit'iin-im
 3OBJ-arrive-APPL:GOAL-back-APPL:AFF-P-REM.PAST house girl-GEN
 I came back to the girl's house.

1.7.4.3 Low future

A final suffix in the mid-verb zone is low future *tet'ée*. Low future is not itself part of the inflectional suffix complex; it always occurs with either an imperfective or prospective suffix cluster following.

- (267) hi-weqi-tet'ee-se
 3SUBJ-rain-LOW.FUT-IMPERF
 It will rain, it's gonna rain

- (268) hi-weqi-tet'ee-yu'
 3SUBJ-rain-LOW.FUT-PROSP
 It might rain

Low future is most acceptable to consultants as proximal future. Low future sentences do not permit deictic adverbials.

- (269) hi-weqi-tet'ee-se miiw'ac-pa / *watiisx / *taac
 3SUBJ-rain-LOW.FUT-IMPERF short.time-LOC / *1.day.away / *soon
 It will rain soon / *tomorrow / *soon

Morvillo (1891) reports that low future *tet'ée* occurs in participles.

- (270) % kii 'aayat hii-we-s- \emptyset ku-tet'-iin'
 this woman 3SUBJ-be-P-PRES go-LOW.FUT-PART3
 Hæc mulier est brevi paritura (Morvillo, 1891, 123)

suffix (+ allomorphs)	approximate function	gloss
-t	active participle / nominalizer	PART1
-'es	modalizer	PART2
-iin'	attributive / passive participle	PART3
-e'i	instrument for V-ing	NMLZR
-nwees	place of V-ing	place
-'weet	agent who Vs	AGT
-e'yey'	without V-ing	without
-siimay	unable to V	unable

Table 1.8. Participial suffixes

This is unlike the behavior of inflectional suffixes; however, Morvillo's example and others like it were not acceptable to my consultants.

1.7.5 The inflectional suffixes

The rightmost region of the Nez Perce verb is taken up by a series of suffixes which provide information about the location of an event in temporal, spatial and modal terms. The description of morphemes occupying this zone raises non-trivial issues of morphology, semantics and syntax. I defer the entirety of this matter to chapter 2.

1.7.6 Participles

I group under the general heading of 'participial suffixes' a number of morphemes which attach to verbal roots and stems and produce words to which verbal inflectional material cannot attach. Eight such suffixes are listed in table 1.8. Words formed with these suffixes cannot combine with verbal agreement prefixes or with any of the morphemes of the inflectional suffix complex.

The first participle is used very productively to produce what appear to be deverbal nouns.

- (271) a. waaqo' kiye 'uuyi-siix
now 1PL.INCL begin-IMPERF.PL
Now we are beginning.

b. **'uuyi-t-pa** hi-naas-his-no'qa lapwai-na tewee-pu-m
 begin-PART1-LOC 3SUBJ-O.PL-beat-QA.PROSP Lapwai-OBJ Orofino-ERG
 In the beginning (game), Orofino could have beaten Lapwai.

(272) a. hipi-se
 eat-IMPERF
 I'm eating.

b. kii paasx̂ hii-we-s-∅ **hip-t**
 this sunflower 3SUBJ-be-P-PRES eat-PART1
 This sunflower is food.

The second participle is used with a copula in a construction with modal meaning.

(273) paasx̂ hii-we-s-∅ **hip-'es**
 sunflower 3SUBJ-be-P-PRES eat-PART2
 Sunflowers are edible.

(274) hii-we-s-∅ nuun-im **takay-n'as** weet'u **hip-'es**
 3SUBJ-be-P-PRES 1PL-GEN watch-PART2 not eat-PART2
 It's for us to look at, not to eat.

The meaning of such forms will become relevant in chapter 3.

The third participle is used with a copula in what Rude (1985) describes as a passive.

(275) paasx̂ hii-we-s-∅ **hip-iin'**
 sunflower 3SUBJ-be-P-PRES eat-PART3
 Consultant 1: "The sunflower was eaten."
 Consultant 2: "Somebody ate it."

(276) Context: you are pointing to the remnants of grass in a pile of manure.

kii c'ixc'ix hii-we-s **hip-iin'**
 this grass 3SUBJ-be-P-PRES eat-PART3
 This grass is eaten.

Consultant: "That was a fact, it was eaten alright!"

The third ("passive") participle, by contrast to the second ("modal") participle, apparently does *not* have a modal meaning.

(277) Context: you pick a sunflower out of the ground and say:

kii paasâ hii-we-s-0 **hip-e's** / #**hip-iin'**
this sunflower 3SUBJ-be-P-PRES eat-PART2 ("edible") / #eat-PART3 ("eaten")
Consultant: "It hasn't been eaten yet."

We cannot use the third participle to describe a sunflower which, while edible, has not yet been eaten.

The suffix *e'i* produces nouns which describe vehicles and instruments from verbs used for those artifacts' functions.

(278) 'ipnee-wle-ke'y-k-e'i
3SG.REFL-run-go-SF-NMLZR
car ("running along by itself thing")

(279) tule-wle-ke'y-k-e'i
with.foot-run-go-SF-NMLZR
bike ("running along with foot thing")

The suffix *nwees* produces nouns which describe places where the activity described by the verb typically takes place.

(280) 'e-'pewi-se **talapos-inwaas-na**
3OBJ-look.for-IMPERF pray-place-OBJ
I'm looking for a church

(281) wecee-nwees
dance-place
dancing ground

(282) hiica-nwaas
climb-place
ladder

The suffix *'weet* produces agentive nominals. Some of these have conventionalized meanings.

- (283) 'inpe-'weet
seize-AGT
policeman ("one who seizes")
- (284) 'ipewi-ye'weet
look.for-AGT
searcher, detective
- (285) sepee-hiteeme-ne'weet
CAUSE-read-AGT
teacher ("one who causes reading")
- (286) hiteeme-ne'weet
read-AGT
student ("one who reads")

The suffix *e'yey'* produces modifiers which describe what an individual is not doing, does not (habitually) do, or has not done.

- (287) hip-e'yey' kuu- \emptyset -m-e
eat-without go-P-CIS-REM.PAST
I came without eating.
- (288) c'i \hat{x} -ney' hii-we-s- \emptyset
speak-without 3SUBJ-be-P-PRES
He doesn't talk.

The final participial suffix, *siimey*, has a similar meaning, but with a modal component. It produces forms that describe not only what an individual does not do, but what he or she *cannot* do.

- (289) miyapkaawit hi-w-siix c'i \hat{x} -siimey
baby 3SUBJ-be-IMPERF.PL speak-unable

Babies can't talk.

(290) Prompt: an old dog can't learn.

ciq'aamqal cuukwe-siimey hii-we-s- \emptyset

dog know-unable 3SUBJ-be-P-PRES

The dog can't learn

The sentence below contrasts the 'inability' participle in *siimey* with the weaker, 'abstains' participle in *e'yey'* (here in allomorph *ney'*).

(291) weet'u c'i \hat{x} -siimey hii-we-s- \emptyset met'u c'i \hat{x} -ney' hii-we-s- \emptyset

not speak-unable 3SUBJ-be-P-PRES but speak-without 3SUBJ-be-P-PRES

He's not unable to speak, but he doesn't talk.

We return to the meanings of certain participles in chapter 3, and will employ participles in distinguishing inflectional from derivational morphology in section 5.3.4.

CHAPTER 2

ASPECT, SPACE MARKERS AND TENSE: MORPHEMES, CATEGORIES, COMPOSITION

Sometimes the most basic exercises in linguistic analysis lead to the most complex and intriguing empirical domains. This chapter is devoted to a series of related investigations that share this characteristic. The empirical domain of interest is the form and meaning of verbal markers belonging to what Rude (1985) called *the inflectional suffix complex*. We begin with a series of questions about these markers which are formally simple, but prove challenging for a range of reasons.

The markers we will be concerned with form a morphologically coherent bloc of suffixes, rightmost in the verb word. Within this bloc, three groups of morphemes are in complementary distribution with one another. This distribution leads us to posit three morphological categories of affixes for this language, and three corresponding syntactic categories as well. These distributionally-based categories we will be calling *aspect*, *space marking* and *tense*. We want to find out:

(292) What are the exponents of aspect, space marking and tense?

This question is a matter of basic linguistic description. Yet it leads us to a series of questions that prove difficult to answer quickly. The morphemes we are interested in occur as part of complex word forms, where non-trivial allomorphic distributions may be in effect. The preliminary work of telling morphemes from allomorphs becomes a serious project. Depending on the allomorphic patterns we countenance in our morphological description, our syntactic and semantic description might reflect strikingly different inventories of aspect, space and tense markers.

The subsequent question reveals complexity in another domain.

(293) What do the particular morphemes belonging to these categories mean?

The question is an important one for the theoretical and typological project of cross-linguistic semantics. It is pressing as a matter of basic description in view of its consequences for nomenclature. We want the names we accord to our morphemes to evoke as accurately as possible the contributions they make to verb meaning. The same goes for the labels of the distributional categories to which the various morphemes belong. The degree of match between language-specific distributional categories and universal notional categories can be a topic of serious inquiry only insofar as we are able to discern what the various exponents of each category actually mean.

Our interest in morpheme meaning leads to a complex question of compositional interpretation. Since the morphemes we are interested in do not occur in free forms, whatever we can learn about their meanings, we will have to learn indirectly. The major indirect means that we are afforded works from the hypothesis of compositionality. We will see that there are major challenges for a fully compositional analysis of the inflectional suffix complex: in certain cases where we are led by morphological analysis to recognize discrete grammatical pieces, the semantic contribution of a piece lies not in a garden-variety compositional contribution but in its ability to trigger special interpretations of *other* pieces. The semantics does not work in a compositional way; it works in an *idiomatic* way.

To the limited degree that we can answer our second question – that is, insofar as compositional analysis is within view – we can ultimately proceed to ask:

(294) What is it about the meanings of our morphemes that leads the grammar of Nez Perce to categorize them as it does?

(295) How does the particular categorization this language imposes fit in to an overall typology of aspectual, spatial and temporal marking in natural languages?

These questions, to the extent they are answerable, connect our investigation to a larger theoretical concern. As crosslinguistic work has gradually grown to include a component of formal semantic analysis, questions of the relationship between meaning and syntactic categorization across languages have become correspondingly more fine-grained, and harder to answer. A striking case study comes from the recent literature on means of locating events in time, which has amply demonstrated variation along morphological, syntactic and semantic lines.¹ The variation appears to be both quantitative and qualitative. Languages have different inventories of temporal vocabulary, and they seem to a certain degree to divide the relevant conceptual space in different ways. As we identify Nez Perce morphemes and gain a sense for their meaning, we make progress on the ultimate project of situating the Nez Perce system in this typological space.

This chapter is structured around a set of four verbal inflectional subparadigms, which we approach in order of increasing difficulty of compositional morphological and semantic analysis. For each subparadigm, we will ask a suite of four related questions.

1. *Parsing question*

What are the morphemes?

2. *Allomorphy question*

How is the form of each morpheme influenced by its local environment?

3. *Distribution question*

How does each morpheme influence the possibility of attaching further morphemes?

4. *Compositionality question*

How is the meaning of each morpheme related to the meanings of other morphemes, and of the whole sentence?

¹Interesting recent treatments are provided by Bohnermeyer (2002), Shaer (2003), Bittner (2005), Matthewson (2006), Lin (2006), and Jóhannsdóttir and Matthewson (2008), concentrating on the phenomena of tense; discussions of aspect may be found in certain of these works and in Smith (1991), Singh (1998), Diesing (2000), Klein et al. (2000), Hacquard (2006).

Our path begins with the verbal subparadigm where matters of categorization, form and meaning take the most familiar shape. We focus here on verbs marked with a suffix we will call the *imperfective*, an exponent of the distributional category of aspect. The imperfective exhibits a full paradigm of space markers and tenses – it raises no question of distribution. For this reason, the task of describing the morphological form and syntactic structure of imperfective verbs proves fairly straightforward; in addition, compositional semantic analysis looks to be within view.

We proceed from here to a group of subparadigms where our answers to the four questions require significantly more care. We look first at two corners of the paradigm where a semantic distinction between the aspect and tense distributional categories appears to be partially collapsed. In one case, tense and aspect clearly coöccur, but aspect duplicates part of the meaning of tense. In another case, we will have to argue that tense is present at all. If we are careful with our morphological analysis, we can discern a part of the suffix complex that belongs to tense, but only certain exponents of tense are permitted, and those that appear have a special meaning. Here, multiple morphological pieces correspond to a single, idiosyncratic semantic atom: we have a case of idiomatic interpretation. In our final subparadigm, we will see putative idiomaticity and allomorphy so unexpected that we will abandon multimorphemic analysis altogether. What are *prima facie* complex suffix clusters in this subparadigm can be treated as syntactically, semantically and morphologically atomic wholes.

2.1 The imperfective

The imperfective (singular *se/sa* or *ce/ca*, depending on vowel harmony and verb class) is a suffix attaching outside of all derivational and valence-changing suffixes. This is a suffix which changes its form in reflection of subject number; subject number cannot be expressed via prefix *pe* in the argument marking zone. In past work on Nez Perce, the morpheme has been granted a number of related names: Rude (1985) called it the *progressive*,

Crook (1999) the *incompletive*, and Cash Cash (2004) the *imperfective*. Verbs marked with this suffix describe events in progress or states that hold.

(296) hipi-se

eat-IMPERF

I am eating

(297) cik'aaw-ca

be.afraid-IMPERF

I am afraid

Eventive predicates in the imperfective, like eventive predicates in the English progressive, do not imply culmination or completion.

(298) sawlakay'-k-sa-qa toyaam-x

drive-SF-IMPERF-REC.PAST top-to

I was driving to the top,

kaa weet'u minma'i kona pay-n-a

and NEG how there arrive-P-REM.PAST

and I didn't in any way make it there.

(299) 'ini-saa-qa

give-IMPERF-REC.PAST

I was giving it to you (but you did not take it) (Aoki, 1970, 113)

This range of classically imperfective meanings poses familiar puzzles, puzzles of notorious subtlety in the best-studied of languages.² It is to be hoped that any solution applicable to imperfectives in other languages will be able to be extended to cover the Nez Perce imperfective as well.

The imperfective suffix belongs to the first of our three distributional categories—what we will be calling *aspect*. It may be followed by suffixes that belong to either or both of

²See Dowty (1979), Parsons (1990), Landman (1992), Bonomi (1997), Zucchi (1999), Higginbotham (2004), *inter alia*.

the remaining two categories. One of these categories has to do with direction and location in space. The other has to do with location in time.

2.1.1 Space marking

The first category of suffixes that may follow imperfective marking consists of two morphemes, *m* and *(n)ki*. Attached to a path-defining predicate in the imperfective, these markers indicate the direction of the path. In Deal (2009a), I dubbed these morphemes *space markers*. Space marker *m*, indicating direction towards the utterance location, is glossed CIS(LOCATIVE); space marker *(n)ki*, indicating direction away from the utterance location, is glossed TRANS(LOCATIVE). (These names come from Rude (1985).) Cislocative verbs may coöccur with locative adverbials picking out the site of elicitation; translocative verbs may not.

(300) Cislocatives and translocatives elicited in Lapwai

a. hi-ku-see-m (Lapwai-x / *Boston-x)

3SUBJ-go-IMPERF-CIS (Lapwai-to / *Boston-to)

He is coming (to Lapwai / *to Boston)

b. hi-ku-see-nki (*Lapwai-x / Boston-x)

3SUBJ-go-IMPERF-TRANS (*Lapwai-to / Boston-to)

He is going (*to Lapwai / to Boston)

(301) 'iskit hi-ku-see-nki

trail 3SUBJ-go-IMPERF-TRANS

The trail goes that way (away from the speaker) (Aoki, 1994, 243)

By contrast to space markers in languages like Abaza (O'Herin, 2002), Nez Perce space markers are not limited to dynamic or path-defining predicates. Space inflection is found on non-path-defining predicates, and in this case it generally locates an event/state as proximal (cislocative) or distal (translocative) from the utterance location.

- (302) a. hi-weqi-se-m
 3SUBJ-rain-IMPERF-CIS
 It is raining here
- b. hi-weqi-see-nki
 3SUBJ-rain-IMPERF-TRANS
 It is raining over there
- (303) ku' malack'iw kalo' hi-wii-ce-nki
 DUNNO several.nights just 3SUBJ-cry-IMPERF-TRANS
 It kept crying for several days (over that way) (Aoki and Walker, 1989, 537)

It is possible for an imperfective verb to be followed by neither *m* nor *(n)ki*. This case does not correspond to any restriction on spatial location and/or direction, nor to an irrealis interpretation (as Wiltschko and Ritter 2005 report for clauses without space marking in Upriver Halkomelem). Both proximal and distal adverbials are possible.

- (304) hi-weqi-se (Lapwai-pa / Boston-pa)
 3SUBJ-rain-IMPERF (Lapwai-at / Boston-at)
 It is raining (in Lapwai / in Boston)

The adverbial facts suggest that verbs without an overt space marker are truly unspecified for spatiality. We have no grounds for positing a third, \emptyset space marker with a particular interpretation. Conservatively, the category consists only of the two morphemes *m* and *(n)ki*.

2.1.2 Tense

The second class of suffix that may follow the imperfective marker provides information about the *time* at which an event is in progress or a state holds. A verb bearing the imperfective suffix plus suffix *qa* is used to describe events in progress or states holding earlier in the day, yesterday, or within the most recent week. Verbs marked with this suffix can be used with the temporal adverbial *watiisx* 'yesterday/tomorrow', which in this

case receives only a ‘yesterday’ translation; they cannot occur with the adverbial *waqiipa* ‘long ago’. The adverbial *taaqc* ‘today’ is also possible, and receives an ‘earlier today’ translation.

- (305) hi-waqi-sa-qa (watiisx / taaqc / *waqiipa)
 3SUBJ-rain-IMPERF-REC.PAST (1.day.away / today / *long.ago)
 It was raining (yesterday / *tomorrow / earlier today / *long ago)

A verb bearing the imperfective suffix plus suffix *ne* is generally used to describe events in progress or states holding at a time one week ago or longer, extending indefinitely far back into history. Verbs marked with this suffix can be used with the temporal adverbial *waqiipa* ‘long ago’, but not *taaqc* ‘today’ or *watiisx* ‘yesterday/tomorrow’.

- (306) hi-weqi-se-ne (waqiipa / *taaqc / *watiisx)
 3SUBJ-rain-IMPERF-REM.PAST (long.ago / *today / *1.day.away)
 It was raining (long ago / *earlier today / *yesterday / *tomorrow)

Such facts suggest that the distributional category to which *qa* and *ne* belong corresponds to the notional category of TENSE. These morphemes are past tenses differing in what Comrie (1985) called “degree of remoteness”. Thus it is that Aoki (1994) and Rude (1985) have labelled *qa* a *recent past tense*; Rude in parallel fashion labels *ne*, *remote past tense*.

There is one other tense as well. A verb bearing the imperfective suffix plus neither *qa* nor *ne* can only be used to describe events in progress or states holding at the moment of speech. Verbs of this form can be used with the temporal adverbial *taaqc* ‘today’, but not *watiisx* ‘yesterday/tomorrow’ or *waqiipa* ‘long ago’.

- (307) hi-weqi-se (taaqc / *watiisx / *waqiipa)
 3SUBJ-rain-IMPERF (today / *1.day.away / *long.ago)
 It is raining (today / *yesterday / *tomorrow / *long ago)

By contrast to the verb without an overt space marker, whose interpretation is spatially unspecified, the verb without an overt tense marker is not temporally unspecified at all.

It is restricted to a present-tense interpretation. This suggests that a null present tense completes our paradigm: there are two past tenses, *qa* and *ne*, and a present tense, \emptyset .

2.1.3 Aspect, space and tense: clause structure

Borgman (1990) reports that in the Amazonian language Sanuma, marking for tense and for space do not appear in the same word. Tense and space marking belong in that language to the same distributional category. This is not the case in Nez Perce. A verb may be simultaneously inflected for imperfective, for space and for tense; it is always in this order that the morphemes appear. From a semantic point of view, the conditions look favorable for a compositional analysis of the contribution of aspect, space and tense marking. In (308)-(309), tense markers provide information about the temporal location of a raining event; space markers provide information about spatial location.

(308) hi-waqi-sa-m-qa

3SUBJ-rain-IMPERF-CIS-REC.PAST

It was recently raining nearby

(309) hi-waqi-see-nki-ke

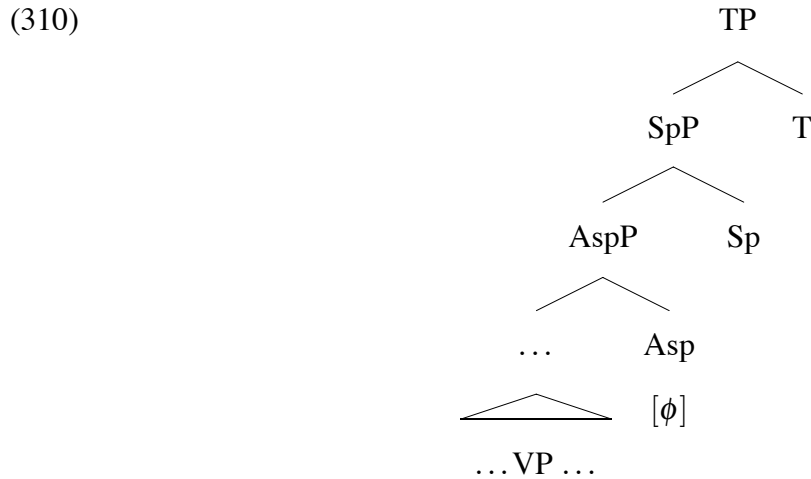
3SUBJ-rain-IMPERF-TRANS-REM.PAST

It was raining far away, not recently

Full combinations of aspect, space marking and tense are important not only as semantic projects, of course. From a morphological point of view, they point us to several important instances of allomorphic variation. From a syntactic point of view, they give us the grounds on which to establish the phrase structure of the relevant part of the Nez Perce clause. This phrase structure plays an important role when we consider whether certain gaps in suffix distribution can be regulated by mechanisms which operate in a syntactically local fashion, viz. syntactic selection or subcategorization.

The fact that a category associated with deictic temporal location – tense – appears outside of a category including the imperfective – aspect – is in line with crosslinguistic

patterns. It would be natural to describe this language as projecting both an aspect phrase (AspP) and a tense phrase (TP), the heads of which host aspect markers and tense markers, respectively. If we tentatively match these language-specific distributional categories to the universal, notional categories their names invoke, the relative structural relations between Asp and T might be a matter of a universal phrase-structural hierarchy (Cinque 1999 i.a.).³



Of the morphemes we have seen, recent past *qa*, remote past *ne* and present \emptyset are exponents of T, cislocative *m* and translocative *nki* are exponents of Sp, and imperfective *se/sa/ce/ca/siix/ciix* are exponents of Asp. These latter two forms of the imperfective only appear when the subject is plural. To account for the relationship between subject number and the shape of the aspect marker, we propose in section 5.3.2 that Asp is the head responsible for subject agreement in Nez Perce. For this reason, $[\phi]$ deserves mention in describing the structure of this region of the clausal spine.

2.1.4 Allomorphy

We are now in a good place to describe certain allomorphic patterns that take place in imperfective suffix clusters. Before we do so, we should make explicit two assumptions about the morphological system that will guide our exploration.

³I depict these projections as head-initial only as a matter of convenience. Ellipsis marks acknowledge the possibility of significant structure between Asp and VP (e.g. applicatives, causative, adverbial suffixes, low future).

First, we will need some morphological mechanism to account for the fact that aspect, space and tense morphemes appear as part of a surface constituent – the verb word – which does not include anything other than the verb and its various affixes. Let us suppose that morphologically complex verbs are assembled morphologically on the basis of articulated syntactic structures, perhaps “Baker-style” by movement from head-to-head (Baker, 1985), or via Marantz (1984)’s *Morphological Merger*. We will further assume in section 8.3.2 that this complex head formation process takes place post-syntactically, at a grammatical level of Morphological Structure.

Second, subsequent to word construction, the surface form of the imperfective verb is subject to a small range of adjustments and suppletions. Let us suppose, in keeping with the morphological tools we will draw upon in chapter 8, that these matters are to be handled as part of the process of vocabulary insertion, which belongs to the phonological or PF component of the grammar (Halle and Marantz 1993, Wolf 2008). Allomorphic patterns transpire at the interface between syntactic representations and phonological ones, and are sensitive to information of both types. Crucially, *allomorphy rules are sensitive to phonological and syntactic locality*: allomorphic variation of morpheme X is always conditioned by the material phonologically or structurally adjacent to X.

The range of adjustments we will need can be seen in the full paradigm of the imperfective in figure 2.1. I collect in the appendix a list of morphemes annotated for class and allomorphic variation along with examples from field data and corpora. Let me highlight two illustrative cases of this allomorphic variation here.

Much of the variation within the imperfective paradigm reflects sensitivity to verb class. Recall from chapter 1 that all Nez Perce verbal constituents below the word-level are specified for membership in one of two classes, S-class and C-class. Some suffixes vary in form depending on the class of the constituent which is phonologically immediately to their left and syntactically their sister. This is transparently the case for the singular imperfective suffix.

		<i>S-class</i>	<i>C-class</i>	
Present	Singular		se	ce
		Cisloc	sem	cem
	Plural	Transloc	senki	cenki
			siix	ciix
		Cisloc	siinm	ciinm
		Transloc	siinki	ciinki
Recent past	Singular		saqa	caqa
		Cisloc	samqa	camqa
	Plural	Transloc	sanqaqa	canqaqa
			siiqa	ciiqa
		Cisloc	siinmqa	ciinmqa
		Transloc	siinqiqa	ciinqiqa
Neutral Past	Singular		sene	cene
		Cisloc	seme	ceeme
	Plural	Transloc	senkike	ceenkike
			siine	ciine
		Cisloc	siinme	ciinme
		Transloc	siinkike	ciinkike

Table 2.1. The imperfective subparadigm

(311) Imperfective singular allomorphy

a. [se] /]*S.class* –

b. [ce] /]*C.class* –

(312) a. [paay]_C-ca

arrive-IMPERF

I am arriving

b. [[paay]_C-toq]_S-sa

arrive-back-IMPERF

I am returning home.

In addition to changing their own shape to reflect the class of the constituent to their left (and their sister), suffixes may also produce a C-class stem from an S-class one, and vice versa. We see this behavior in the suffix *toq* ‘back’ in (312b): the simplex verb *paay* ‘arrive’ is C-class, but complex verb *paay-toq* ‘arrive back, return home’ is S-class. This behavior

also characterizes the imperfective suffix: it produces a verb of class C. The C-class membership of the imperfective conditions to its right a pattern of allomorphy very common in the language. Both remote past and translocative, when local to the imperfective, take allomorphs beginning with [n]. (Further instances of this [n]-pattern in C-class forms can be found in section 1.7.4.1.) For remote past, this class-driven alternation is in addition to what appears to be a case of pure suppletion.

(313) Remote past allomorphy

- a. [e] /]*S.class* _
- b. [ne] /]*C.class* _
- c. [ke] / ki _

The suppletive *ke* form of the remote past suffix crops up again at a crucial moment. This moment comes in section 2.3.

2.2 The notional habitual

To make sure that tense and space markers are contributing compositionally to the meaning of imperfective verbs in the way we suspect, we will want to examine the way these markers behave when they combine with other exponents of aspect. The logical place to look for the three tense system beyond the imperfective is in a class of verb forms which Rude (1985) groups together under the heading of *habitual aspect*. In this case, there are two complications. The first concerns the semantic and morphological relationship between habitual marking and tense. Tense seems to be responsible for a choice between two radically different exponents of notional habitual. The second complication concerns the distributional relationship between habitual marking and space marking. Habitual verbs permit one exponent of Sp, but systematically refuse the other.

2.2.1 Three tenses in the habitual

Habitual-suffixed verbs are used to describe habits or dispositions and to express generalizations.

(314) tayam tekelu'-teetu- \emptyset

summer swim-HAB.PRES-PRES

I always swim in the summer.

(315) 'iceyeye hi-ip-teetu- \emptyset picpic

coyote 3SUBJ-eat-HAB.PRES-PRES cat

Coyotes eat cats.

(316) ko-qa-qa Portland-x

go-HAB.PAST-REC.PAST P-to

I used to travel frequently to Portland. I used to go there all the time. (not okay if you only went twice)

As with the imperfective, these verbs call for suffixal subject number agreement; the form of the habitual changes when the subject nominal is plural. All forms of the habitual are in complementary distribution with the imperfective, supporting the shared categorization; in our terms (and in Rude's), forms of the habitual and imperfective are exponents of distributional *aspect*. These markers also fit reasonably well into a notional category of aspect. Both have to do with 'ways of viewing the internal temporal constituency of a situation' (Comrie, 1976, 3) – whether as something ongoing at a particular time, or as a habitual or generalizable state of affairs spread over multiple instances.

As soon as we start to describe the shape of habitual suffixation, there is an immediate twist. Unlike the imperfective, notional habitual marking comes in two phonologically very different forms. When the verb takes aspect suffix *teetu* (singular subject) / *tee'nix* (plural subject), habits must be in force or generalizations true at the present time. The simple present of an eventive English verb provides an apt translation.

- (317) hip-teetu- \emptyset nukt
 eat-HAB.PRES-PRES meat
 I eat meat.
 a. I am not a vegetarian. I am willing to eat meat.
 b. I eat meat on a regular basis. I habitually eat meat.

- (318) hip-tee'nix- \emptyset nukt
 eat-HAB.PRES.PL-PRES meat
 We eat meat. (interpretations as above)

When we shift to speaking of habits, dispositions or generalizations that obtained in the recent past, we see the recent past tense suffix *qa*, but we do not find the habitual suffix *teetu* (sg) / *tee'nix* (pl). Instead, we find a suffix *qa* (sg) / *a'nii* (pl) inside the tense marker.

- (319) hip-qa-qa nukt
 eat-HAB.PAST-REC.PAST meat
 I used to eat meat (recently). I was recently a non-vegetarian.

- (320) hip-a'nii-qa nukt
 eat-HAB.PAST.PL-REC.PAST meat
 We used to eat meat (recently). We were recently non-vegetarians.

This pattern persists in nearly identical form in the remote past tense: *qa* remains the form of the singular habitual, and the plural habitual surfaces as *e'nii*.

- (321) hip-qa-na nukt
 eat-HAB.PAST.SG-REM.PAST meat
 I used to eat meat (long ago). I was once upon a time a non-vegetarian.

- (322) hip-e'niix-ne nukt
 eat-HAB.PAST.PL-REM.PAST meat
 We used to eat meat (long ago). We were once upon a time non-vegetarians.

From the point of view of tense marking, these paradigms are familiar from what we have seen in the imperfective. Tense *qa* contributes recent pastness in both aspects; tense *ne*

marks past that is more remote. The twist here has to do with the nature of the aspect marker, a matter that boils down to a question of the aspectual inventory. Is Nez Perce a language with one habitual aspect marker, subject to radical allomorphy? Or does notional habitual aspect correspond to two distinct morphemes in this language?

2.2.2 Present and past habitual: allomorphs or morphemes?

The form of habitual marking differs between recent and remote past only in that the final *x* of the aspect morpheme in (322) is missing from the aspect morpheme of (320). (The vowel change results from a language-wide system of vowel harmony; see section 1.2.) This small change could well be phonologically conditioned. Supposing this is in fact the case, we can describe the shape of notional habitual marking in terms of subject number and tense in the following way.

(323) The form of habitual marking

	sg	pl
pres	teetu	tee'nix
past	qa	e'nii(x)

Is the change from the top to bottom row a case of allomorphy – a single HAB.SG and HAB.PL morpheme realized in a variety of ways, depending on their local environment? It does not appear so. While the plural forms *tee'nix* and *e'nii(x)* are phonologically similar, singular forms *teetu* and *qa* are phonologically different in segmental, prosodic and vowel harmonic terms. They do not present the sort of contrast one expects to attribute to allomorphic variation. There is also the crucial matter of the trigger of the contrast. Concentrating on the singular forms, the present habitual *teetu* suffix appears word finally, but also preceding cislocative *m*:

(324) hi-weqi-teetu- \emptyset

3SUBJ-rain-HAB.PRES-PRES

It rains.

- (325) hi-weqi-teetu-m- \emptyset
 3SUBJ-rain-HAB.PRES-CIS-PRES
 It rains here.

The past habitual *qa* suffix appears to the immediate left of recent past *qa*, remote past *na* or cislocative *m*:

- (326) hi-waqi-qa-qa
 3SUBJ-rain-HAB.PAST-REC.PAST
 It used to rain (recently).

- (327) hi-waqi-qa-na
 3SUBJ-rain-HAB.PAST-REM.PAST
 It used to rain (not recently).

- (328) hi-waqi-qa-m-qa
 3SUBJ-rain-HAB.PAST-CIS-REC.PAST
 It used to rain here (recently).

The factor conditioning the choice between *teetu* and *qa* is not the local phonological or syntactic environment. The conditioning factor is non-local, that is, whether we think of allomorphic rules as operating on linear, string-like objects, or on hierarchical, tree-like objects. We see this most plainly in that either *qa* or *teetu* may precede and project a complement to the cislocative *m*.

This leaves us with an analysis where the present habitual *teetu* / *tee'nix* and the past habitual *qa* / *e'nix* are separate morphemes. Syntactic or semantic tools must be invoked to regulate their distribution. We might imagine that the matter comes down to a syntactic mechanism of selection or subcategorization. Present tense would select the present habitual morpheme; the past habitual could surface as the elsewhere case. Yet this move faces the same challenge as on the allomorphy approach. Selection, like allomorphy, requires a

tightly local relationship between selecting head and selected phrase.⁴ We do not expect an exponent of T to select an exponent of Asp in Nez Perce, given that SpP intervenes.

And so we are left to tell a semantic story – from a question of aspectual inventory, we come to a discovery about what habitual markers must mean. If we want to regulate the distribution of *teetu* and *qa* semantically, what seems most plausible is to treat the two habitual morphemes as encoding deictic information narrowing the range of admissible tense markers. If we can describe these systems using the terms of Klein (1994), the habitual markers enforce a relationship not only between event time ET and topic time TT (as imperfective plausibly does, and notional aspects do), but also between topic time TT and utterance time UT (as each of the tenses plausibly does, and notional tenses do). *Habitual aspect markers collapse part of the function of tense together with the function of aspect.* If this is so, we have our first clue about the way that meaning relates to categorization in this area of (this) language. Whether a morpheme behaves as a tense marker (T) or aspect marker (Asp) cannot purely be a matter of its deicticness. Habitual markers encode deictic temporal location, but this does not prohibit their combination with tenses, nor does it make the grammar treat them as exponents of distributional category T.

Our analysis is not the first to conclude that notional aspect and notional tense must reside in single morphemes in at least some cases. In fact the conclusion we have reached on the habitual recalls in an interesting way the analysis that Jo-wang Lin has put forth for aspectual markers in Mandarin Chinese. According to Lin (2006), Chinese is a language where deictic temporal location is handled by morphemes in Asp, and where TP is not projected. What we find in the Nez Perce habitual suggests that these two facets of the grammar of Mandarin must be logically independent of one another. That aspect replicates part of the function of tense does not mean that T cannot be projected.

⁴This is an observation that different theories formulate in different ways; see Sag (2007) for discussion.

2.2.3 Space marking in the habitual

Now we come to an area where the paradigm of habitual marking is subject to a striking gap. Both past and present habitual combine with the cislocative *m*, as we saw in (325) and (328). From a syntactic point of view, this means that the AspP projected by habitual markers can be immediately dominated by a SpP. This space projection, however, is subject to a constraint: it cannot host a translocative morpheme. Translocative habitual verb forms do not exist synchronically; nor have they apparently ever existed in Nez Perce in post-contact times, judging by their conspicuous absence from the extensive verb charts of the missionary grammarians (Morvillo and Cataldo 1888, Morvillo 1891).

(329) * hi-weqi-tetu-(n)ki- \emptyset
3SUBJ-rain-HAB.PRES-TRANS-PRES
Intended: it rains far away.

(330) * hi-waqi-qa-(n)ki/(n)qa-na/ka
3SUBJ-rain-HAB.PRES-TRANS-REM.PAST
Intended: it used to rain far away (not recently).

This fact does not seem to reflect the *semantics* of the habitual markers. Habitual-marked verbs without a space marker (as in (324), (326)) may be used to describe events that take place at a nearby location, or at a spatially distant one. The explanation we need is likely to be syntactic in nature. The translocative morpheme, appearing as head of SpP, imposes selectional requirements on the AspP it combines with. This AspP may be headed by an imperfective, but it may not be headed by a habitual – neither the present variety, as in (329), nor the past one, as in (330).

The paradigm of the notional habitual, incorporating this gap, is shown in figure 2.2. (The relevant allomorphic rules may be found in the appendix.) As we turn now to another aspectual subparadigm, gappy distribution within a category like we see here is the shape of things to come. What we see now for space marking, we see next for tense.

Present Habitual

		<i>S-class</i>	<i>C-class</i>
Singular		teetu	teetu
	Cisloc	teetum	teetum
	Transloc	–	–
Plural		tee'nix	tee'nix
	Cisloc	tee'nixinm	tee'nixinm
	Transloc	–	–

Past Habitual

Recent past	Singular	qaaqa	naqaaqa
	Cisloc	qaamqa	nqaamqa
	Transloc	–	–
Plural		a'niiqa	na'niiqa
	Cisloc	a'niixinmqa	na'niixinmqa
	Transloc	–	–
Neutral Past	Singular	qaana	naqaana
	Cisloc	qaama	naqaama
	Transloc	–	–
	Plural	e'niixne	ne'niixne
	Cisloc	e'niixinme	ne'niixinme
	Transloc	–	–

Table 2.2. The subparadigm of the notional habitual

2.3 The P aspect

Rude (1985) and Crook (1999) distinguish two further aspectual markers which we take up now. They call these suffixes *perfect* (a examples) and *perfective* (b examples). (I adopted these labels in Deal (2009a).) The meanings of verbs ending in these suffixes are very similar; in many cases, no difference surfaces in translation.

(331) S-class verb

a. 'inee-kuu-s kuus
1SG.REFL-water-"PERFECT" water
I drank the water

b. 'inee-kuu-ye kuus
1SG.REFL-water-"PERFECTIVE" water
I drank the water

(332) C-class verb

a. hi-pay-**n**
3SUBJ-arrive-"PERFECT"
He arrived

b. hi-pay-**na**
3SUBJ-arrive-"PERFECTIVE"
He arrived

Verbs marked with these suffixes have in common that they call for prefixal subject number agreement, and that they combine with both cislocative and translocative space markers. In addition, they share a surprising property: they cannot combine with markers for tense. Why should this be?

The type of answer we can give to this distribution question is largely determined by how we go about morpheme segmentation. Let's compare two alternative solutions to the question of parsing.

On the first parse, we analyze the suffixal material in (331) and (332) as morphemes *s/n* and *(y)e/ne*, S-class and C-class exponents of two distinct aspectual categories, perhaps a notional perfect and notional perfective. (That identification, however, we have yet to establish.) We might call this *the traditional parse*. On this analysis, we have a distribution question to be asked in connection with tense. We end up forced to respond by stipulating selectional relationships of an exceptional, non-local character. We also have a question of allomorphy to be asked in connection with space markers. It turns out that space-marked verbs in the so-called ‘perfective’ (seen in the (b) examples above) show material to the right of the space marker that looks exactly like the appropriate allomorph of the remote past tense. This is an unexplained coincidence on the traditional parse.

An alternative way of carving up the morphemes requires fewer syntactic and morphological stipulations. We could treat the ‘perfect’ and ‘perfective’ suffixes of the traditional view as bimorphemic. The so-called ‘perfect’ becomes an aspectual morpheme plus present tense; the so-called ‘perfective’, the same aspectual morpheme *plus remote past tense*. This analysis is significantly morphologically simpler, and avoids the tricky matter of non-local selection. It leads us to an issue that is semantic in nature. The remote past tense and the aspectual marker do not combine in a totally compositional way. We see this in the fact that the temporal remoteness meaning of remote past tense is, in this environment, missing. This idiomaticity means that the semantics of the aspectual morpheme in common to the so-called ‘perfect’ and ‘perfective’ verbs is hard to clearly ascertain. It is not clear if this morpheme belongs in a typology of perfect aspects, or perfective aspects, or neither. To be neutral about the place of the morpheme in an aspectual typology, I give it a *sui generis* title. I call this proposed aspect marker simply *P aspect*, and I call this second view the *P-aspectual parse*.

We begin with semantic means by which the *s/n* and *(y)e/ne* suffixes can be differentiated, and the question of their temporal interpretation. We turn then to the forms of these endings that surface with space markers. In doing so, we will see a number of examples

of these suffixes that we will need to gloss. Since – as will become clear – the P-aspectual parse offers the simpler treatment of both syntactic and morphological facts, I gloss the examples below in this way.

2.3.1 Tense and temporal interpretation

Verbs marked with the *s/n* (S-class/C-class) and *ye/ne* endings do not mean *exactly* the same thing. They differ quite sharply, it turns out, in their temporal interpretation, as revealed by their ability to combine with past and present temporal adverbials. Those with suffixes *s/n* can combine with present time adverbials such as *waaqo* ‘now, already’ and *taaqa* ‘today’.

(333) *waaqo* ’*inaa-hinaq*’*i-s-0*
 now 1SG.REFL-finish-P-PRES
 Now I’m all ready

(334) *waaqo* *hi-yk*’*iw-n-0*
 now 3SUBJ-be.sunny-P-PRES
 It’s finally sunshining!

(335) *hi-lati-s-0* *taaqa*
 3SUBJ-flower-P-PRES today
 It’s flowering today

However, non-present adverbials such as *watiisx* ‘yesterday/tomorrow’ cannot appear. This is so even when the past time in question is very recent.

(336) Context: People are getting ready to do something in the middle of the night – doing something just a few minutes after midnight.

* *watiisx* ’*inaa-hinaq*’*i-s-0*
 1.day.away 1SG.REFL-finish-P-PRES
 Intended: I got ready yesterday

With a past adverbial, speakers either correct the *s/n* (traditional ‘perfect’) P-aspectual suffix to the *ye/ne* (traditional ‘perfective’) P-aspectual suffix, or they find a way to interpret the adverbial in a way akin to an English *in-* or *since-*phrase.

- (337) k’akx-kin’ix hi-waqi-s- \emptyset
 week-from 3SUBJ-rain-P-PRES
 Since last week it’s been raining / *It rained last week

- (338) miw’ac-pa ’inaa-hinaq’i-s- \emptyset
 short.time-LOC 1SG.REFL-finish-P-PRES
 I got myself ready in a little while / *a little while ago

Verbs bearing the *(y)e/ne* suffix show the opposite pattern. When they appear with *waaqo* ‘now, already’, it is interpreted as ‘already’, not as ‘now’.

- (339) waaqo’ hi-pinmik-te-n-e
 now 3SUBJ-sleep-go.away-P-REM.PAST
 He already went to bed

- (340) waaqo’ ’eetx kiwyek- \emptyset -e
 now 2PL feed-P-REM.PAST
 I already fed you! (speaker says to her begging cats)

These verbs combine freely with past adverbials. The minimal pair below contrasts the past adverbial reading of *naaqc ’inwim* ‘one year’ available with the *(y)e/ne*-suffixed verb (here undergoing harmony to *a*) with the *in-*adverbial reading with the *s/n*-suffixed version.

- (341) a. naaqc ’inwim paa-lawlimq-s- \emptyset ’iskii-ne
 one year 3/3-fix-P-PRES road-OBJ
 They fixed the road in one year / *one year ago
- b. naaqc ’inwim-pa paa-lawlimq- \emptyset -a ’iskii-ne
 one year-LOC 3/3-fix-P-REM.PAST road-OBJ
 They fixed the road a year ago. They got it done 1 year ago.

Interestingly, both recent past adverbial *watiisx* ‘yesterday/tomorrow’ and remote past adverbial *waqiipa* ‘long ago’ are acceptable with the *(y)e/ne* suffix.

(342) pay’s watiisx hi-wwliik- \emptyset -e
 maybe 1.day.away 3SUBJ-fall[of trees]-P-REM.PAST
 Maybe it (a tree) fell over yesterday

(343) kawo’ haswalaya kal’a waaqo’ waqiipa hi-nees-weqii-**n-e**
 then defeated just already long.ago 3SUBJ-O.PL-desert-P-REM.PAST

kal’o’ kaa ’uu-s- \emptyset pi-p’im ’iweepne-me kona.
 just and 3GEN.be-P-PRES PL-young wife-PL there

Then (we are) defeated – he already left us long ago, and he has young girls for wives there. (Aoki and Walker, 1989, 264)

Overall, patterns of adverbial modification connect the *s/n* forms to the present tense forms of the imperfective and the *(y)e/ne* forms to past tense forms of the imperfective, either recent or remote.

On the traditional parse, these patterns are most plausibly to be handled by mechanisms similar to what we saw with the present and past habitual. Two discrete aspectual morphemes, *s/n* and *(y)e/ne*, each bundle together deictic temporal location with aspectual information (perhaps of two very different sorts). The challenge lies in assuring that these aspectual markers do not go on to compose with tense, as present and past habitual do. We must recall that the relationship between Asp and T is not a structurally local one, in frustration of any natural syntactic selection/subcategorization account. We will have to exceptionally stipulate selection at a distance, whereby tense markers can look past space markers to select nearly any aspect *but s/n* and *(y)e/ne*.

On the P-aspectual parse, *s/n* suffixation is broken down into P-aspect plus \emptyset present tense. We expect, therefore, that only present tense adverbials will be acceptable with *s/n*-suffixed verbs. The *(y)e/ne* forms are segmented into P-aspect plus remote past tense.

Possible adverbials	Space marking	S-class form	C-class form
Present		s	n
	Cisloc	m	nim
	Transloc	ki	niki
Past		(y)e	ne
	Cisloc	me	nime
	Transloc	kike	nikike

Table 2.3. P-aspect subparadigm

Examples like (342), with adverbial *watiisx* ‘yesterday/tomorrow’ reveal that something semantically special is going on in this combination. We require a special, idiomatic interpretation rule: in combination with P-aspect, remote past tense imposes a pastness condition, but not a condition of temporal remoteness. The morphology leads us to posit two morphemes here, but from a semantic point of view, we have a single, idiomatic chunk.

2.3.2 Allomorphy

Let’s look now at the shape of P-aspect suffix complexes including space markers. The paradigm appears in table 2.3.

On the traditional parse, the suffix clusters in table 2.3 represent aspect in combination with space marking, but not tense. The forms permitting past adverbials call for some allomorphy of a suspicious sort. For some reason the final *e* of the ‘perfective’ aspect *(y)e/ne* does not appear when a space marker follows. Instead, an *e* appears *after* the space marker: cislocative *m* takes exceptional allomorph *me*; translocative *ki* takes exceptional allomorph *kike*. We miss the generalization that all forms in this paradigm end with *e*.

On the P-aspectual parse, the suffix clusters in table 2.3 represent aspect in combination with both space marking and tense. The allomorphy of the aspectual marker can be described in a relatively simple way.

(344) P-aspect allomorphy

a. [s] /]s.class _#

- b. [∅] /]*S.class* _ (otherwise)
- c. [ni] /]*C.class* _C
- d. [n] /]*C.class* _ (otherwise)

What we see here follows natural phonological outlines plus the general pattern of *n* following a C-class constituent.

The rest of the allomorphy we see is conditioned by the class of the P-aspect, and by the space markers. By contrast to the imperfective and past habitual, the P-aspect belongs to class S. When remote past tense appears immediately to the right of P-aspect, it takes allomorph *e*, as expected by (345) (repeating our allomorphic rule from above). As a matter of general Nez Perce phonology, this vowel is preceded by epenthetic glide *y* when a vowel would otherwise directly precede it.

(345) Remote past allomorphy

- a. [e] /]*S.class* _
- b. [ne] /]*C.class* _
- c. [ke] / ki _

The translocative suffix, attached to the right of P-aspect, takes S-class form *ki*. (Full allomorphic rules for the translocative appear in the appendix.) Crucially, when the remote past suffix attaches outside of the translocative, we fully expect (given what we see in the imperfective) suppletive remote past allomorph *ke*. The *kike* suffix complex in the imperfective and in the P-aspect receive a unified analysis. Both are decomposed into translocative plus remote past tense.

The following examples, annotated for class membership, parse several complex forms in keeping with the P-aspectual analysis.

(346) P-aspect cislocative remote past, C-class, and P-aspect remote S past, S-class

ciklii]_{C-ni}]_{S-m}]_{S-e} 'iin kaa kine 'ee wic'ee]_{S-∅}]_{S-ye}.

go.home-P-CIS-REM.PAST I and here you become-P-REM.PAST

I came home, and you were born here. (Aoki and Walker, 1989, 327)

(347) P-aspect translocative remote past, C-class

kaa yoŋ hi-quyim]_C-ni]_S-ki]_S-ke tewliikt 'uykin'ix.

then DEM 3SUBJ-climb-P-TRANS-REM.PAST tree farther

Then that one went farther up the tree. (Aoki and Walker, 1989, 12)

2.3.3 Idiomaticity and the distribution of tense

Having followed the morphology to its natural conclusion, our perspective on the semantics of P-aspectual forms starts to take shape. Some P-aspectual forms contain present tense; some contain remote past tense. At least those that contain remote past tense are put together semantically in a non-compositional way. The remote past tense P-aspectual suffix complex is essentially an inflectional idiom. The existence of such idioms is important from the point of view of projects like Arad (2003)'s and Marantz (2010)'s, which investigate the degree to which idiom formation is subject to the same locality constraints as allomorphy. In this instance, it appears that it is not. The remote past / P-aspect combination is non-compositional regardless of whether a space marker intervenes between P-aspect and remote past tense.

This non-compositionality deals a crushing blow to any potential attempt at singling out the meaning of the P-aspectual morpheme. We cannot safely avoid the remote past idiom by appeal to the meaning of the present tense P-aspect form, as we could well have idiomatic interpretation in this case as well. (How would we know?) If tense does not have its usual meaning, we are not able to factor out the contribution of aspect by working backwards from verb meaning and the meaning of tense. This means that the semantic project for the P-aspectual forms has to be undertaken as if these forms contain a single, atomic tense-aspect suffix.

If we take this idea seriously, we might contemplate an analysis under which P-aspect has no meaning in its own right. It is a lexical item like Quine (1960)'s "defective nouns"

dint, *behalf* and *sake*, which has meaning only in a fixed syntactic context. Either remote past tense or present tense is required for P-aspect to be meaningful, but (perhaps surprisingly) recent past tense does not fit the bill. Yet it turns out that there is to some degree a correlation in Nez Perce between subparadigms which have gappy distribution for tense and subparadigms where aspect and tense do not compose compositionally.

(348) *Idiomaticity generalization*

Modulo semantic incompatibility between aspect and tense, an aspect may have an incomplete paradigm of tenses just in case it composes with tense in a non-compositional way.

A full tense paradigm is seen in the imperfective, where a compositional treatment appears plausible. Present and past habitual also compose with all semantically compatible tenses in what looks to be a compositional way. A reduced tense paradigm is seen in the P-aspect; something similar happens in the prospective, which we take up in section 2.4. In these last two cases, what is at least phonological material corresponding to one past tense marker appears, but the other marker cannot appear; at the same time, the material that does appear does not bring the meaning of the typical morpheme it evokes. This suggests that it would be incorrect to assign the distribution of T in these subparadigms to a syntactic selectional mechanism. The connection between T and Asp in these cases has to do with triggering a idiomatic interpretation – a process which, unlike selection, need not operate in a syntactically local way.

2.4 The prospective family

The pieces of verbal inflection we have discussed so far build verbs that describe eventualities temporally located in the past or at the present time. We come now to verb forms that may be used with adverbials picking out times in the future. There are three groups of forms that must be mentioned. These I will call *imperative*, *optative* and *prospective*. Imperatives are used to give orders and suggestions, and must have a second-person subject.

- (349) hani-tx
make-IMPER.PL
Make (something)! (to plural)

Optatives are used for a particular type of emotive report. They must appear as complements of imperatives or in clauses headed by relativizer *ke*.

- (350) ke-pem pa-ani-t'a
REL-2PL S.PL-make-OPT
May you make (something)!

Prospectives are used to talk about the future, and to convey a range of modal notions.

- (351) pa-ani-yo'
S.PL-make-PROSP
You are going to make (something).

These three suffixes complete the picture of verbal inflectional suffixation in Nez Perce in an important way. A Nez Perce verb that is neither deverbalized with a participial suffix nor marked with one of the four aspect morphemes we have discussed (imperfective, present habitual, past habitual, P-aspect) must have either an imperative, optative or prospective suffix.

All three of these markers deserve close semantic, syntactic and morphological attention. Where I want to focus here is on the status of the form we see in (351), whose suffix belongs to a family of endings I call *prospective*. Prospective verb forms present the extremes of many of the behaviors we have now acquainted ourselves with. Their analysis raises serious questions of parsing, allomorphy, distribution and composition. There is most strikingly in this subparadigm a question of distribution: the *u'* (surface form: *yo'*) suffix we see in (351) does not combine productively with space marking *or* with tense. In addition, when we see what we could parse as space and tense markers in addition to the *u'* suffix, the interpretations that are available are significantly different from what we

<i>Aspect</i>	<i>Space marker</i>	<i>Tense</i>
P-aspect	Cislocative (<i>m</i>) Translocative (<i>ki</i>)	Present (\emptyset) Remote past (<i>e</i>) – idiom *Recent past (<i>qa</i>)
Prospective aspect (if parsed)	*Cislocative (<i>m</i>) *Translocative (<i>ki</i>) Cislocative (<i>kum</i>) – form found only here, meaning found only here	Present (\emptyset) – idiom *Remote past (<i>e</i>) Recent past (<i>qa</i>) – idiom

Table 2.4. Parsing in the P aspect versus the prospective

find with space/tense morphemes in other environments. For the putative space marker, the very *form* we see is also not otherwise attested.

The situation contrasts with what we found in the P-aspect in an important way. In dealing with P-aspect suffix clusters, the recognition of discrete morphemes helped us make progress on questions of syntactic selection and morphological form. By treating these clusters as multi-morphemic, we are able to help ourselves to the general pattern of allomorphy of remote past tense, significantly simplifying the morphological analysis. This kind of argument is not available for the prospective. There are few, if any, morphological, syntactic or semantic reasons to favor a multi-morpheme analysis of prospective forms. If we did have multiple morphemes, both the morphology and the meaning would be *sui generis*. The contrast between the P-aspectual subparadigm and the prospective subparadigm is schematized in table 2.4.

This suggests a radical approach to the parsing of prospective verb forms. We will approach prospectives as a family of morphemes that are semantically atoms and syntactically portmanteaux: they correspond to Asp, Sp and T together. This family consists of four morphemes subject to a typical pattern of class-based allomorphy: *n* appears following a C-class constituent.

(352) 0-prospective

i. [u'] /]_{S.class} –

ii. [nu'] /]C.class _

Besides the form shown here, which I call '0-prospective', parallel allomorphic rules apply to three other prospective family members: *o'qa* 'Qa-prospective', *u'kum* 'K-prospective', and *o'komqa* 'K-Qa-prospective'.

This parse may seem unparsimonious on morphological grounds. It derives its plausibility from a consideration of the alternative—that *qa* in two of these forms is recent past tense, and that *kom* is cislocative. In the former case, we would need an idiomatic analysis. In the second case, we would need idiomaticity in the semantics, selection in the syntax, and made-to-order allomorphy in the morphology.

2.4.1 Temporal interpretation and tense

Half of the prospective-family suffixes end in *qa*. Could this be recent past tense? Others end in no obvious tense marker. Could this be \emptyset present tense? It turns out that the presence or absence of the syllable *qa* does make a difference in terms of temporal interpretation, but the details of that interpretation do not straightforwardly reflect either recent past or present tense. If we were to segment the prospective-family suffixes into these morphemes plus a residue, the motivation would *not* come in any straightforward way from the meaning.

0-prospectives of eventive verbs describe events in the future of the time of speech. They may combine with *watiisx* 'yesterday/tomorrow', which receives only a 'tomorrow' interpretation.

- (353) hi-weqi-yu' watiisx
 3SUBJ-rain-PROSP 1.day.away
 It will rain tomorrow / * It rained yesterday

The 0-prospective of a stative verb indicates extension of a state that may hold at present into the future. Future readings of deictic adverbials again appear.

(354) qo'c 'ee hete'ew wek-**u'** watiix
 still you favorite be-PROSP 1.day.away
 I'll still love you tomorrow

(355) [From *Cannibal*, Aoki and Walker 1989, 558] The youngest brother learns that his eldest brother has become a cannibal and eaten his other brothers when they went to look for him. He prepares himself by tying sharpened flints to his legs and goes looking for the cannibal. He thinks to himself:

ku'k'u'-weet taɬc waaq'is wek-**u'**

DUNNO-Y.N soon alive be-PROSP

hu'-ku'-x taɬc na'-yaaca-m hi-waapciy'aw-**no'**

or-DUNNO-1SG soon 1SG-older.brother-ERG 3SUBJ-kill-PROSP

Maybe in a little while I will still be alive, or maybe my older brother will kill me.

The possibility of non-present adverbials is a surprise if 0-prospectives include a present tense. The meaning of a present tense in these cases would have to be importantly different from what we find in the imperfective, present habitual and P-aspect. In the present tenses of these aspects, present adverbials are a possibility, and non-present adverbials are impossible.

Compared to 0-prospectives, qa-prospectives allow a greater variety of temporal interpretations, most visibly for eventive predicates. They may concern events in the recent or remote past, the present or the future. In addition, qa-prospective verbs have a clearly modal component to their meaning. In the following case, a qa-prospective sentence states what *would* or *should* be the case at present.

(356) Context: My consultant is due to attend a meeting in Orofino [Teweepe] tomorrow.

c'alawi pi'amkin kii taqc hi-wak-**o'qa**

if meeting this today 3SUBJ-be-QA.PROSP

'ee teweepe wak-**o'qa**

you Orofino be-QA.PROSP

(If the meeting were today, you would be in Orofino)

Comment: "You should be in Teweepe."

In the following sentences, qa-prospectives make *counterfactual* claims about events in the past. (Note that *watiisx* '1 day away' receives a 'yesterday' reading in (358).)

(357) kii meeywi picpic-nim paa-p-**o'qa** cu'yeem-ne

this morning cat-ERG 3/3-eat-QA.PROSP fish-OBJ

met'u cuu'yem hi-wa-qa yowic'ayn-pa

but fish 3SUBJ-be-REC.PAST fridge-LOC

This morning the cat would have eaten the fish but the fish was in the fridge

(358) 'iin watiisx kiy-**o'qa**

1SG 1.day.away go-QA.PROSP

c'alawi ta'c watiisx hi-wak-**o'qa**

if good 1.day.away 3SUBJ-be-QA.PROSP

I would have come yesterday if the weather had been good

Finally, in the following cases qa-prospective sentences concern events in the future – what *should* happen in the future, what *would* happen in the future if affairs were otherwise at present, or what *would have* happened in the future if affairs had been different in the past. Note that this future orientation is never the only possibility: *watiisx* 'yesterday/tomorrow' can receive either a 'tomorrow' or a 'yesterday' translation in (359).

(359) wihne-**no'qa** watiisx

go-QA.PROSP 1.day.away

I should go tomorrow.

Alternatively: I could have gone yesterday.

(360) Prompt: it's not going to rain. We know that because if it were going to rain, it would get dark.

c'alawi hi-waqi-**yo'qa** kaa hi-ckeet-**no'qa**
 if 3SUBJ-rain-QA.PROSP then 3SUBJ-get.dark-QA.PROSP
 If it were to rain it would get dark

As in the P-aspect, if these forms include tense, the tense does not make its expected semantic contribution.

2.4.2 Spatial interpretation

Now we can ask a parallel question about space markers. Half of the prospective-family suffixes include the syllable *kum*. Could this be a special allomorph of cislocative? What we find is very similar to the situation with temporal interpretation and the syllable *qa*. The presence or absence of *kum* does make a difference in terms of spatial interpretation, but the details of that interpretation are not what we expect.

Unlike the *m* cislocative that appears in other verb forms, prospective forms with *kum* are not deictic to the place of utterance. Imperfective examples like (361) remind us of what we expect in terms of deicticness. Cislocative locates events proximal to the place of utterance, regardless of the tense; similar facts can be seen in the habitual and the P-aspect.

(361) hi-waqi-sa-**m**-qa lepwey ke-x kaa 'iin weke tatxinma
 3SUBJ-rain-IMPERF-CIS-REC.PAST Lapwai.ID REL-1 then I was Moscow.ID
 It was raining here in Lapwai when I was in Moscow
 a. cislocative: local space w.r.t. utterance location
 b. recent past: recent past time w.r.t. to utterance time

In prospective forms with *kum*, by contrast, the event location need not be proximal to the utterance location, but must be proximal to *the speaker's location at the event time*. Therefore, (362) is judged contradictory.

- (362) # kine lepwey-pe hi-weqi-yu'kum met'u 'iin wek-u'
 here Lapwai.ID-LOC 3SUBJ-rain-K.PROSP but I be-PROSP
 tatxinma-pa
 Moscow.ID-LOC
 It will rain here in Lapwai but I'll be in Moscow (40 miles north)
 Comment: "That wouldn't happen!"
- a. cislocative: local space w.r.t. to speaker's future location
 - b. *u'* future: future time w.r.t. utterance time

The contradiction derives in the following way. The *u'kum* suffix requires that a rain event be proximal to the speaker's location at the relevant future time. Independent adverbial(s) *kine lepwey-pe* 'here in Lapwai' further specifies that the rain will take place at the location of utterance, Lapwai. It follows that the speaker will be in or very near Lapwai during the rain event. However, the *when*-clause specifies that the speaker will be in Moscow, 40 miles north, at the time of the rain. In order for the prediction expressed by this sentence to come true, the speaker would have to be simultaneously in Lapwai and in Moscow at the time of the predicted rain. The sentence is rejected.

Likewise, example (363) with suffix *u'* is accepted, but the sentence is rejected when this suffix is replaced with *u'kum*.

- (363) kine hi-'yoxo'y-{o' / #o'kom} ke-x kaa 'iin wek-u'
 here 3SUBJ-wait-{PROSP / #K.PROSP} REL-1SG then I be-PROSP
 Payniwas-pa
 Payniwas-LOC
 He will wait here while I'm at the Payniwas Cafe

What we find with the *u'kum* form is what we might call a 'follow me into the future' interpretation: what matters is not where the speaker is now, but where the speaker will be at the future, event time.

The K-prospectives of (362) and (363) are strictly future-oriented. When we turn to K-Qa-prospective, which may have a past, counterfactual reading, we see that ‘follow me into an alternative past’ interpretations are possible as well.

(364) Context: You encounter a friend who is going to Wallowa [a mountainous area of eastern Oregon] to camp. You just got back from Wallowa and you want to tell your friend that you’ve just missed each other, so you say:

a. ah! ku-se- \emptyset wal’awa-x.

ah go-IMPERF-PRES Wallowa-to
Ah! You’re going to Wallowa.

b. c’alawi ’ee kiy-**o’komqa** watiisx wal’awa-px

if you go-K.QA.PROSP 1.day.away Wallowa-to

pay’s kiye pii-hex-no’qa kona

maybe 1PL.INCL RECIP-see-QA.PROSP there

If you had gone to Wallowa yesterday, perhaps we could have met each other there.

The *o’komqa*-suffixed verb in the conditional antecedent provides a direction for the motion predicate which is not toward the place of utterance, but toward where the speaker would have been located at a past time, given a counterfactual supposition.

In sum: the syllable *kum* is not an independently attested allomorph of cislocative *m*, and it does not make the meaning contribution that cislocative *m* makes. There is no clear morphological or semantic reason to grant this syllable a morphemic existence distinct from the *u’kum* and *o’komqa* suffixes in which it appears. By positing multiple distinct morphemes in the prospective family, we avoid having to stipulate a set of idiomatic and allomorphic rules.

We also avoid having to state a set of syntactic selectional rules to explain why prospective does not allow regular cislocative *m* or translocative *ki*. It does not appear that the absence of these markers from prospective forms is due to the semantics of futurity. In verb

forms including the low future suffix *tet'ee* and imperfective aspect, cislocative *m* shows expected deictic behavior.

(365) kine hi-'yoxoo-tat'aa-sa-m ke-x kaa wek-u' Payniwas-pa
 here 3SUBJ-wait-LOW.FUT-IMPERF-CIS REL-1 then be-PROSP Payniwas-LOC
 He's gonna wait here while I'm at the Payniwas Cafe

- a. cislocative: local space w.r.t. to utterance location
- b. low future: future time w.r.t. to utterance time

If, on the basis of *u'kum* and *o'komqa* forms, we posited a prospective aspect *u'* that combined with space marker *kum*, a selectional rule would be required to rule out other space marker combinations *u'm* and *u'ki*.

2.5 Morphemes, categories, composition

On the basis of what we have seen across four subparadigms, we can now provide answers to certain of our initial questions.

The system we have described has four morphemes (modulo plurals) that occupy the Asp position: imperfective, present habitual, past habitual, and P aspect. The difference between the habituals, as we saw, mirrors what Lin reports for aspect markers in Mandarin Chinese: these aspect heads encode both notional aspect and notional tense. The meaning of P aspect is linked to tense in a different way. The interpretation of T and Asp in this case is determined non-compositionally; the Asp morpheme and T morpheme form an idiom. The pieces that constitute this idiom do not form a syntactic constituent. Space marking may intervene. There are many well-known English idioms that share this syntactic character (e.g. *keep tabs on X*, *What's eating X?*).

There are two morphemes that occupy the Sp position: cislocative and translocative. These are deictic morphemes for location in space. These morphemes do not form idioms with aspect or with tense. They are subject, however, to selectional restrictions. Transloca-

tive selects for imperfective or P-aspect; it cannot combine with either habitual aspect morpheme.

There are three morphemes that occupy the T position: recent past, remote past and present. These, like the space markers, are deictic locators; their domain is not space but time. The combination of these morphemes with aspect markers is subject to semantic restrictions. Present tense may not combine with past habitual, nor may either past tense with present habitual. The remote past tense and the present tense form idioms with P aspect. Recent past tense may not combine with this aspect, as the aspectual morpheme derives its meaning only from the two idioms in which it appears.

Finally, there are four portmanteau morphemes that occupy the entire Asp-Sp-T region: 0-prospective, K-prospective, Qa-prospective and K-Qa-prospective. It is plausible that these morphemes derive historically from suffix combinations, but synchronically, they are interpreted and pronounced in a way that does not straightforwardly relate to any independently attested pieces.

The investigation in this chapter puts us in a position where it is clear what semantic investigations will be necessary to fit the Nez Perce system into a broader typology. It is via compositional analysis focused on imperfective and the habituals that we can hope to learn what it is possible to know about the meanings of individual morphemes and thus the meanings associated with the distributional categories. On top of this, we have identified several idioms which merit investigation as semantic atoms. Two of these come from the P-aspect, and four more from the family of prospective. In the next two chapters, we wrestle with two of the prospective idioms from a semantic point of view.

CHAPTER 3

THE MODAL PORTMANTEAU *O'QA*

In this chapter and the next, I want to take a closer look at the interpretation of two of the prospective portmanteaux identified in the previous chapter. These morphemes, 0-prospective *u'* and qa-prospective *o'qa*, belong to the notional categories of *modality* and *future tense*.

Expressions of modality and future tense are frequently reported to be connected in natural languages. In Nez Perce, this connection is visible as a historical relic: modal portmanteau *o'qa* very plausibly derives historically from 0-prospective *u'* plus recent past tense *qa*. In the synchronic grammar, these morphemes are portmanteaux, both of which can be used to talk about events in the future; for the qa-prospective, this is only one of the possibilities for temporal interpretation. There is a clear difference in meaning between 0- and future-oriented qa-prospective sentences: where 0-prospective sentences are generally interpreted as claims about the actual future, qa-prospective sentences express modal claims. This difference is evident in translations. Qa-prospective sentences are translated by consultants with the vocabulary of possibility. 0-prospective sentences aren't.

(366) Context: a discussion of the spinner picture, figure 3.1 (page 136). What is the difference between *hiwataalko'* (0-prospective) and *hiwataalko'qa* (qa-prospective)?

- a. hi-wataalk-**o'** yoosyoos
3SUBJ-stop-PROSP blue
It's gonna stop at the blue.

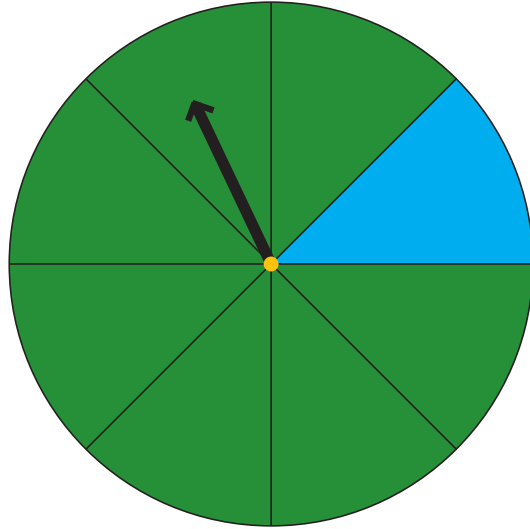


Figure 3.1. Green and blue spinner

- b. hi-wataalk-**o'qa** yoosyoos-pa
 3SUBJ-stop-QA.PROSP blue-LOC
 There's a possibility it could stop at blue.

- (367) a. 'e-pe-x-**nu'**
 3OBJ-S.PL-see-PROSP
 We will see it.

- b. 'a-pa-x-**no'qa**
 3OBJ-S.PL-see-QA.PROSP
 We're liable to see it. We might see it.

- (368) a. mawa hip-te-**nu'**
 when eat-go.away-PROSP
 When are you going to go eat?

- b. mawa hip-ta-**no'qa**
 when eat-go.away-QA.PROSP
 What time would you want to go eat? What time would you suggest? When could you go?

The difference is confirmed in contexts of two types. In a fortune teller context, we are interested in what will happen in the actual future. Consultants felt it would be strange for a fortune teller to use a qa-prospective sentence to make her prediction, but natural for her to use a 0-prospective sentence.

(369) Context: a fortune teller is making a prediction.

a. # saq'antaayx-na 'a-x-**no'qa**

bald.eagle-OBJ 3OBJ-see-QA.PROSP

(You could see a bald eagle.)

Consultant 1: "If she is telling her that she is *going* to see, she would have to say

saqantaayx-na 'ee 'e-x-**nu'**

bald.eagle-OBJ you 3OBJ-see-PROSP

(You will see a bald eagle.)

If you're going to say 'axno'qa ..."

Consultant 2: "How about, 'By chance you might see a *saqantaayx* on your way.'"

The 0-prospective sentence is naturally interpreted as a claim about the actual future. The qa-prospective sentence says something weaker. One expects more of a fortune teller.

In a second type of context, we recognize that a particular state of affairs is a possibility for the future that will not be realized. The qa-prospective sentence tells us that a particular state of affairs is possible. The negated 0-prospective sentence tells us that it's not going to obtain in the actual future.

(370) Context: Some horses are in a corral with its gate left open.

sik'em hi-pe-wuy-**no'qa**

horse 3SUBJ-S.PL-run.away-QA.PROSP

met'u weet'u hi-pe-wuy-**nu'**

but not 3SUBJ-S.PL-run.away-PROSP

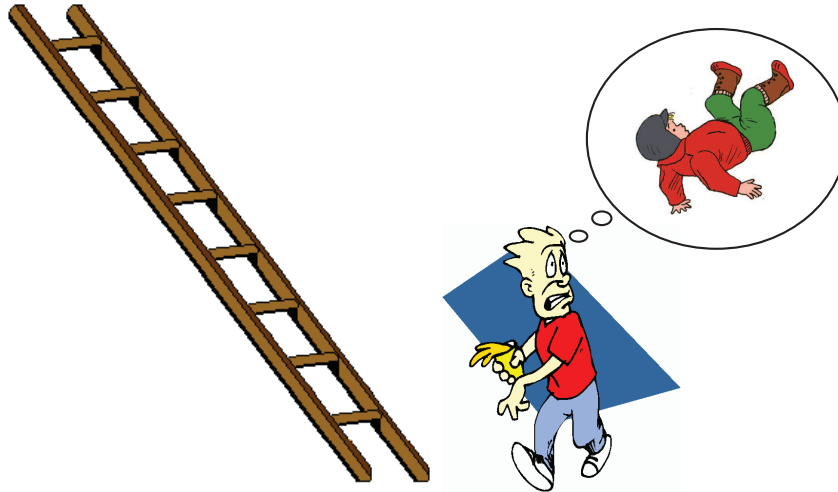


Figure 3.2. Scared climber cartoon

The horses could run away but they aren't going to.

Consultant: "They could, but then they won't."

(371) Context: Scared climber cartoon, figure 3.2

hi-hica-**yo'qa** met'u weet'u hi-hica-**yo'**

3SUBJ-climb-QA.PROSP but not 3SUBJ-climb-PROSP

He can climb but he won't climb.

Consultant: "He could, he would be able to, but he'd rather not."

Since future possibility statements are logically weaker than claims about the actual future, a qa-prospective sentence can be true where a 0-prospective sentence is false.

What precisely is the difference in meaning between 0-prospective *u'* sentences and qa-prospective *o'qa* sentences that accounts for these differences in translation, appropriateness and truth? This chapter and the next pursue two refinements of the general picture. The first project lies in situating the modal meaning of *qa*-prospective in a larger theory of modal expressions. This is the project of this chapter. The second project comes from a puzzle about the meaning of 0-prospective: in some cases, 0-prospective sentences clearly concern only the actual future, but in other cases, mere possibility meanings are apparently possible. This is the project of chapter 4.

3.1 Kratzer's theory of modal meaning

If qa-prospective sentences express modal claims, what kind of modal claims do they express? The standard theory of modal vocabulary developed by Kratzer (1977, 1981, 1991) gives us various ways of making this question formally explicit.

The standard analysis treats modal vocabulary as expressing quantification over possible worlds. When we quantify modally, we restrict ourselves to worlds which are like ours in certain *facts* and which correspond to certain *ideals*. Modal quantifiers are restricted by two *conversational backgrounds* roughly corresponding to facts and ideals, the *modal base* MB and the *ordering source* OS. Conversational backgrounds are functions from a world to a set of propositions. The modal base functions like an accessibility relation. A world v is accessible from a world w just in case v is a member of all the propositions in $MB(w)$. (Succinctly, the worlds accessible from w are those in $\cap MB(w)$.) The accessible worlds may be more or less close to ideals we have about the way things should go and stereotypes about how they typically do go. The ordering source *OS* gives us a way of ranking the worlds accessible in view of the modal base so that we can restrict ourselves to those that are *most* ideal (in keeping with certain facts) or *most* normal (in keeping with certain facts).

Modal expressions can be divided into expressions of possibility and expressions of necessity based on the relevant modal quantifier, existential or universal. They can also be classified by the type(s) of conversational backgrounds they admit. Kratzer makes a distinction between two kinds of conversational backgrounds: circumstantial and epistemic.

Circumstantial and epistemic conversational backgrounds involve different kinds of facts. In using an epistemic modal, we are interested in what else may or must be the case in our world given all the evidence available. Using a circumstantial modal, we are interested in the necessities implied by or the possibilities opened up by certain sorts of facts. Epistemic modality is the modality of curious people like historians, detectives, and futurologists. Circumstantial modality is the modality of rational agents like gardeners, architects and engineers. A historian asks what might have been the case, given all the available facts. An engineer asks what can be done given certain relevant facts. (Kratzer, 1991)

In English, modal expressions tend to be quite flexible about what kinds of conversational backgrounds are admissible. It is generally the case that the same lexical items can be used with both epistemic and circumstantial conversational backgrounds. Consider the sentence below, with modal auxiliary *could*.

(372) John could have gotten lost.

The following pair of contexts for this sentence favor epistemic and circumstantial conversational backgrounds, respectively.

(373) John is not home. He was last seen wandering off into the woods. The evidence available is compatible with him having gotten lost.

(374) John is home, and thank goodness! He went wandering off in the woods with only a very rough map, and his sense of direction is poor. In light of these facts, it was possible for him to get lost.

The same modal word, *could*, is used when we reason from evidence and when we reason from facts about provisions and capacities.

Such flexibility in modal vocabulary is not universal. In a typological survey, van der Auwera and Ammann (2008) find that it is for the most part an areal feature of European languages. They did not discover any American language where modal expressions generally admit both epistemic and non-epistemic conversational backgrounds. In formal work, Rullmann et al. (2008) show that background-selectivity of this type plays an important role in the grammar of St'át'imcets (Northern Interior Salish). Modal expressions in that language are specialized for subtypes of epistemic or circumstantial modality, but never permit a range of both. Against this backdrop, our first set of facts about qa-prospective comes as no surprise. In Nez Perce, epistemic and non-epistemic modalities are strictly lexically differentiated. The modality of qa-prospective is restricted to non-epistemic modality.

3.2 Three readings of qa-prospectives

We can single out three major reading types for qa-prospective sentences: pure circumstantial readings, deontic readings and counterfactual readings. These meanings reflect a range of admissible non-epistemic modal bases, together with a range of admissible ordering sources.

3.2.1 In view of the circumstances...

Kratzer (1991)'s example *Hydrangeas can grow here* is a textbook case of circumstantial modality. The modal base reflects facts such as the condition of the soil, the climate, and growing needs of hydrangeas; in light of these factors, it is possible for hydrangeas to grow. This kind of example is naturally rendered in Nez Perce with a qa-prospective.

(375) Context: You want to plant some flowers in your yard where there aren't any flowers. Roses could grow there; the soil is good.

teminik-**o'qa** taamsas kona
plant-QA.PROSP rose there

kaa hi-pe-p'im-**no'qa**
and 3SUBJ-S.PL-grow-QA.PROSP

You could plant roses there and they could grow.

Qa-prospective sentences are frequently used to talk about the mental and physical circumstances in light of which a certain task can be undertaken. They can be used to encourage someone by reminding them of their ability to complete a task.

(376) Context: I am on the top of the cliff, having climbed up, and my sister is below. I call down to her:

'e-q'uyim-**no'qa**
3OBJ-climb-QA.PROSP

You can climb up

Comment: "You can do it!"

They can also be used to discuss one's limitations, what is not possible (or what is the limit of the possible) in light of one's physical and/or mental makeup.

(377) Context: a discussion of the size of Whoppers at Burger King

hinaq'i-yo'qa kuckuc

finish-QA.PROSP small

I can finish a small one

(378) Context: Turtle and Bull are about to race. Turtle explains that he will be swimming, not running.

ka'la 'iin kuus-pe kiy-u'.

just 1SG water-LOC go-PROSP

I will just go along in the water.

weet'u mi's teqesemiy 'iin wila-ka'y-k-o'qa.

NEG at.all on.shore 1SG run-go-SF-QA.PROSP

On shore I could not run at all. (Phinney, 1934, 121)

They can be used to bemoan an ability that is going to waste.

(379) laqaas-na picpic-nim paa-capqick-o'qa

mouse-OBJ cat-ERG 3/3-catch-QA.PROSP

met'u weet'u mawa laqaas-na paa-capqick-sa-∅ picpic-nim

but not when mouse-OBJ 3/3-catch-IMPERF-PRES cat-ERG

The cat can catch mice but never does

In these examples, circumstantial modal bases encode selected facts about the mental and physical makeup of various people and objects. Other facts are ignored. In (379), it is

possible in light of the cat's physical condition and genetic programming that she catches mice, but that might not be possible once we take into account her habits and preferences.

Negated qa-prospective sentences, like (378) and (380), receive not-possible readings – a fact that will become important.

(380) Context: someone says to you

'ee we'np-**u**' puute'ptit we'nipt

you sing-PROSP 100 song

You will sing 100 songs

You reply:

weet'u ka'la-na 'e-cuukwe-ce- \emptyset we'nipt

not that.many-OBJ 3OBJ-know-IMPERF-PRES song

I don't know that many songs!

weet'u we'np-**o'qa**' puute'ptit we'nipt

not sing-QA.PROSP 100 song

I couldn't sing 100 songs.

Negated qa-prospective sentences cast light on potential values of the ordering source, the second conversational background of the qa-prospective modal. In light of me not knowing 100 songs, it is not possible for me to sing 100 songs—at least, given that things proceed normally. My claim is not falsified by the existence of possible worlds where, despite not knowing 100 songs, I sing words and notes at random and, like the proverbial monkeys and their *Hamlet*, quasi-miraculously end up producing 100 perfect songs. The ordering source for this example is stereotypical. We are concerned with what happens under normal conditions.

3.2.2 Deontics

The qa-prospective also shows deontic uses alongside its "pure" circumstantial ones. When speakers want to grant or discuss permission, expressing deontic possibility, they use qa-prospective sentences.

Here a mother uses a qa-prospective sentence to give permission to a child, informing him what is possible in light of her rules.

- (381) tepelweku's-ne 'a-p-**o'qa** hip-naaq'i-t-pa
candy-OBJ 3OBJ-eat-QA.PROSP eat-finish-PART1-LOC
You can eat candy after the meal

Similarly, when a student asks a teacher to be excused, he asks about what is permitted by her rules.

- (382) Context: How a student should ask a teacher for permission:

weet-eex kiy-**o'qa** 'aatinwas-x
Y.N-1 go-QA.PROSP bathroom-to
Can I go to the bathroom?

When the referee talks to a player, he speaks with the force of law.

- (383) Context: the referee is talking to an injured player.

tamaalwit-wecet weet'u 'ee xelewi-**yo'qa**
rule-reason NEG 2SG play-QA.PROSP

'etke k'omayc 'ee wee-s 'aatim
because hurt 2SG be-IMPERF-PRES arm

According to the rules, you can't play, because your arm is injured

Kratzer (1981) treats deontic modality as a combination of a circumstantial modal base and a deontic ordering source. In (382), the student is well aware that in view of his physical and mental circumstances, it is possible for him to make the trip to the bathroom. He asks

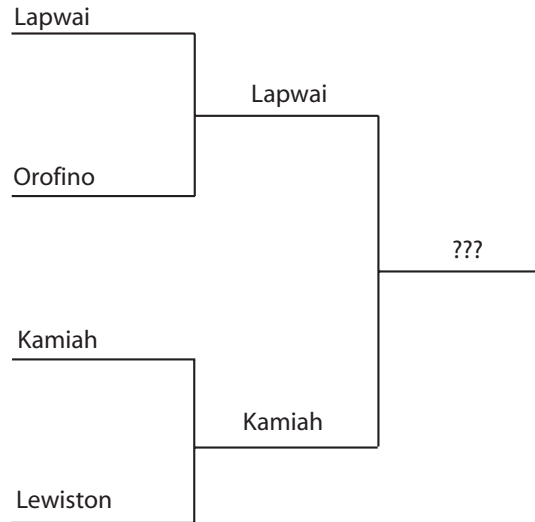


Figure 3.3. Tournament brackets

if worlds where he does so are among the best worlds as ranked by the rules of conduct established by the teacher.

3.2.3 Counterfactuals

Finally, *qa*-prospectives play an important role in counterfactual statements and conditionals. In the following case, Orofino did not beat Lapwai; nevertheless, it was possible for them to have done so.

(384) Context: Tournament bracket picture, figure 3.3

'uuyi-t-pa hi-naas-his-**no'**qa lapwai-na tewee-pu-m
 begin-PART1-LOC 3SUBJ-O.PL-beat-QA.PROSP Lapwai-OBJ Orofino-ERG
 In the first (game), Orofino could have beaten Lapwai

In the following case, we know that certain plants were flowering four days ago. We could have watered them at that time, but we failed to do so.

- (385) sepe-wala-no'qa lepiti-pe lehey-pe met'u weet'u ku'us
 CAUSE-flow-QA.PROSP four-LOC day-LOC but not thus
 pe-ku-∅-ye
 S.PL-do-P-REM.PAST
 We could have watered them four days ago, but we didn't.

On the analysis of Kratzer (1981), the ordering source for a counterfactual modal is the totally realistic conversational background, a background which reflects every proposition that is true of the actual world. The modal base for a counterfactual modal is empty. Counterfactual readings, then, are the limiting case of conversational background variability for the *o'qa* modal. This modal accepts any modal base, perhaps, provided it is *not* epistemic.

This prohibition we document next.

3.3 The expression of epistemic modality

Qa-prospective sentences are systematically not volunteered in contexts favoring epistemic conversational backgrounds. In a context where the facts that matter are the pieces of evidence available, consultants volunteer sentences with particles such as:

- (386) a. *pay's* 'maybe'
 b. *paalwit* 'perhaps'
 c. *'eete* 'surely', 'I guess' / inferential
 d. *ku'(nu) weet* 'dunno whether'

These particles relate to evidence, inference, and speaker's knowledge/ignorance. They are an interesting topic in their own right. Following are some examples of scenarios that elicit these epistemic particles, but not qa-prospective.

Hearing a knock at the door gives a piece of evidence about what is the case outside. In light of this evidence, the speaker uses the particle *pay's* 'maybe'.

(387) Context: You hear a knock at the door and you think it's Scotty. You say, "That'll be Scotty."

pay's hii-we-s- \emptyset Scotty
maybe 3SUBJ-be-P-PRES Scotty
Maybe it's Scotty

A flattened place in tall grass is a clue about the prior use of the spot examined; the speaker again uses *pay's*.

(388) Context: You see evidence of someone having slept in the grass.

pay's pinmik-it-peme
maybe sleep-PART-from
Maybe (it's) from sleeping

The fact that a dog ran away is consistent with a number of possibilities, expressed by sentences containing *pay's*. The evidence is consistent with each, but does not decide between them.

(389) 'itu-wecet yo \hat{x} pit'iin' hi-neki-se
what-reason that girl 3SUBJ-think-IMPERF-PRES

ciq'aamqal 'e-wuy-n-e
dog 3GEN-run.away-P-REM.PAST

Why does the girl think her dog ran away?

a. pay's he-eyeex-n-e
maybe 3SUBJ-be.hungry-P-REM.PAST
Maybe it was hungry

b. pay's picpic-ne pee-twe'-ke'y-k- \emptyset -e
maybe cat-OBJ 3/3-follow-go-SF-P-REM.PAST
Maybe it chased a cat

Particle *'eete* is used where an inference is drawn from evidence. The evidence can take a variety of forms. An obscured visual image, peeping through a small space, is evidence of who is outside; it takes an inference to conclude that the one so glimpsed is Scotty.

(390) Context: you are looking through a keyhole.

'eete hii-we-s-Ø Scotty

INFER 3SUBJ-be-P-PRES Scotty

I guess it's Scotty.

Bones scattered about are evidence of mass suffering. Coyote infers from these clues that many people have died inside the monster's belly.

(391) [From *Coyote and Monster*, Phinney 1934, 21] The monster has just swallowed all the people; Coyote was the last. Coyote is walking along inside the monster.

pipis-ne pee-wye-x-n-e

bone-OBJ 3/3-as.one.goes-see-P-REM.PAST

He saw bones as he went along.

"'eete hi-pe-wii-tin'x-n-e 'ilxnii-we titooqan"

INFER 3SUBJ-S.PL-DIST-die-P-REM.PAST many-HUM person

"Surely many people have died."

One cat speaks for all the rest in begging for food. The speaker infers from this that the vocal cat is the leader of all the cats, advocating on their behalf.

(392) Context: Of the speaker's cats, most are skittish but one is very vocal. He approaches the speaker to beg for food when she comes home. She says to him:

'eete miyooxat 'ee wee-s-Ø

INFER chief you be-P-PRES

You must be the chief!

A colleague does not answer her phone. This is evidence as to her whereabouts: she is no longer at her desk. It takes an inference to conclude that she has gone home.

- (393) Context: It is late in the day. The speaker has just called a colleague and gotten her answering machine.

waaqo' 'eete hi-ckilii-n-Ø

now INFER 3SUBJ-go.home-P-PRES

I guess she has gone home now. / She must have gone home now.

The compound particle *ku' weet* or *ku'nu weet* 'dunno whether' is used where the evidence is inconclusive regarding a particular possibility. It is made up of *ku'* or *ku'nu*, an ignorance marker that combines with indeterminate pronouns (see section 1.5), plus yes/no question particle *weet*.

- (394) Context: My consultant tells me that her cat was hit by a car in the road. I ask when. She replies:

kii kayak'in. ku' weet hal'paawit-pa

this week DUNNO Y.N Monday-LOC

This week. Maybe Monday. / I don't know whether it was Monday.

- (395) Context: Missed connection cartoon, Figure 3.4.

Weet'u. ku'nu weet ne-'ic-im 'ee ha-ak-sa-qa

no. DUNNO Y.N 1SG-mother-ERG you 3SUBJ-see-IMPERF-REC.PAST

No. Maybe my mother saw you.

Notably, these various means of expressing epistemic and evidential notions do not include qa-prospective sentences. The same results are seen when consultants are questioned about qa-prospective sentences in contexts favoring epistemic conversational backgrounds. They offer a correction to a form including an epistemic particle.

- (396) Context: A detective notices a broken window and says: He could have come in through the window!

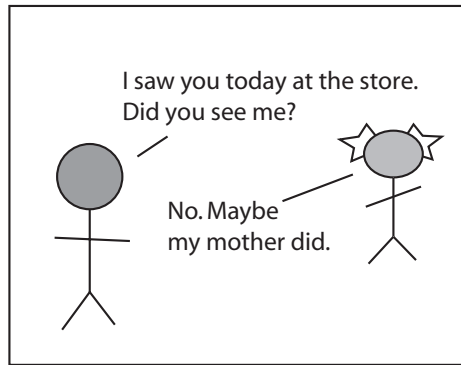


Figure 3.4. A missed connection [frame 1]

- a. 'ipewi-ye'weet hi-nees- \emptyset -n-e:
 look.for-AGT 3SUBJ-O.PL-say-P-REM.PAST
 'eete pay's ha-'ac- \emptyset -a 'ipneexne's-payi
 INFER maybe 3SUBJ-come.in-P-REM.PAST window-through
 The detective [lit: seeker] told them: Maybe he came in through the window.
- b. # ha-'ac-**no'qa** 'ipneexne's-payi
 3SUBJ-come.in-QA.PROSP window-through
 Intended: He could have come in through the window

(397) Context: you see the foundation of a house in the grass.

- a. 'eete waqiipa kine 'iniit hi-week- \emptyset -e
 INFER long.ago here house 3SUBJ-be-P-REM.PAST
 A long time ago there must have been a house here.
- b. # hi-pe-tewyenik-**o'qa**
 3SUBJ-S.PL-live-QA.PROSP
 Intended: People could have lived here.

The modality of qa-prospective is restricted to non-epistemic modality. The modality of detectives and historians requires other means of expression.

Some contexts make available both epistemic and circumstantial conversational backgrounds. In this case, epistemic and circumstantial modals can co-occur. Some English

speakers allow a modal auxiliary making use of an epistemic conversational background to co-occur with a modal auxiliary making use of a non-epistemic conversational background. In the following example, *might* makes use of an epistemic conversational background, whereas *could* makes use of a circumstantial conversational background. For speakers who do not allow double modals, *possible* may be used to pick up an epistemic conversational background in this case.

(398) “It’s not whether I could win or not,” McAuliffe said. “For me, it’s about whether I could get things done.” And that’s the problem. He **might could** get the nomination, but he’d sure as shootin’ lose the election.¹

(399) It’s possible that he could get the nomination.

Nez Perce epistemic particles can occur in qa-prospective sentences in contexts where both epistemic and non-epistemic conversational backgrounds are available. In the following case, the evidence about the player’s injury is compatible with him (counterfactually) having continued playing, had he not reported his injury to the referee.

(400) Context: a player has just reported his injured arm to the referee and been informed that he can no longer play.

c’alawi weet’u hi-tamaapayk-**o’qa** k’omayc ’aatim

if not 3SUBJ-report-QA.PROSP hurt arm

pay’s hi-êlewi-**yo’qa**

maybe 3SUBJ-play-QA.PROSP

Consultant: “If he didn’t report his injury he’d probably continue playing!”

In such cases of multiple modality, the epistemic particle conveys epistemic modality and qa-prospective conveys non-epistemic modality.

¹Source: <http://waldo.jaquith.org/blog/2008/11/mcauliffe-win-or-not/>

3.4 Modal force

3.4.1 Possibility or necessity?

The evidence so far supports an analysis of qa-prospective *o'qa* as a non-epistemic possibility modal. Its range of uses brings together permission, ability and counterfactual possibility meanings.

Let's now investigate in a more systematic way the question of the modal force of this portmanteau. The examples we have seen all call for existential interpretations, i.e. possibility meanings; we see this in the translations with English possibility modals *might, may, can, could*. We find additional evidence for the possibility meaning of *o'qa* sentences by considering sentences which describe two incompatible possibilities. Qa-prospective *o'qa* sentences may be used for each possibility to be described. We see this type of sentence in (401). In this case a tree poses a threat to two houses. It could fall on either one.

(401) Context: Tree drawing, figure 3.5 (page 153)

pe-wiw-likaac-a'ny- o'qa	kin-ye 'inii-ne	kaa ku's-tiite
3/3-fall[of trees]-on.top-APPL:AFF-QA.PROSP	this-OBJ	house-OBJ and thus-same
pe-wiw-likaac-a'ny- o'qa	kon-ya 'inii-ne	
3/3-fall[of trees]-on.top-APPL:AFF-QA.PROSP	that-OBJ	house-OBJ
Consultant: "It could fall on this house, and, the same, it could fall on that house"		

But there is a complication for our possibility analysis. In certain cases, *o'qa* sentences are translated by consultants with the language of necessity: *would, should, have to, need to*. Translations of this type can be found in pure circumstantial contexts, as in (402); in deontic contexts, as in (403); and in counterfactual contexts, as in (404).

(402) Context: Boise is a 6 hour drive away.

lep-ehem watalq- o'qa	'ee	hipt-'ayn
two-times stop-QA.PROSP	2SG	food-BEN

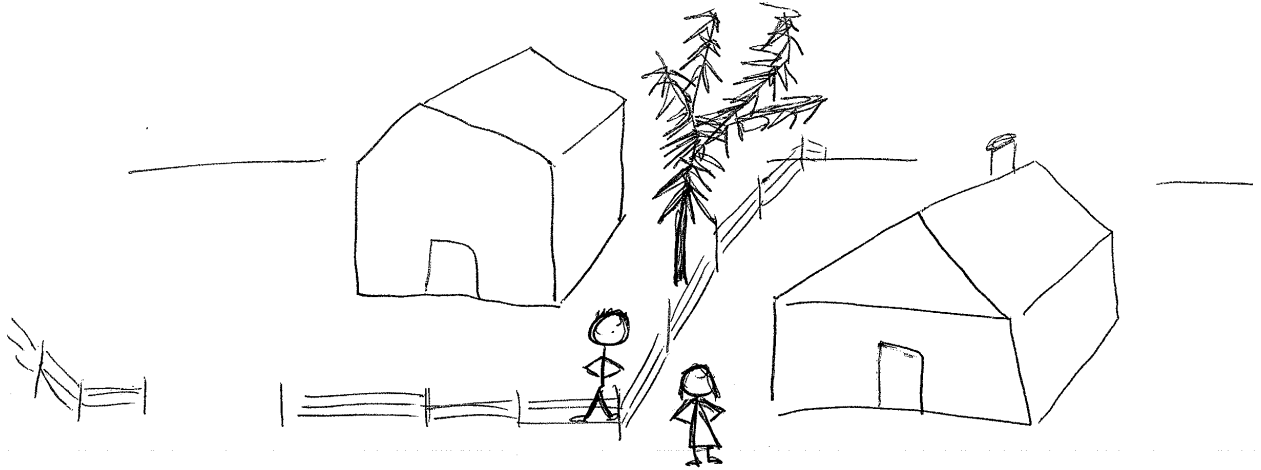


Figure 3.5. Dangerous tree context

ke-m kaa kiy-**o'qa** pasxa-px

REL-2 then go-QA.PROSP Boise-to

You have to stop twice for food when you go to Boise.

- (403) 'oyakala ciq'aamqal hi-pe-wic'e-**yo'qa** 'imiit cikeet-pe
 all dog 3SUBJ-S.PL-stay-QA.PROSP inside night-LOC
 All dogs must stay inside at night

- (404) kii meeywi picpic-nim paa-p-**o'qa** cu'yeem-ne
 this morning cat-ERG 3/3-eat-QA.PROSP fish-OBJ

met'u cuu'yem hi-wa-qa yowic'ayn-pa

but fish 3SUBJ-be-REC.PAST fridge-LOC

This morning the cat would have eaten the fish but the fish was in the fridge

How can we account for these translations? Does they reflect an additional dimension of the meaning of qa-prospective?

These issues take on added significance in virtue of the discoveries of Matthewson et al. (2005) and Rullmann et al. (2008) regarding St'át'imcets. St'át'imcets, these authors show, is a language that does not employ a lexical distinction between possibility and necessity modals. Its range of modal expressions is variably translated by consultants with English possibility *and* necessity modals. Rullmann et al. argue that this variability in translation is tracable to a core necessity meaning for modal expressions plus contextually-variable weakening (domain restriction). In the default case, speakers opt for necessity translations of modal expressions, but when the context is right, possibility-like meanings (and translations) come to the fore.

Like St'át'imcets, Nez Perce is a language plausibly without a lexicalized possibility/necessity distinction. In addition to the qa-prospective portmanteau, modalized non-epistemic declaratives in the language are expressed by two participle-based forms, both of which are translated by consultants with either possibility and necessity modals. Verbs with participial suffix *t/n* ('first participle') may combine with suffix (*V*)*̂* to create a form which behaves as a main verb and has a modal meaning. Such verbs are sometimes volunteered by consultants when asked for possibility reports.

(405) 'a-pi-t-'âx ham-na met'u weet'u 'e-wewluq-tetu-∅
3OBJ-eat-PART1-MOD ham-OBJ but not 3OBJ-like-HAB.PRES-PRES
I could eat ham but I don't like it

When consultants are asked for *would* counterfactuals – expressions of counterfactual necessity – they produce these participial forms in seeming free variation with qa-prospectives.²

²This variation does not seem to be a recent innovation. In Cataldo's 1914 bible portions, counterfactuals expressed in qa-prospective are often followed by modalized first-participial forms in parentheses, and vice versa.

(i) 'etke ku'-pem 'eetx 'ikuuyn-u 'e-pe-mic'kuynek-t-aâx
for DUNNO-2PL 2PL true-EMPH 3OBJ-S.PL-believe-PART1-MOD
('a-pa-mic'kuynak-o'qa) Moses-na,
(3OBJ-S.PL-believe-QA.PROSP) Moses-OBJ

- (406) a. c'alawi hi-waqi-**yo'qa** kaa hi-ckeet-**no'qa**
 if 3SUBJ-rain-QA.PROSP then 3SUBJ-get.dark-QA.PROSP
 If it were to rain it would get dark
- b. c'alawi hi-waqi-**t-a'x** kaa hi-ckeet-**n-u'x**
 if 3SUBJ-rain-PART1-MOD then 3SUBJ-get.dark-PART1-MOD
 If it were to rain it would get dark

This fluidity between possibility and necessity translations also characterizes the second participle-based construction. A participle ending in *(n)'es* ('second participle') may occur with a copula in a construction recognized by the missionary grammarians (Morvillo, 1891) as a means of translating both Latin *possum* 'I can' and *debeo* 'I must'.

- (407) 'iin wee-s- \emptyset c'iq-**n'es**
 I be-P-PRES speak-PART2
 I can or must speak
 Original translation: Ego possum vel debeo loqui (Morvillo, 1891)

Copular participial constructions are used by contemporary speakers in ways suggesting both possibility and necessity meanings. A possibility meaning is suggested by the translation of (408), and a necessity meaning by the translation of (409).

- (408) tam'aamiin hii-wes hip-'**es**
 cake 3SUBJ-be eat-PART2
 The cake is okay to eat
- (409) hii-we-s- \emptyset nuun-im takay-**n'as** weet'u hip-'**es**
 3SUBJ-be-P-PRES us-GEN watch-PART2 not eat-PART2
 It's for us to look at, not to eat

kawa 'inen-k'e pay's pe-mic'kuynek-**ta-m-x** (pa-mic'kuynak-**o'komqa**)
 then me-too maybe S.PL-believe-PART1-CISLOC-MOD (S.PL-believe-K.QA.PROSP)

For had ye believed Moses, ye would have believed me (John 5:46; Cataldo 1914, 57)

Neither the first participle plus modal suffix nor the second participle plus copula provides a straightforward necessity meaning potentially rendering it the dual of possibility-modal *o'qa* (qa-prospective).

Given this degree of similarity between Nez Perce and St'át'imcets, can a St'át'imcets-style analysis be fitted to the qa-prospective facts? I maintain that it cannot, for two reasons. First, unlike what Rullmann et al. report for similar expressions in St'át'imcets, necessity-modal translations of *o'qa* qa-prospectives are by no means a default. One encounters possibility translations much more frequently than necessity translations in corpora and in elicitation work. This is plausibly a place where we will want to capture a real difference between Nez Perce and St'át'imcets. Second, a necessity analysis does not provide a straightforward treatment of the meanings of negated qa-prospective sentences. This is the main argument for preserving a possibility-only approach. We need some other way, beyond positing true necessity modal meanings, to explain the translation data in (402)-(404).

3.4.2 Interactions with negation

The strongest reason to treat *o'qa* only as a possibility modal comes from negation. Negation plausibly takes scope over the qa-prospective portmanteau, but when it does so, only not-possible readings are found. Negated *o'qa* sentences never have not-necessary meanings.

Let's look first at the scopal picture. In negated prospective sentences, negation always precedes the prospective-marked verb. (This applies to qa-prospective as well as to the other members of the prospective family.) Several patterns suggest that linear order of words in Nez Perce corresponds in a familiar way to structural height, among them *wh*-movement to the left periphery in questions, and complementizers on the left edge of relative clauses and adjunct clauses (see chapter 1).³ It is especially important to recall the

³Patterns of this type in English are discussed by Johnson (1997) in connection with the proposal of Kayne (1994), according to which linear precedence maps generally onto asymmetric c-command.

pattern of NPI licensing discussed in section 1.5: an indeterminate can only be licensed as an NPI by negation if it follows the negation linearly. The scopal domain of negation is the domain to its linear right.

Syntactic evidence for the scope of negation vis-à-vis prospective verbs is particularly clear for the negative command particle *weetmet*, which always appears clause-initially and with a prospective sentence or a sentence with modal suffix (V) \hat{x} .

- (410) waaqo' 'ee hico-'ay-sa- \emptyset yo \hat{x} tuye.
 now you climb-APPL:AFF-IMPERF-PRES that grouse
 “Now I’m climbing up to get you that grouse.
 kaa weetmet ta \hat{x} c sita-lahsa-**yo'qa**
 then NEG.COMMAND soon with.face-up-QA.PROSP
 Don’t look up any time soon.” (Aoki and Walker, 1989, 74)

If *weetmet* selects for a portmanteau in the prospective family, we expect it to c-command the structure to which the portmanteau corresponds.

With the scopal picture in mind, let’s look at the way that negated qa-prospective sentences are interpreted. The range of meanings available to negated qa-prospective sentences is limited; it doesn’t include not-necessary readings. A good way to elicit negated qa-prospective sentences is to ask for negated possibility claims. The examples below were elicited via translation prompts in this way.

- (411) Context: the referee is talking to an injured player.

tamaalwit-wecet weet'u 'ee \hat{x} elewi-**yo'qa**
 rule-reason NEG 2SG play-QA.PROSP

'etke k'omayc 'ee wee-s- \emptyset 'aatim
 because hurt 2SG be-P-PRES arm

According to the rules, you can’t play, because your arm is injured

- (412) weet'u kiye kine pa-caay-**o'qa**, kiye ciklii-six- \emptyset
 not 1PL.INCL here S.PL-stay-QA.PROSP we go.home-IMPERF.PL-PRES
 We can't stay here, we are going home.

By contrast, consultants do not give negated qa-prospective sentences when presented with *not-necessary* scenarios as elicitation prompts. One consultant prefers copular participial constructions for these scenarios.

- (413) Context: I tell someone my number and I see that they are trying to remember it. I say, "You don't have to remember, here's my card."
 weet'u timiiipni-t'es. kii wee-s- \emptyset tiim'es.
 not remember-PART2 here be-P-PRES paper
 lit. Not for remembering. You have this paper.

- (414) Context: you are driving with someone who thinks there's a stop sign ahead. But the stop sign has been removed, so they don't have to stop. You say, "You don't have to stop."
 weet'u wataalk-'as
 not stop-PART2
 Consultant: "No stopping here."

In another scenario, a consultant used a negated speech verb construction to express a *not-necessary* reading. In this case a doctor is talking to his patient.

- (415) Prompt: You can stay in bed, but you don't have to.
 'imee-nik-**o'qa** met'u weet'u 'ee hi-ce- \emptyset
 2SG.REFL-lay.down-QA.PROSP but not you tell-IMPERF-PRES
 kunk'u 'ee 'imee-nik-**o'qa**
 always you 2SG.REFL-lay.down-QA.PROSP
 You could lay down, but I'm not telling you you could stay in bed all the time.

In this case, the qa-prospective sentence is not directly negated. Rather, the doctor points out that he has not made a certain claim. The not-necessary meaning calls for additional complexity.

3.4.3 Possibility and understatement

If qa-prospective sentences always express possibility, what accounts for the translations in (402)-(404)? The hypothesis I want to explore is that these sentences describe states of affairs that hold in some of the best accessible possible worlds and also, as it happens, hold in *all* of the best accessible possible worlds. The qa-prospective sentence makes only the weaker, existential claim – it is an understatement. This effect of understatement is lost in the process of translation. The English modal sentence does not mean the same thing as the Nez Perce modal sentence it purports to translate.

Here is an example of a case where we see this effect. That you have the goal of making bread, the knowledge of how bread is made and a batch of dough in your hands opens up the possibility that you knead the bread. For an example like (416), uttered in this kind of scenario, plausibly we have a teleological ordering source – we only look at possibilities in keeping with your goals. It is not merely the case that you knead the bread in *some* of the best accessible worlds, given the circumstances and your goals; in fact you knead it in *all* of them.

- (416) 'e-tuseq-o'qa leehey
3OBJ-knead-QA.PROSP long.time
You have to knead it (bread) for a long time

The qa-prospective sentence literally means that you *can* knead the bread for a long time. The English sentence that translates it turns this understatement into a stronger claim.

Similar understatement effects can arise with English possibility modals. Suppose I arrive to the airport late, and am told by the gate agent:

- (417) You can sit in seat 25-B. It's the only seat left on the plane.

It would be reasonable to translate this possibility claim into another language, or paraphrase it in English, with a necessity claim: you *have to* sit in seat 25-B. Sitting there is not only a possibility afforded by the circumstances, it is *the only* possibility afforded by the circumstances.

Crucially, this explanation of the difference between (402)-(404) and our original possibility examples is an account of the translation only. We are not giving a true necessity meaning to the examples translated with necessity modals, but rather trying to understand why possibility claims might be translated in this way in certain contexts. Since we are positing that the translations are inexact, we might expect that bilingual consultants would be aware that qa-sentences rendered with English necessity modals are not exactly equivalent to their translations in meaning. The following discussion with a consultant makes clear that this is indeed the case.

(418) 'eemtii hi-wc'a-**yo'**qa

outside 3SUBJ-stay-QA.PROSP

It (the dog) stays outside

Consultant: It could be kept outside. It can stay outside.

ARD: Could you say that for it *has* to stay outside, 'eemtii hiwc'ayo'qa?

Consultant: Uh-huh. That would pertain to staying outside. It could be kept outdoors, outside.

ARD: If you say 'eemtii hiwc'ayo'qa, are you just saying that's okay, or that that has to happen?

Consultant: That would be, that was her rule: dogs stay outside. But there was no mention of any kind of rule there, just mentioning that the dog can stay outside.

The consultant remarks that the qa-prospective sentence *only mentions a possibility*; but this does not mean it cannot be used in context where, in a language like English (which lexically distinguishes possibility from necessity expressions), a necessity modal would be appropriate.

3.5 Modality and temporal interpretation

We can now describe the meaning of the qa-prospective portmanteau *o'qa* in a precise way. Qa-prospective sentences express possibility. This possibility cannot be in view of an epistemic modal base; it can be pure circumstantial, deontic, or counterfactual in flavor.

The choice between these flavors of non-epistemic modality is influenced in an important way by temporal interpretation. We saw in section 2.4 that *o'qa* sentences support both past and future adverbials: a symmetrical adverbial like *watiisx* 'yesterday/tomorrow' may receive either a past or a future translation. The following example is repeated from (359).

- (419) *wihne-no'qa watiisx*
go-QA.PROSP 1.day.away
a. I should go tomorrow.
b. I could have gone yesterday.

When *o'qa* sentences describe possibilities for the future, the modality they express may be of any of the three flavors we have observed. In addition to future-oriented abilities and future-oriented permissions, we find future-oriented counterfactuals, as in (420).

- (420) [From *Water Buffalo and the Deer Child*, Aoki and Walker 1989, 242] Water Buffalo Woman gives birth to a baby boy. She puts him in a cradleboard and she tells her brothers, who are baby-sitting, "Don't unlace him all the way—only down to the middle and not any further." Curious, the youngest brother unlaces the baby all the way down. The cradleboard flies open and they see that the baby is half deer. The baby gets on its feet and turns into a full deer with spots. It runs away. The mother

passes by, sees this, and cries, "I told you not to unlace him all the way! He was half deer and now he's turned completely into a deer.

'oo-qa ku'-wiyeewc'et mac-icim-k'ay' hiisemtuks
 3GEN.be-REC.PAST DUNNO-time how.much-only-in.addition month

kona kawanna& hi-wak-**o'qa** nikeepkuyk-in'
 there at.last 3SUBJ-be-QA.PROSP unlace-PART3

wilpwilp titooqan hi-wc'aa-**yo'qa**
 complete person 3SUBJ-become-QA.PROSP

After the right amount of time he would have been unlaced and he would have been completely human."

With a past adverbial, the admissible flavors of qa-prospective statements are significantly more restricted. Counterfactual interpretations are possible, and other interpretations are not. Qa-prospective sentences are *not* used to report abilities in the past, past obligations or past permissions. Consultants correct verbs with qa-prospective presented as past ability statements to verbs with past habitual aspect.

(421) kunk'u picpic-nim pee-cepeqick-qa-na laqaas-na
 always cat-ERG 3/3-catch-HAB.PAST-REM.PAST mouse-OBJ

kii kaa hii-we-s- \emptyset tamawin tisqa'aw
 this then 3SUBJ-be-P-PRES too fat

The cat used to be able to catch mice, but now she's too fat

They correct statements of past permission and obligation rendered with qa-prospective to participial forms.

(422) ku-t'es wa-qa kaa weet'u ku- \emptyset -ye
 go-PART2 be-REC.PAST and not go-P-REM.PAST

I should have gone yesterday, but I didn't.

Consultant: "Was scheduled, but didn't go!"

(423) Prompt: Women didn't used to be allowed to vote.

- a. weet'u hi-w-sii-ne ha-'aayat mic'ii-t-pa
not 3SUBJ-be-IMPERF.PL-REM.PAST PL-woman hear-PART1-LOC
c'iiġn'es
speak-PART2

"So that would be, they weren't allowed, weren't allowed to vote. The women weren't allowed to be heard, that would be, allowed to vote.

Without that *c'iiġn'es* that would be almost meaning the same, let's see, how would I say that?

- b. ha-'aayat weet'u hi-w-sii-ne mic'ii-t'as
PL-woman not 3SUBJ-be-IMPERF.PL-REM.PAST hear-PART2

I guess that would be the sentence. *mic'ii-t'as* that would be heard or allowed to vote, their voice wasn't even counted. No matter what they thought, they were just supposed to keep mum. . . . That's changed."

These restrictions on the interplay between modal flavor and temporal orientation form an interesting contrast with the situation in English, where similar correlations have been discussed primarily in connection with modals that allow epistemic readings (e.g. Condoravdi 2001). For *qa*-prospective, the flavor choice concerns the difference between strictly counterfactual interpretations on one hand and a range of counterfactual, ability and deontic interpretations on the other.

CHAPTER 4

ACTUAL FUTURE, POSSIBLE FUTURE: THE PUZZLE OF FUTURE SUFFIX *U'*

Are sentences about the future true or false, like sentences about the present, purely in virtue of what is actually the case? Or does the analysis of future sentences require modality of some sort? The debate is one of the oldest in natural language semantics, having seen both ancient and modern incarnations;¹ increasingly, its bounds extend to a broad range of typologically and genetically distinguished languages. This chapter is devoted to a particular instance of this puzzle, which comes from the interpretation of Nez Perce sentences including the 0-prospective morpheme *u'*. The outlines of the problem are simple. In the majority of cases, simple sentences containing this morpheme behave like assertions about the actual future. In certain contexts, however, simple sentences containing this morpheme behave like possibility claims.

4.1 The evidence against a modal analysis

0-prospective sentences show a cluster of three properties that argue forcefully for a strictly temporal, non-modal analysis. To the extent that we can directly test their truth conditions, they do *not* have modal truth conditions: they are judged true or false purely on the basis of how things actually transpire. They cannot be used to comment on mere possibilities; and their non-modal character is not affected by the presence of negation.

¹e.g. Aristotle (*De interpretatione*, ix), Enç (1996), Kissine (2008)

4.1.1 Truth-value judgment tasks

The case for a non-modal truth condition for 0-prospective sentences can be made most directly via truth-value judgment tasks. If we want to judge the truth-value of a sentence with 0-prospective, we need only wait to see if the state of affairs described by that sentence comes to pass in the actual world. If it does indeed come to pass, the sentence is true. Otherwise, it is false.

Fortune tellers use 0-prospective sentences that are judged purely on the basis of how things actually turn out. No consideration of mere possibilities is necessary or relevant.

(424) Context: you go to a fortune teller with a money-back guarantee: if she is wrong, you get your money back. You ask:

Manaa hi-wc'e-yu' weyecet?

how 3SUBJ-become-PROSP dance
(How will the dance be?)

She says:

'ilxnii-we titooqan hi-pa-pay-no' weyecet-x

many-HUM person 3SUBJ-S.PL-arrive-PROSP dance-to
(Many people come-PROSP to the dance)

The dance happens, and only a few people come.

Consultant: "She missed her prediction." You get your money back.

The setup in this example (suggested to me by Angelika Kratzer) is designed to make the truth or falsehood of the fortune teller's prediction have some real consequences. The consultant judged the prediction to be false. If all the fortune teller had said was that many people coming to the dance was a *possibility*, we would not expect to be able to demand a refund. Just because something isn't actual doesn't mean it isn't possible.

This effect is very robust in fortune teller examples.

(425) Context: you go to a fortune teller with a money-back guarantee: if she is wrong, you get your money back. She says:

'ee 'e-x-**nu'** saq'antaayâ-na kii meeywi
 you 3OBJ-see-PROSP bald.eagle-OBJ this morning
 (You will see a bald eagle this morning.)

Judgment: if you don't see one, she would be wrong.

(426) Context: you go to a fortune teller with a money-back guarantee: if she is wrong, you get your money back. You say:

watiisx ciq'aamqal-niin 'itamyaanwas-x pe-kiy-**u'**
 1.day.away dog-with town-to S.PL-go-PROSP
 (Tomorrow I'm taking my dog to town.)

She says:

hi-wuy-**nu'**
 3SUBJ-run.away-PROSP
 (He will run away)

Judgment: if the dog doesn't run away, you would get your money back.

In all these cases, fortune tellers are judged wrong on the basis of how things actually turn out. They can also be judged *correct* based on what actually happens.

(427) You go to a fortune teller with a money-back guarantee. She says:

ciq'aamqal hi-wuy-**nu'**
 dog 3SUBJ-run.away-PROSP
 The dog will run away

The dog runs away. The fortune teller is right.

In religious texts, prophecies expressed by 0-prospective sentences are routinely judged true on the basis of what happens in the world of evaluation. In this case, a prophecy regarding speaking in parables, expressed with a 0-prospective, is judged true on the basis of what Jesus does in the evaluation world.

- (428) a. kawa heenek'e ilexni-ki sepecet-ki ku'us-tite
 then again many-INST parable-INST thus-same
 hi-nees-ten'we-Ø-ye ke ku'us 'imee mic'it-'as
 3SUBJ-O.PL-speak-P-REM.PAST REL thus 3PL hear-PART2
 hi-w-sii-ne:
 3SUBJ-be-IMPERF.PL-REM.PAST
 Then again he [Jesus] spoke to them in many parables, just as he spoke to them
 in the way that they were able to hear:
- b. kawa sepec-e'yey-ki weet'u hi-nees-ten'we-Ø-ye,
 then parable-without-INST not 3SUBJ-O.PL-speak-P-REM.PAST,
 then he did not speak to them parableless,
- c. kawa kunk'u 'a-ca'a-n-a Prophet-nim c'iiqi-n ke
 then always 3GEN-be.correct-P-REM.PAST Prophet-GEN speak-PART1 REL
 kawa hi-hi-n-e:
 then 3SUBJ-say-P-REM.PAST:
 then the prophet's word was forever correct when he said:
- d. 'iin-im him' sepecet-ki tamaaxalp-'in wic'ee-yu',
 1SG-GEN mouth parable-INST open-PART3 become-PROSP,
 my mouth with parables will be opened,
- e. kaa 'iin c'ix-nu' pe'tuu weet'u cukwe-niin' 'uuyi-t-kin'ix.
 and 1SG speak-PROSP thing not know-PART3 begin-PART1-from
 and I will speak things not known from the beginning.

(Cataldo 1914. Cf. *And with many such parables he spoke to them the word, according as they were able to hear. And without parable he did not speak unto them, that the word might be fulfilled which was spoken by the prophet, saying: I will open My mouth in parables; I will utter things hidden from the foundation of the world. Matthew 13:34-35*)

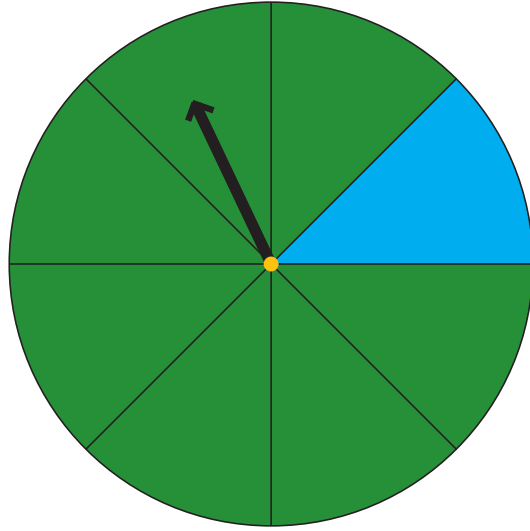


Figure 4.1. Green and blue spinner

4.1.2 Commenting on possibilities

0-prospective sentences seem to be about the actual future even when uttered by those without any special credentials to predict the future. It is in general not felicitous to use a 0-prospective sentence to comment on a mere future possibility.

This prohibition can be seen in discussion of ongoing games of chance. Suppose we are spinning a spinner that could land on either of two colors at random. There are two possibilities: the spinner can land on green, and the spinner can land on blue. We cannot conjoin two 0-prospective sentences to describe these mutually incompatible possibilities. The reading that we get is instead one where each color will be landed upon on separate spins.

(429) Context: Spinner picture, figure 4.1

hi-wataalk-**o'** x̂êxuus-pe kaa hi-wataalk-**o'** yoosyoos-pa

3SUBJ-stop-PROSP green-LOC and 3SUBJ-stop-PROSP blue-LOC

Intended: It could stop on green and it could stop on blue.

Consultant: "It'll land on both."

An interpretation where each 0-prospective sentence committed only to a possibility of the spinner landing on a certain color was not available to the consultant.

The same effect can be seen when we are observing a bingo game.

(430) Context: you see your friend has a bingo board that is almost bingo in several directions.

'e-nees-his-**nu**'

3OBJ-O.PL-win.over-PROSP

Intended: you might beat them / win

Comment:

wit'ic 'ee

almost you

You almost did it

Surely it is possible for the friend to win the bingo game. Maybe there is even a good chance of this happening. But you cannot use a simple 0-prospective sentence to say as much.

It is crucial that these examples involve games of *chance*. In a game of chance, there is no reliable way of predicting how the game will come out. Much as a historian might encounter incomplete evidence about what happened in the past, the observer of a bingo game encounters incomplete evidence about what will happen in the future. Matters change, however, when we move to discussion of games of skill. In a game of skill, the evidence to support a claim about the future can be quite extensive. It can be possible to predict how the game will come out on the basis of the game rules plus the moves made thus far. A 0-prospective becomes acceptable.

(431) Context: you see your friend's hand of cards.

'ee 'e-nees-his-**nu**'

you 3OBJ-O.PL-win.over-PROSP

You will beat them / win

Comment: "You have a winning hand."

In the card game context (431), the future is predictable, and the 0-prospective can be appropriately used. In the bingo context (430), the future is *not* predictable, and the 0-prospective sentence is inappropriate.

4.1.3 Interactions with negation

Negation provides confirmation of the non-modal meaning of 0-prospective sentences. Negated 0-prospective sentences express neither not-possible nor not-necessary readings. Just like their affirmative counterparts, they make claims about how this world's future will (and will not) transpire.

Like qa-prospective verbs, 0-prospective verbs, when they combine with negation, linearly follow it. Negated 0-prospectives are naturally translated with *won't*.

(432) puute'ptit 'inmiiwit weet'u 'ilexni hi-weyehne-**nu'**

100 year not a.lot 3SUBJ-snow-PROSP

In 100 years it won't snow very much.

(433) weet'u wataalk-**o'**

not stop-PROSP

You won't stop

NOT: you don't have to stop

If historians are to be believed, the most famous line ever spoken in Nez Perce, uttered by Chief Joseph at the conclusion of the Nez Perce war of 1877, was likely a negated 0-prospective.² The sentence makes a promise about the actual future.

(434) ka-kona hiisemtuks hi-wseetu

REL-there sun 3SUBJ-stand.PRES

²See Aoki (1979) for discussion of the various reports on Joseph's surrender. The Nez Perce version here is a translation from the English by Elizabeth P. Wilson in 1966.

weet'u heenek'e 'iin tuuqele-**nu'** ko-niix kunk'u
not again I fight-PROSP there-from always

From where the sun now stands, I will fight no more forever

In surrendering, Joseph does not claim that it is no longer necessary for him to fight, or that further fighting is impossible; he claims merely that in the actual future, he will fight no more.

4.2 The evidence for a modal analysis

Now we come to the second piece of our puzzle. 0-prospective sentences sometimes behave as though they contain a modal expression. We don't find this behavior via our most ironclad diagnostic, the truth-value judgment task, but we can come up with some *prima facie* arguments for modal meaning via a variety of more subtle means. In this section we will consider four potential arguments for modal meaning in order of increasing power. We begin with weaker arguments, from translations and from apparent comments on possibilities. We move from here to stronger arguments: 0-prospectives can license free choice items, and as exceptions to one of the very patterns we used above as evidence *against* a modal treatment, they can sometimes, though not in general, be used to describe incompatible possibilities.

4.2.1 Modal translations

A first potential argument comes from translations.

With Matthewson (2004), I take translations to be a clue about meaning to be considered among other clues in the enterprise of semantic fieldwork. While translations do not provide a privileged window onto meaning, they are a natural first place to look because they are relatively easy to elicit and are available in published corpora. Suggestively, in addition to *will* and *be going to* translations, 0-prospective sentences are sometimes translated with

possibility modals. In the following instances, translated by (two different) consultants, we find 0-prospective sentences translated with *can* and *might*.

(435) Context: You are explaining to someone that they will be allowed to drink at a certain time (after prayer, after eating).

kawa 'ee 'iqcuup-**nu'**
then you drink-PROSP
Then you can drink (volunteered form)

(436) A: weet wewluq-se- \emptyset tam'aamiin?

Y.N want-IMPERF-PRES cake
Do you want some cake?

B: weet'u, hi-sepe-tisqa'wi-**yo'**

NEG 3SUBJ-CAUSE-fatten-PROSP
No, it might make me get fat (volunteered reply)

Possibility translations with *might*, *could* and *can* also appear in texts, for instance in the following passages:

(437) [From *Coyote breaks the fish-dam at Celilo*, Aoki and Walker 1989, 33] Coyote is scolding his fighting children:

cu'u kuu-m-tx
now go-CIS-IMPER.PL

'eetx silu pii-txc'a'k-a'n-**yo'**
2PL eye RECIP-poke-APPL:AFF-PROSP

Now, come over, you might poke out each other's eyes!

(438) [From *Coyote and White-Tailed Buck*, Aoki and Walker (1989, 99)] When the different kinds of deer were created, there was White-Tailed Buck. Coyote used to see him sitting there. Nothing disturbed him, even when Coyote came over and tried to scare him by shouting in various ways. He was just peaceful and sat chewing his

cul. For a long time Coyote studied the matter, wondering "How can he become more alert! He is too indifferent.

kal'a la'am-nim ku' ha-'atway-iinax-nim kal'a puu-c'illiikse-**nu'**
just all-ERG UNSURE PL-old.woman-even-ERG just 3/3-club-PROSP
Anyone, even a woman, could club him to death.

Closer translation: Everyone, even old women, could club him.

- (439) [From *Sucker and Whitefish*, Aoki and Walker 1989, 132] Sucker and Whitefish are served porridge. Sucker uses a half-burned log as a spoon, making his mouth very thick. So Suckerfish is hard to cook. Whitefish, on the other hand, drank the porridge with a straw. As he did so he said:

kal'a 'iin wek-**u'** kal'a 'ineex penneχsep
just I be-PROSP just even different

kal'a 'ineex 'ituu-ki peqes-ki 'ituu-ki
just even what-with straw-with what-with
hi-pa-tqa-'alikoo-**yo'**
3SUBJ-S.PL-quickly-build.fire-PROSP

huume ki-kuckuc-eki hecuu-ki kal'a c'awiin 'eeti-**yu'** miiw'ac-pa.
or PL-small-with wood-with just even.so be.cooked-PROSP short.time-LOC

ku'us 'iin wek-**u'**
thus I be-PROSP

Aoki and Walker translation: I can be cooked with anything—a straw or anything that will burn, or even with a small piece of wood. I will cook in a short time.

Closer translation: I will just be different. Just even with anything, with straw, with anything they can quickly build a fire, or even with small pieces of wood, even so I can be cooked in a short time. That's how I will be.

Citations of 0-prospective forms in the Nez Perce Dictionary (Aoki, 1994) are also occasionally translated with English possibility modals.

(440) hi-toŋ-**no'**

3SUBJ-explode-PROSP

It might explode (Aoki, 1994, 783)

Such translations provide a hint that modal meaning may be found in 0-prospectives. This evidence is only preliminary, of course, and the need to treat it with caution is underlined by what we saw in chapter 3. We need to find other ways of assuring ourselves that the translations we have just seen accurately reflect the meaning of 0-prospective sentences.

4.2.2 Commenting on possibilities (bis)

A second potential argument deserves mention in connection with possibility translations. We saw in connection with environments like the bingo context (430) that it is in general not possible to use a 0-prospective sentence where there is insufficient grounds for a claim about the actual future. In certain cases, however, we do find 0-prospective sentences uttered in contexts of this type.

Examples of this behavior can be classified into two groups. In the first group of cases, a speaker is making a bet or a guess about a chance process.

(441) Context: a coin toss.

taŋc hi-tqiik-**u'** huusus

soon 3SUBJ-land-PROSP head

It's going to land on heads

Consultant: "It's a guess, anyway."

For examples of this type, speakers use *will* or *be going to* translations. These are claims about the actual future made in contexts with special assertive norms.

In the second group of cases, a speaker is expressing a hope, wish or fear about the future. Our first example of this type is inspired by a St'át'imcets example given by Rullmann et al. (2008).

(442) Context: Two men are robbing a house. They are nervous that they will be caught, though they don't have any special reason to believe that they will be. One says to the other:

haamti'c! 'inpe'weet-um kiye hi-nees-pay-noo-yo'
 fast police-ERG 1PL.INCL 3SUBJ-O.PL-come-APPL:GOAL-PROSP
 Quick! The cops might come (upon us)!

In this case, speakers use an English possibility modal to translate the 0-prospective. Subsequent examples of this kind show the same behavior.

(443) Context: a child is talking to the bank manager

C: 'itu-wecet hii-we-s-∅ cepeeletp'es kine kiicuuy-nim 'iniit-pe?
 what-reason 3SUBJ-be-P-PRES camera here money-GEN house-LOC
 Why is there a camera here in the bank?

M: 'etke pexu'uye ha-'ac-o'
 because thief 3SUBJ-enter-PROSP
 Because a thief might come in.

(444) Context: Dangerous tree scenario, figure 3.5 (page 153). The woman sees the dangerous tree and says to the man:

'aay'iic! 'ee hi-wiw-likeec-e'n-yu' 'iniit
 danger you 3SUBJ-fall[of trees]-on.top-APPL:AFF-PROSP house
 Watch out! The tree is might fall on your house.

Consultant: "She's warning him that the tree might fall on his 'iniit."

Do sentences like these call out for a possibility analysis? Or could we treat them as expressing claims about the actual future – claims that are more literally to be translated with *will* or *be going to* – that speakers make in spite of a paucity of evidence to support their prediction, just as in a coin toss context? If this is so, these sentences are a sort of complement to the understatement sentences we considered in section 3.4. The claims expressed by speakers in these contexts would be, in effect, overstatements. The speaker only has evidence for how the future *might* turn out, but nevertheless, in a context calling for bold prediction or with vision clouded by a strong emotional state, makes a claim about how the future *will* turn out.

The matter can be settled by a truth-value judgment task. We start by eliciting a 0-prospective that is translated with an English possibility modal. This elicitation was accomplished with the help of a cartoon.

(445) Context: Turtle race cartoon, figure 4.2 (page 177)

weetmet timneenek-**u'**

NEG.COMMAND worry-PROSP

Don't worry.

'aacix 'ee qetu haamti'c kiy-**u'** kaa hi-nees-wiyehnee-**nu'**

turtle you more fast go-PROSP and 3SUBJ-O.PL-win.over-PROSP

Your turtle might speed up and win!

Consultants were subsequently asked how the conversation might proceed as a function of the turtle's behavior. Unsurprisingly, if the turtle wins, the 0-prospective claim is judged to have been true.

(446) Continuation context: The slow turtle does speed up and win. Man says to woman:

'ikuuyn 'ee hi-ca-m-qa

true you say-IMPERF-CIS-REC.PAST

You were telling me truthfully.

Consultant: "You did tell me the truth."

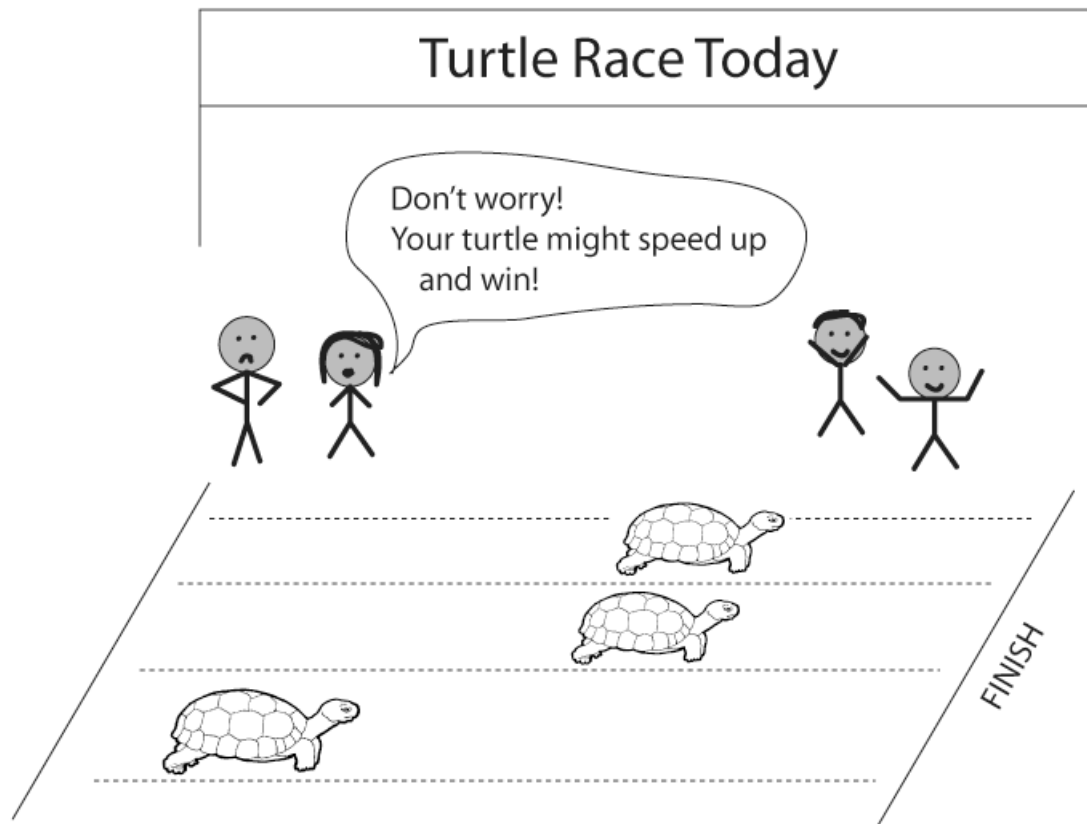


Figure 4.2. Turtle race

Crucially, if the turtle does *not* win, the 0-prospective claim is judged to have been false.

(447) Continuation context: The second turtle, not the slow turtle, wins the race. Woman says to man:

'eete-me-x weet'u ca'a' hi-ca-qa

INFER-2-1 not correct say-IMPERF-REC.PAST

I guess I was not telling you correctly

Consultant: "I didn't tell you the right."

This test pulls strongly toward an overstatement analysis of the sentences in (442)-(444). These sentences make claims about the actual future in cases where the evidence in support of those claims is particularly weak. Whether the claims are true or false, however, is not a matter of possibility. As for all 0-prospective sentences, it matters only how things transpire in the actual future.

4.2.3 Free choice licensing

We come now to two arguments in favor of a modal meaning for 0-prospective sentences which are bit harder to diffuse. The first comes from the distribution of free choice items, a class of expressions which enjoy a special relationship with modality.

Free choice in Nez Perce is expressed by indeterminate pronouns. As reviewed in section 1.5, these items are also used as question words and as negative polarity items. (See (105)-(111), (114)-(122) for examples of these readings.) The way they are interpreted depends on the kind of sentence in which they appear, and on where they appear in the sentence. Question readings of indeterminates are licensed by fronting to a clause initial position; negative polarity readings are licensed by operators such as negation, the yes/no question particle *weet*, and *c'alawi* 'if'.

Free choice readings of indeterminates, too, require licensing by a particular type of sentential context. In general, they only occur in sentences with modal portmanteaux *o'qa* or *o'komqa*, modal participles, imperatives or optative particles – all plausibly modal sen-

(451) Question: When will the doctor call? Answer:

hi-muu-**nu'**kum **mawa**

3SUBJ-call-K.PROSP when

He might call anytime

The presence of the free choice item affects the translation. Note that in English, future auxiliary *will* does not license free choice *any*;³ to give a grammatical translation using an *any*-word for the indeterminate, the prospective sentence must be translated with a possibility modal. This factor is presumably what led to a possibility translation in corpus example (439), with free choice indeterminate *'ituuki* 'with anything'.

The following sentence was volunteered by a speaker to describe the picture in figure 1.1. In this scenario, the ball could fall in any direction inside the enclosure.

(452) Context: Drop ball picture (Figure 1.1, page 42)

k'apapk'apap hi-tqew-**yu'** **mi-px**

ball 3SUBJ-fall-PROSP where-to

Consultant: "Whichever direction."

The speaker chooses an *-ever* translation of the free choice indeterminate, which again captures its universal-like character.

A treatment of the free choice system of Nez Perce falls far beyond the aims of this chapter. The problem for that treatment, however, is clear. If free choice items enjoy a special relationship with modality in natural languages generally, as they do in the particular instances which have received theoretical treatments in the literature,⁴ a source for modality in at least some 0-prospective sentences must be found.

³So-called "volitional" *will* does, however; e.g. *He will eat anything* \approx *He eats anything, he is willing to eat anything*. See Haegeman (1983).

⁴Pieces of the cross-linguistic and theoretical picture are discussed by Haspelmath (1997), Dayal (1998), Giannakidou (2001), Kratzer and Shimoyama (2002), Menendez-Benito (2005), Chierchia (2006), among others.

4.2.4 Conjunctions of incompatibles

A final and quite striking argument for modality in the meaning of 0-prospective sentences comes from cases where more than one turn of events is a possibility for the future, and the various possibilities are incompatible with one another. Under certain (but not all) conditions, speakers are willing to describe such scenarios with conjoined 0-prospective sentences describing contradictory turns of events.

The examples we can produce of this phenomenon are especially puzzling because the pattern they represent is not fully general. In a case like (429), speakers would not allow conjoined 0-sentences to describe two incompatible possibilities. This baseline judgment can be replicated in other examples. Speakers look for a way of reading conjunctions of 0-prospective sentences as making a consistent claim about the actual world.

(453) A: manaa 'e-p-**u**' yoŋ siis-ne?

how 3OBJ-eat-PROSP that soup-OBJ

How are you going to eat that soup?

B: 'e-cepeleluk-**u**' kaa yiwiiis-ne 'e-p-**u**'

3OBJ-heat-PROSP and cold-OBJ 3OBJ-eat-PROSP

I heat it (*u*') and I eat it cold (*u*')

Consultant: "You're heating it, but eating it later when it gets cold. Warm it, then let it cool to room temperature."

(454) taŋc hi-yk'ew-**nu**' waŋ hi-weqi-**yu**'

soon 3SUBJ-be.sunny-PROSP and 3SUBJ-rain-PROSP

It is sunny (*u*') and it rains (*u*')

Consultant: "Change from sunshine to rain."

When speakers are asked to translate conjunctions of incompatible possibility statements from English to Nez Perce, if they use 0-prospective in their translation and do not insert epistemic particles, they convert conjunction to disjunction.

(455) Context: Umbrella cartoon, figure 4.3 (page 182)

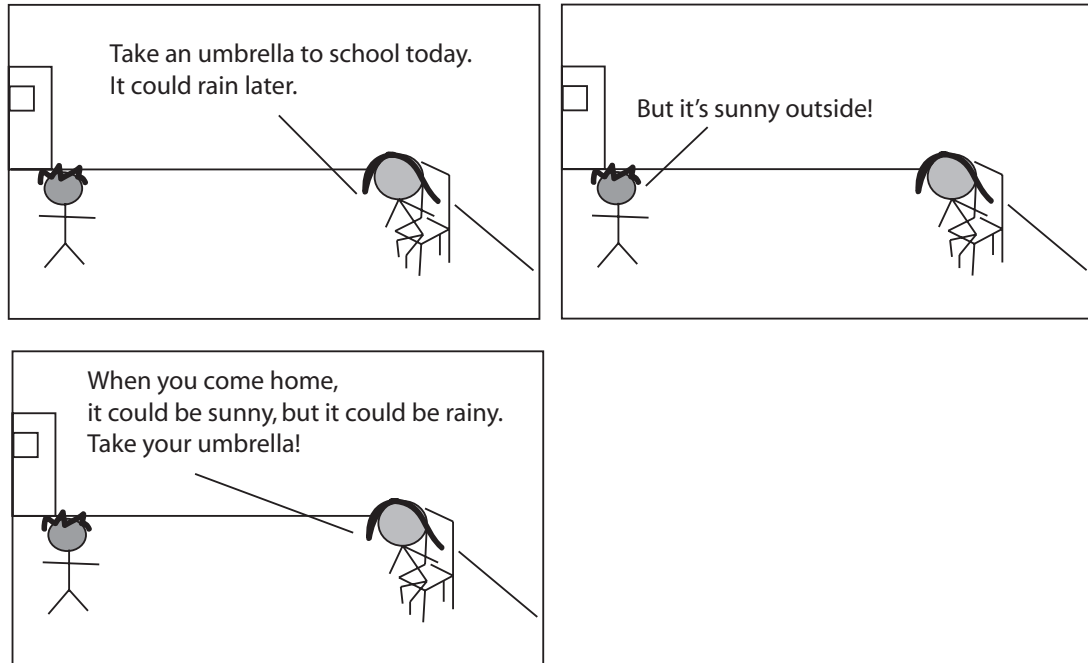


Figure 4.3. Umbrella cartoon

ke-m kaa pay-toq-o'kom

REL-2 then come-back-K.PROSP

'iitq'o hi-yk'ew-no'

'iitq'o hi-weqi-yu'

or 3SUBJ-be.sunny-PROSP or 3SUBJ-rain-PROSP

Prompt: When you come home, it could be sunny but it could be rainy

lit.: When you come back, it will be sunny or it will be rainy.

These judgments form the baseline in light of which our next set of data comes as a surprise.

Our first example that fails to conform to the baseline pattern is found in a text. In this passage Meadowlark, the conventional soothsayer of the Nez Perce myth, gives a boy advice on how to kill the cannibal who has caught all his older brothers with a lasso of intestines and eaten them. Meadowlark uses 0-prospective sentences to describe both the possibility of the cannibal eating her advisee and the possibility of her advisee defeating the cannibal.

(456) [From *Cannibal*, Aoki 1979, 32] Meadowlark is giving advice on how to defeat the cannibal.

a. waaqo' la'am 'asqa-ma hi-wyaakal'amk-s-Ø

already all brother-PL 3SUBJ-eat.up-P-PRES

Now he has already eaten up all the brothers.

b. kaa kii'u 'ee 'iim we.

and here you you be

And here you are.

c. ku's-tiite 'ee 'ime-noon-k'e hi-kiy-u'.

thus-same you 2SG-OBJ-also 3SUBJ-do-PROSP

In the same way he will do it to you.

d. wa'x kal'o' 'ee waaqo' naaqc hi-ce-Ø.

and just you now one say-IMPERF-PRES

Right now I am telling you one thing.

e. ta'xc 'ee hani-yo' 'aps-nim weyuux-pe t'awa

soon you make-PROSP flint-GEN leg-LOC thingie

wii-wel'etp'e-yu' pelqeeey kaa 'imiitkin'ike q'o' xi-xaw'oc-'o

DIST-tie.on-PROSP both.sides and on.inside quite PL-sharp-EMPH

You make flints and tie them tightly on both sides of the leg, and place real sharp flint pieces on the inside.

f. 'ee ta'xc 'aps-nim hani-yo'

you soon flint-GEN make-PROSP

Soon you'll make the flints.

g. ka-m-kaa hi-tamaasitkatk-o' kawa 'ee wilee-ke'y-k-u'

REL-2-then 3SUBJ-lasso-PROSP then you run-go-SF-PROSP

'ee q'o' 'imee-qpis-nu'

you quite 2SG.REFL-exert-PROSP

kaa yõx 'ee x̃it'il' 'e-kiy-'en-**yu'** maymay

and that you break 3OBJ-do-APPL:AFF-PROSP intestine

When he lassoes you, then you run, you try quite hard, and you will break his intestines.

h. weetmet haamti'c teem'ik-**u'**.

do.not fast go.down-PROSP

Don't go down fast.

i. 'iyewki 'ee kiy-**u'** 'imaa-sy'aw-nin'.

slowly you go-PROSP 2SG.REFL-guard-PART3

You will go slowly, on your guard.

j. 'ime-neen-k'e 'ee hi-wapciy'aw-**no'**

2SG-OBJ=also you 3SUBJ-kill-PROSP

He will kill you also.

With the relevant 0-prospective sentences rendered into English with *will*, this passage is contradictory. Meadowlark both claims that the cannibal will eat the boy and claims that the boy will break the intestines and defeat the cannibal. If 0-prospective can express mere possibility, however, Meadowlark's words need not express a contradiction.

Clearer instances of this phenomenon can be produced in elicitation. In this case two neighbors are having a disagreement, as we see from their confrontational posture. One of them exclaims:

(457) Context: Tree drawing, figure 3.5 (page 153)

ki-nm tewliki-nm 'ee hi-tq'ilikeec-e'n-**yu'** 'iniit

this-ERG tree-ERG you 3SUBJ-fall.on-APPL:AFF-PROSP house

met'u ku's-tiite hi-tq'ilikeec-e'n-**yu'** 'iin-e 'iniit

but thus-same 3SUBJ-fall.on-APPL:AFF-PROSP 1SG-OBJ house

This tree might fall on your house but it also might fall on my house!

Consultant: "There's a chance it might fall on either building."

Consultants also allowed a conjunction of incompatibles in the following case. One golden egg will be laid, and there are at least two incompatible possibilities: the king's duck lays the egg, and my duck lays the egg.

(458) A dialogue presented to consultants in written form. Translations (in parentheses) were not presented.

A: naaqc qeetqet ha-ani-**yo'** kicuy-nim taa'mam
one duck 3SUBJ-make-PROSP gold-GEN egg
(One duck will lay a golden egg)

B: miyooŋat-om qetqee-nm-cim paa-n-**yo'** kon-ya ta'maam-na
chief-GEN duck-ERG-only 3/3-make-PROSP that-OBJ egg-OBJ
(Only the king's duck could lay that egg)

Consultant (reading): "The king's qeetqet is the only one that will make the egg"

A: weet'u 'ikuuyn
NEG true
(That's not true)
miyooŋat-om qetqee-nm paa-n-**yo'** kaa 'iin-im=k'e qetqee-nm
chief-GEN duck-ERG 3/3-make-PROSP and 1SG-GEN-too duck-ERG
paa-n-**yo'**

3/3-make-PROSP
(The king's duck might lay it but mine might lay it too)

Consultant: "The king's isn't the only one that can lay the egg"

If 0-prospective sentences always concerned only the actual future, we would expect all such cases to be flatly contradictory. If the tree falls to the east, it does not fall to the west. One egg cannot be laid by two ducks.

4.3 The 0-prospective puzzle

Our final two arguments *for* modal meaning in 0-prospective sentences, together with the core evidence from truth-value judgments *against* modal meaning in these sentences, sketch for us the outlines of a true puzzle.

The conflict is a sharp one, and I can offer no quick resolution. To resolve the paradox, part of the progress that will be necessary will have to come from an analysis of the system of free choice. The other, most crucial part will have to come from an improved understanding of the contexts in which conjunctions of incompatibles may and may not be expressed with 0-prospective.

PART II. ERGATIVE CASE AND CLAUSAL ARCHITECTURE

CHAPTER 5

FIRST STEPS

Case marking patterns that distinguish a special category of transitive subjects are widely reported in the languages of the world. Rude (1985) first described Nez Perce as such a language, based on contrasts in subject marking like that in (459) and (460). Observe the presence of a case marker on the subject of (459), compared with the absence of case-marking on the subject of (460).

(459) **ciq'aamqal-nim** paa-wah-naat-k-sa- \emptyset picpic-ne
dog-ERG 3/3-howl-APPL:BYPASSER-SF-IMPERF-PRES cat-OBJ
The dog is howling at the cat (as it goes by).

(460) **ciq'aamqal** hi-wahoo-ca- \emptyset
dog 3SUBJ-howl-IMPERF-PRES
The dog is howling.

Patterns of subject case-marking like that in (459) and (460) are generally discussed under the heading of *ergativity*. The overarching goal for this and the following three chapters is to arrive at an empirically adequate approach to the pattern of ergative case marking we see in Nez Perce.

As promised by the title of this part, however, our study of ergative case will not focus on the case system alone. How could it? In-depth investigation of case-marking systems has shown over and over again that case marking is far from a surface detail of natural languages. We can learn something quite profound about a language by examining its case-marking system. What we stand to learn spans morphological, syntactic and semantic aspects of the language. Making precise what the crucial difference is between a clause

like (459), where ergative is required, and a clause like (460), where ergative is ruled out—as well as how it is that the case system comes to reflect that difference—we will take an extended voyage into the clausal architecture of Nez Perce. We will see the workings of agreement, applicative constructions, possessive constructions, possessor raising, weak indefinites, reflexives and causatives. Each piece of the puzzle offers us both a clue as to the proper analysis of ergative case in a single language and a small window from which to peek into broader syntactic and semantic architectures in natural language.

We begin our investigation with a simple question: *What is the grammatical difference between clauses where the subject is marked as it is in (459), and those where the subject is unmarked?*

5.1 Grammatical conditions for ergative case

Let us begin by exploring various simple approaches to the difference between clauses where ergative appears, such as (459), and those where it does not, such as (460). At first glance there are several obvious differences between (459) and (460) that could be tied to the presence of an ergative case marker in (459) but not in (460). Since the analysis I will develop in this thesis differs from standard typological and formal syntactic approaches to ergativity, it will be worthwhile to make sure at the outset that various simple and well-explored distinctions between our two clauses do not suffice to capture the distribution of the ergative case.

5.1.1 Transitivity?

The verb of sentence (459) has two arguments; that of sentence (460) has only one argument. We started out by noting that case patterns like those in Nez Perce are commonly described as sensitive to transitivity: the ergative case appears with transitive verbs, but not with intransitive ones. Our first attempt at formulating the difference between (459) and (460) might go as follows: ergative case appears in (459) because the complex verb

wahnaatk ‘howl at (as the object goes by)’ is transitive, and not in (460) because the simplex verb *wahoo* ‘howl’ is intransitive. Let us say that a verb is transitive if it has two or more semantic arguments. Otherwise it is intransitive.

(461) *Hypothesis 1a.*

The ergative case marks the subject of all and only verbs with two or more semantic arguments.

This hypothesis runs into trouble right away. In addition to what we see in (459), we also encounter examples where ergative case does *not* appear on the subject, even though the verb takes two arguments. Here is a minimal pair from Crook (1999, 238) using the verb *qi'nii* ‘dig’.

- (462) a. 'ip-nim pee-qn'i-se-∅ qeqii-ne.
 3SG-ERG 3/3-dig-IMPERF-PRES edible.root-OBJ
 He digs qeqiit roots.
- b. 'ipi hi-qn'ii-se-∅ qeqiit.
 3SG 3SUBJ-dig-IMPERF-PRES edible.root
 He digs qeqiit roots.

Sentence (462b) is felt by speakers to express a meaning very similar to that of sentence (462a), where ergative case appears on the subject. The semantic role of the two nominals is the same in both cases.

The case alternation we see in (462) is not confined to the verb *qi'nii* ‘dig’. In fact, it turns up with every transitive verb in the language. Some further pairs are below.

- (463) a. pit'iin-im paa-'yaâ-n-a picpic-ne.
 girl-ERG 3/3-find-P-REM.PAST cat-OBJ
 The girl found the cat.
- b. pit'iin' hi-'yaaâ-n-a picpic.
 girl 3SUBJ-find-P-REM.PAST cat
 The girl found her cat.

- (464) a. sik'em-nim kunk'u pee-wewluq-se- \emptyset timaanii-ne.
 horse-ERG always 3/3-want-IMPERF-PRES apple-OBJ
 The horse always wants an apple.
- b. ke 'ituu hi-wewluq-se- \emptyset kunk'u 'iceyeeye.
 REL what 3SUBJ-want-IMPERF-PRES always coyote
 Coyote is always wanting something. (Aoki and Walker, 1989, 417)

The (a)-examples are like our original example (459); ergative case appears on the subject. In the (b)-examples, we have what looks like the very same verb, along with the two nominals that are understood as its semantic arguments, but the ergative case on the subject has gone missing. (Also missing, we should note, is the objective case marker on the object, and all trace of object agreement on the verb—clues that will soon become important.)

To have a convenient way of talking about these sentences, let us agree to call sentences like those in the (b)-examples, which have semantically transitive verbs but no ergative case on the subject, *caseless clauses*. Sentences like those in the (a)-examples, as in our original example (459), we can call *cased clauses*.

Caseless clauses pose a clear problem for Hypothesis 1a. A potential diagnosis of the problem is that we construed ‘arguments’ too broadly in formulating that hypothesis. In a caseless clause, the verb might take two *semantic* arguments, but perhaps only one nominal is *syntactically* an argument while the other is an adjunct. Perhaps we can distinguish cased clauses from caseless clauses just as we distinguish between an active English transitive clause, where we find two semantic arguments expressed as syntactic arguments, and a passive English clause, where we find one of the verb’s semantic arguments expressed as a syntactic argument and one as a syntactic adjunct.

- (465) a. [The butler]_{argument} ate [the candy]_{argument} on Tuesday
 b. [The candy]_{argument} was eaten on Tuesday [by the butler]_{adjunct}

This kind of reconsideration leads to a new version of the transitivity hypothesis.

(466) *Hypothesis 1b.*

The ergative case marks the subject of all and only verbs with two or more syntactic arguments.

Testing our revised hypothesis depends on discovering means for distinguishing arguments from adjuncts in Nez Perce. In English active-passive pairs like (465), the *by*-phrase adjunct of the passive (465b) is distinguished from argument nominals – the subject of passive (465b) and both subject and object in (465a) – in three notable ways. It is first distinguished by its marking with a preposition, which no argument in this paradigm shares. It is also distinguished by its optionality and by its exceptional position to the right of temporal modifier *on Tuesday* (another adjunct). Can any of these diagnostics be applied to Nez Perce to draw an appropriate distinction between nominals in cased clauses and those in caseless ones?

A natural place to look for evidence of an argument/adjunct distinction in the Nez Perce data would be in the marking of nominals, where we do see a difference between cased and caseless clauses. However, here we run the risk of circularity, as it is just this difference in the marking of nominals we seek to explain.

Moving to patterns of grammatical omission, we fare little better. Both nominals may be freely omitted from cased clauses like (467a), where we are supposing on the basis of Hypothesis 1b that both nominals are arguments:

- (467) a. haacwal-m pee-p- \emptyset -e timaanii-na
 boy-ERG 3/3-eat-P-REM.PAST apple-OBJ
 The boy ate an apple
- b. haacwal-m pee-p- \emptyset -e
 boy-ERG 3/3-eat-P-REM.PAST
 The boy ate it
- c. pee-p- \emptyset -e timaanii-na
 3/3-eat-P-REM.PAST apple-OBJ

He/she/it ate an apple

d. pee-p- \emptyset -e

3/3-eat-P-REM.PAST

He/she/it ate it

The same facts hold in caseless clauses, where we are supposing that at least one nominal is an adjunct, as we see in (468).

(468) a. haacwal hi-hip- \emptyset -e timaanit

boy 3SUBJ-eat-P-REM.PAST apple

The boy ate an apple

b. haacwal hi-hip- \emptyset -e

boy 3SUBJ-eat-P-REM.PAST

The boy ate (something)

c. hi-hip- \emptyset -e timaanit

3SUBJ-eat-P-REM.PAST apple

He/she/it ate an apple

d. hi-hip- \emptyset -e

3SUBJ-eat-P-REM.PAST

He/she/it ate (something)

Patterns of omission do not provide evidence, then, for treating both nominals in (467a) as arguments but (at least) one nominal in (468a) as an adjunct.

Word order differences also provide no grounds for distinguishing the nominals of cased clauses from those of caseless ones. Both cased clause (467a) and caseless clause (468a) allow free word order permutation:

(469) a. haacwal-m pee-p- \emptyset -e timaanii-na

boy-ERG 3/3-eat-P-REM.PAST apple-OBJ

The boy ate an apple

b. haacwal-m timaanii-na pee-p- \emptyset -e

boy-ERG apple-OBJ 3/3-eat-P-REM.PAST

- c. timaanii-na haacwal-m pee-p- \emptyset -e
apple-OBJ boy-ERG 3/3-eat-P-REM.PAST
- d. timaanii-na pee-p- \emptyset -e haacwal-m
apple-OBJ 3/3-eat-P-REM.PAST boy-ERG
- e. pee-p- \emptyset -e haacwal-m timaanii-na
3/3-eat-P-REM.PAST boy-ERG apple-OBJ
- f. pee-p- \emptyset -e timaanii-na haacwal-m
3/3-eat-P-REM.PAST apple-OBJ boy-ERG
- (470) a. haacwal hi-hip- \emptyset -e timaanit
boy 3SUBJ-eat-P-REM.PAST apple
The boy ate an apple
- b. haacwal timaanit hi-hip- \emptyset -e
boy apple 3SUBJ-eat-P-REM.PAST
- c. timaanit haacwal hi-hip- \emptyset -e
apple boy 3SUBJ-eat-P-REM.PAST
- d. timaanit hi-hip- \emptyset -e haacwal
apple 3SUBJ-eat-P-REM.PAST boy
- e. hi-hip- \emptyset -e haacwal timaanit
3SUBJ-eat-P-REM.PAST boy apple
- f. hi-hip- \emptyset -e timaanit haacwal
3SUBJ-eat-P-REM.PAST apple boy

Thus our diagnostics for adjuncts based on English active-passive pairs – a paradigm where semantic arguments and syntactic arguments can be distinguished – cannot be applied to confirm the sort of distinction between cased and caseless clauses Hypothesis 1b leads us to expect. We have no independent evidence in support of the supposition that both

nominals in cased clauses, but no more than one nominal in a caseless clause, are syntactic arguments.

How should we respond to these challenges for both semantic and syntactic transitivity conditions? A first temptation might be to reject Rude's use of the label 'ergative' for the Nez Perce case we are investigating, since transitivity does not appear to be the determining factor. As a purely terminological point there is surely little to be gained empirically by such a shift. On the other hand, insofar as we are making an implicit typological claim by describing the Nez Perce facts under the rubric of ergativity, we are obliged to note that the distribution of "ergative cases" in other languages is also known to respond to factors other than transitivity *sensu stricto*. What we call "ergative case" in Hindi does not appear in imperfective sentences, regardless of transitivity, and can go missing in the perfective as well when the subject denotes an experiencer; what we call "ergative case" in Yukulta appears in transitive sentences only in realis mood and when constraints on the person of subject and object are met; and so on in many other well-studied "ergative" case systems.¹

Another response, given this range of complication in the typology of so-called ergatives, might be to question whether we have taken all plausible senses of 'transitive' into consideration in formulating our hypotheses 1a and 1b. Indeed some linguists have pursued typologies of 'transitivity' that go well beyond the two hypotheses we have just considered. In influential work Hopper and Thompson (1980) gave the following characterization:

Transitivity involves a number of components, only one of which is the presence of an object of the verb. These components are all concerned with the effectiveness with which an action takes place, e.g., the punctuality and telicity of the verb, the conscious activity of the agent, and the referentiality and degree of affectedness of the object.

¹The range of case-marking patterns used in experiencer constructions in Hindi is discussed by Kachru (1990). Ergative marking and its absence in Yukulta is discussed in some detail by Keen (1983).

Hopper and Thompson's broad sense of transitivity includes our two narrow senses as a special case, but extends also to a number of other factors in the interpretation of subject, object, and clause. These factors deserve investigation as possible determinants of case-marking quite independent of whether we consider them to be tied to an overarching notion of broad transitivity. Of particular interest are the matters of the θ -role of the subject and the definiteness or referentiality of the object, each of which has been put forward in recent work as the decisive factor behind case-marking in Nez Perce.

5.1.2 Thematic roles?

Hopper and Thompson link their broad notion of transitivity in part to conscious activity on the part of some individual. This description lends itself readily to a characterization in terms of θ -roles.

(471) *Hypothesis 2.*

The ergative case marks all and only nominals which pick out agents.

Hypothesis 2 in a variety of forms has a long history in research on ergativity. A version of it was commonly held in the 1970s, as noted by Comrie (1978) (who argued against it), and another version has recently returned to prominence due to the work of Woolford (1997) (who argues partially on the basis of Nez Perce) and Legate (2002).² While it is certainly the case for Nez Perce that many nominals marked with ergative denote agents, we have already seen a range of examples that pose challenges for hypothesis 2. The unmarked subject of our original intransitive example (460) seems to denote an agent; furthermore, as we noted, cased-caseless pairs like (462) are not perceived by consultants to differ in thematic role for subject or object. In (462a), the subject denotes an agent, and marks ergative; in (462b), the subject still denotes an agent, but is unmarked.

²Reference to agency also repeatedly crops up in the terminology used to describe ergative case patterns; see Seely (1977).

Could it be that picking out an agent is a necessary but not sufficient criterion for ergative marking? No: ergative case appears regularly on nominals denoting non-agents. It appears on the subjects of psych-predicates such as *cikaaw* ‘fear’ and *heetewi* ‘like’:

- (472) paa-ckaw-ca- \emptyset ciq’aamqal-na picpic-nim
 3/3-fear-IMPERF-PRES dog-OBJ cat-ERG

 met’u pee-tewi-se- \emptyset ciq’aamqal-nim picpic-ne.
 but 3/3-like-IMPERF-PRES dog-ERG cat-OBJ

 The cat is afraid of the dog but the dog likes the cat.

It is also used for subjects denoting natural forces or inanimate objects.

- (473) hahatya-noo-sa- \emptyset ’icewe’iis-nim haatya-nm.
 be.windy-APPL:GOAL-IMPERF-PRES cold-ERG wind-ERG
 Cold wind is blowing towards me. (Aoki, 1994, 100)

 (474) ta \acute{x} c ’ee hi-tqeweeylelek-e’n-yu’ mac’ayo kuus-nim.
 soon 2SG 3SUBJ-flow.into-APPL:AFF-PROSP ear water-ERG
 Water will flow into your ears. (Aoki and Walker, 1989, 112)

With at least one set of verbs, exemplified in (475), ergative marks even what appears to pick out a patient or theme.

- (475) piswe-m ’inii-ne pee-tqe-likeece- \emptyset -ye.
 rock-ERG house-OBJ 3/3-suddenly-on.top-P-REM.PAST
 A rock fell on the house.

Hypothesis 2 does not offer the right generalization to account for these cases.

5.1.3 Referentiality and affectedness of objects?

What about another of Hopper and Thompson’s ingredients to Broad Transitivity, “referentiality and degree of affectedness of the object”? Several authors have proposed to treat

ergative case both in Nez Perce and in general as conditioned by the interpretation of the object. I think it is not an accident that attention has focused here, for there are indeed interesting and subtle contrasts in object interpretation that correlate with the presence of ergative case in Nez Perce. In reviewing (and ultimately rejecting) some simple proposals in this domain we will begin to uncover certain key distinctions that will prove crucial to our overall generalizations and proposal.

The first proposal linking ergative case to object interpretation in Nez Perce was made by Noel Rude (1982, 1985, 1986b), who observed two crucial facts about the distribution of ergative and objective case in the language. First, Rude noted that the distribution of ergative case is tied to the distribution of objective case. A third person subject is ergative-marked just in case there is an objective-marked object; otherwise the clause is caseless, just as we saw in comparing cased (463a) to caseless (463b). I call this observation *Rude's Generalization*.

(476) *Rude's Generalization*

A third person subject is marked ergative iff the object is marked objective.

We do not find an intermediate pattern like (477c), where ergative is marked on the subject but objective is not marked; likewise (provided the subject is 3rd person) we do not find a pattern like (477d), where the subject is not marked but the object is objective-marked.

- (477) a. haacwal-m pee-p- \emptyset -e timaanii-na
 boy-ERG 3/3-eat-P-REM.PAST apple-OBJ
 The boy ate an apple
- b. haacwal hi-hip- \emptyset -e timaaniit
 boy 3SUBJ-eat-P-REM.PAST apple
 The boy ate an apple
- c. * haacwal-m pee-p- \emptyset -e / hi-hip- \emptyset -e timaaniit
 boy-ERG 3/3-eat-P-REM.PAST / 3SUBJ-eat-P-REM.PAST apple

- d. * haacwal pee-p- \emptyset -e / hi-hip- \emptyset -e timaanii-na
 boy 3/3-eat-P-REM.PAST / 3SUBJ-eat-P-REM.PAST apple-OBJ

Second, Rude observed that the distribution of objective case cannot be determined on the basis of thematic role. In (477a), the marked object is a theme. In a ditransitive, however, the theme nominal *cannot* be marked objective. In (478), the objective-marked nominal denotes the benefactor or goal of a knitting event; in (479), the objective-marked nominal denotes the source of a taking event.

- (478) 'ip-nim pee-ken'wi- \emptyset -ye qeqepe'(-*ne) meri-ne
 3SG-ERG 3/3-knit-P-REM.PAST corn.husk.bag(-*OBJ) Mary-OBJ
 She knitted Mary a corn husk bag (Aoki, 1994, 206)

- (479) âaâaas-na 'aatim(-*na) puu-tkuy'k- \emptyset -e
 grizzly-OBJ arm(-*OBJ) 3/3-take.away-P-REM.PAST
 He took away the arm from grizzly bear. (Aoki and Walker, 1989, 122)

Similar patterns are found in applicative constructions: the applicative object is marked objective and a theme nominal cannot be. We saw in (258) in chapter 1 that the *aapii* 'away' applicative adds a source/malefactive argument to a transitive or intransitive verbal projection. In (480a), where no applicative is present, the theme object of *'inipi* 'take' is marked with objective case. In (480b), however, where the applicative has been added, only the source argument, *toni* 'Tony', is marked with objective case; the theme argument *nukt* 'meat' cannot be.

- (480) Applicative *aapii* 'away' (data from Crook 1999, 172)

- a. 'e-'npi-se- \emptyset nuku-ne
 3OBJ-take-IMPERF-PRES meat-OBJ
 I am taking the meat.

- b. 'a-'np-aapii-k-sa- \emptyset nukt toni-na
 3OBJ-take-APPL:AWAY-SF-IMPERF-PRES meat Tony-OBJ
 I grab away the meat from Tony (Crook, 1999, 172)

Applicative constructions demonstrate particularly clearly the dissociation of objective case from thematic role. Whether or not the theme argument is marked with objective depends not on its own properties, but on the presence of an applicative argument.

Having shown that the additional marking of objects does not convey additional meaning regarding admissible thematic roles, Rude conjectured that another kind of meaning might be at stake in case-marking contrasts. He set out to investigate the possibility that a semantic motivation for the marking of objective case might lie in the role played by the referent of an object nominal in the broader discourse—in other words, in information structure. This led him to a study of narrative corpora (selections from Aoki 1979 and Phinney 1934), on the basis of which he produced statistical arguments linking objective case to object *topicality*.³

The substance of this claim arises from a method that works as follows. For every nominal in a text, Rude counted forward in the text to find the number of following clauses in which the referent of the nominal was mentioned. This measure helped single out topical referents as ‘important’ for the continuing narrative. Rude also counted backwards to find the number of clauses separating the nominal from the most recent mention of its referent. (If a referent had not been previously mentioned, or had been mentioned more than 20 clauses prior, he assigned it a 20.) This measure helped single out topical referents as discourse-old. (For more discussion of these measures and their rationale, see Rude (1985).)

Rude discovered that both measures yield a sharp distinction between objective-marked arguments and caseless theme arguments. Referents of objective-marked arguments had, on average, *been mentioned more recently* than those corresponding to caseless theme arguments. The referent of an objective-marked argument had been mentioned an average of 5.25 clauses earlier; a referent corresponding to an unmarked theme argument had on

³Rude (1985, e.g. 165) further qualifies this as ‘secondary topicality’, but does not discuss means for differentiating secondary topics from topics *simpliciter*.

average been mentioned a whopping 13.86 clauses earlier. (This figure is especially high considering that Rude coded no higher than 20.) Referents of objective-marked arguments were also *more likely to be mentioned again* in subsequent clauses than those corresponding to caseless theme arguments. The referent of a objective-marked argument was, on average, mentioned in the following 2.64 clauses; a referent corresponding to an unmarked theme argument was, on average, mentioned only in the following .41 clauses.

Given the tight connection between objective case and ergative case, Rude's hypothesis about the meaning of objective marking could be translated into a new hypothesis about the conditioning of ergative:

(481) *Hypothesis 3a*

Ergative case is assigned in all and only clauses where the object is topical.

Hypothesis 3a is in fact slightly stronger than the position Rude himself endorses.⁴ Given the corpus-based methodology, Rude is only in a position to note that objects of cased clauses are *typically* topical by his metrics, not that they *must* be. Hypothesis 3a turns this statistical observation into a grammatical prediction.

The insight behind our new hypothesis ties back to Hopper and Thompson's remark that broad transitivity, and thus ergative case, can be tied to the *referentiality* of object nominals. After all, Rude's methodology for discovering topics presupposes that topical nominals are referential. A referential term may be topical or non-topical by Rude's metrics, depending on whether its referent is mentioned in prior and subsequent discourse. Given a nominal that does *not* refer to an entity, however, it does not make sense to ask about previous or subsequent reference back to "that entity". On a logical level, questions of topicality simply don't apply to nominals that don't refer. On a practical level, a non-referential term will end up registering as highly non-topical by Rude's metrics. With these considerations in mind, from hypothesis 3a we derive hypothesis 3b:

⁴I refer especially to the dissertation, Rude (1985).

(482) *Hypothesis 3b*

Ergative case is assigned only in clauses where the object is referential.

This consequence leads to problems.

Hypothesis 3b leads us to expect that ergative subjects should not be found in clauses with quantificational objects. If we analyze nominals headed by words like *'oykala* 'everything', *la'am* 'all', and *'uynapt* 'seven' as quantificational, rather than referential, this prediction is not borne out.

(483) picpic-nim pee-wewluq-se- \emptyset **'oykala-na cu'yeem-ne**
cat-ERG 3/3-want-IMPERF-PRES all-OBJ fish-OBJ
The cat wants all the fish.

(484) Caan-nim pee-p-u' **la'am hipi-ne**
J-ERG 3/3-eat-PROSP all food-OBJ
John is going to eat all the food.

(485) Caan-nim pee-nkek'uup- \emptyset -e **'uynapt soo \hat{x} -ne**
J-ERG 3/3-break-P-REM.PAST seven spoon-OBJ
John broke seven spoons.

We also run into trouble with negative polarity item objects, which are clearly without referents of any type. In (486), the object is *'ituune* 'anything', licensed by sentential negation *weet'u*. In (487), the object is *'isiine* 'anyone', licensed by the *wh*-question. In both cases objective appears on the object and ergative appears on the subject.

(486) fepfep-nim *weet'u* pee-p-tetu- \emptyset **'ituu-ne**
butterfly-ERG not 3/3-eat-HAB.PRES-PRES what-OBJ
A butterfly doesn't eat anything.

(487) *'isi-nm* pee-sukwe-ce- \emptyset **'isii-ne**
who-ERG 3/3-recognize-IMPERF-PRES who-OBJ
Who recognizes anyone?
Consultant: "Like if you're out of town."

Wh-objects pose a final challenge:

(488) **'ituu-ne** ʔepʔep-nim pee-p-tetu-*∅*?
what-OBJ butterfly-ERG 3/3-eat-HAB.PRES-PRES
What does a butterfly eat?

(489) **'isii-ne** pee-ke'np-u' ciq'aamqal-m
who-OBJ 3/3-bite-PROSP dog-ERG
Who will the dog bite?

These objects are formed from the same indeterminate pronouns used to express negative polarity in (486) and (487). In neither case does the object refer to any entity, yet in both cases objective case appears on the object and ergative case appears on the subject.

These cases undermine hypothesis 3b, and with it, hypothesis 3a. They show us that marking of ergative and objective cases is perfectly possible in clauses where the object is not referential, and so cannot be topical in Rude's sense. Given the patterns Rude discovered in his corpus, this raises an interesting challenge. How are we to account for the notable statistical differences between objective-marked nominals and unmarked theme nominals if we do not interpret objective marking as topic marking?

Maybe our error lay in the particular way we interpreted the corpus results. The logic of our proposal, following Rude, turned on the concept of *markedness* in an important way. There is a clear morphological sense in which cased clauses are more marked than caseless ones; they include ergative and objective case markers in addition to object agreement. It would be natural to suppose that this additional marking contributes additional meaning in cased clauses vis-à-vis caseless ones. It was this line of reasoning that led us to the problematic hypothesis 3a.

Another line of reasoning is open to us, however. It could be that meaning is conveyed not by case, but by its absence—not that cased objects must be topical, but that caseless theme objects *cannot* be topical. Then we might expect to find that it is caseless objects, not cased ones, that form a natural class in terms of meaning. We won't find a semantic

motivation for the marking of case in Nez Perce or be able to treat the case marker as a mark of topicality à la Rude (or definiteness, as posited in recent work by Markman (2009)). To understand case-marking, we will want to look instead to purely formal factors, potentially the same factors that underlie object case-marking in familiar accusative case systems (e.g. Latin, German). It is in the realm of *caseless* objects where we expect to find a special meaning – a meaning which in some way allows these objects to opt out of the case-marking system.

An influential proposal along these lines was made by Diane Massam for Niuean (Massam, 2001), an Oceanic (Austronesian) language showing a case alternation in several ways similar to the Nez Perce contrast in (462). In a typical Niuean transitive clause, the subject is marked ergative and the object absolutive; in addition, predicate fronting takes place, producing VSO order.

(490) Niuean VS_{erg}O_{abs} (Massam, 2001, 157)

takafaga	tūmau	nī	e	ia	e	tau	ika
hunt	always	EMPH	ERG	he	ABS	PL	fish
He is always fishing							

As originally noted by Seiter (1980), however, in a special class of Niuean sentences formed with transitive verbs, the subject marks absolutive and the object marks no case at all. In addition to their special case pattern, such sentences deviate from the standard VSO order and surface as VOS.

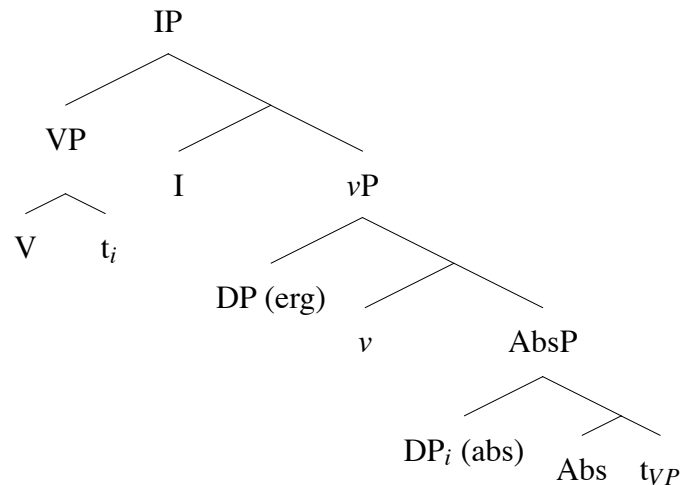
(491) Niuean VO_{caseless}S_{abs} (Massam, 2001, 157)

takafaga	ika	tūmau	nī	a	ia
hunt	fish	always	EMPH	ABS	he
He is always fishing					

Massam notes that the objects of VOS clauses like (491) are semantically distinguished by their indefiniteness. In particular, they behave like weak indefinites, taking scope under

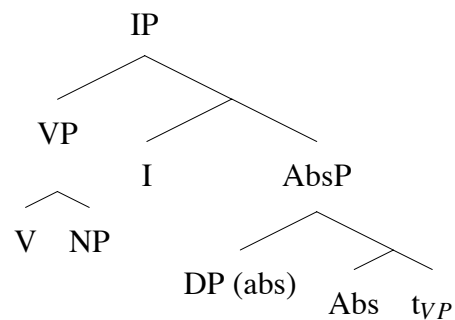
negation and intensional verbs (Massam, 2001, 169). Linking the indefiniteness restriction to the case and order facts, Massam proposes that the crucial factor behind the case/word order alternation in (490)-(491) is the structure of the object. In VSO clauses like (490), the object is a DP and required to participate in the case system. It leaves the VP for a functional projection connected with absolutive case, after which the remnant VP is fronted.

(492)



In a VOS clause, by contrast, the object is an NP and a weak indefinite. Its NP status exempts it from movement to the absolutive projection (in effect absolving it of participation in the case system), and thus it fronts to Spec,IP as part of the VP. The subject is then merged into the absolutive position.

(493)



This proposal ties together the case, position and interpretation of objects in Niuean by linking each to a structural distinction between NP and DP objects. DP objects mark case, move to an absolutive position and can be referential; NP objects do not mark case, remain in the VP and behave semantically as weak indefinites. Crucially, the semantically distinguished class of objects is those that *lack* case, not those that mark it. Case is assigned

for formal reasons; the NP status of caseless objects, connected with their interpretation, allows them to opt out.

Massam's treatment of Niuean suggests a natural way of understanding Rude's corpus findings without committing to a unified semantics for case-marked objects.

(494) *Hypothesis 3c*

- i. Ergative case is assigned in all and only clauses where there is a DP object.
- ii. NP objects receive weak indefinite interpretations.

Instead of linking ergative directly to object interpretation, we let a DP/NP distinction connected with interpretive differences drive the case system. Hypothesis 3c is attractive both in that it offers a clear cross-linguistic parallel with Niuean and in that it promises a treatment of the Nez Perce facts within the bounds of a standard case theory. The only required modification—relativizing a case filter to DPs, rather than NPs—seems to be independently justified by the Niuean facts.

I think there is something essentially correct about Hypothesis 3c. We expect a unified semantics not for cased objects, but for caseless ones; and indeed, across a number of environments, caseless objects in Nez Perce behave like weak indefinites. Just as Massam reports for Niuean, caseless objects in Nez Perce take narrow scope with respect to scopal operators of various kinds. They are interpreted in the scope of negation:

(495) weet'u mawa Jane ha-ani- \emptyset -ya sam'x̂
 not when Jane 3SUBJ-make-P-REM.PAST shirt
 Jane has never made a shirt

(496) A: 'ee we'np-u' puute'ptit we'nipt
 you sing-PROSP 100 song
 You will sing 100 songs.

B: weet'u cuukwe-ce- \emptyset puute'ptit we'nipt
 NEG know-IMPERF-PRES 100 song
 I don't know 100 songs!

They also receive opaque interpretations in the intensional context created by a verb like *'ipeewi* 'look for'. The following example contrasts a caseless clause, where the object is interpreted opaquely (and thus *de dicto*), with a cased clause, where the object is interpreted transparently (and, given the consultant's comment, *de re*). Caseless (497a) can be true despite the fact that purple cats do not exist; cased (497b) cannot be.

- (497) a. *'ipeew'i-se-∅* *ciiciyele picpic*
 look.for-IMPERF-PRES purple cat
 I'm looking for a purple cat
- b. *'e-'ipeew'i-se-∅* *ciiciyele picpic-ne*
 3OBJ-look.for-IMPERF-PRES purple cat-OBJ
 I'm looking for a purple cat
- Comment: (surprised) "There's a cat out there that is purple and you're looking for it!"

These examples are consonant with a treatment of caseless objects as weak indefinites. Massam's syntactic proposal offers a natural way to tie weak indefinite semantics in with the morphosyntax of caselessness. The weak indefinite object is an NP, not a DP, and accordingly exempt from the case filter.

On the other hand there is also something deeply wrong with hypothesis 3c as it stands, a flaw that bears on the attractiveness of the standard case-theoretic approach. Not *all* caseless objects behave like NPs, or like weak indefinites. Some show both syntactic and semantic hallmarks of further structure. Nevertheless, ergative case is not marked on the subject.

Understanding the precise character of the exceptional cases is crucial to amending our hypothesis. One supposed exception is noted by Carnie and Cash Cash (2006), who report that it counterexemplifies the otherwise tempting Massam-style analysis. They give sentence (498) as an example of a caseless clause with a referential object, *kuksne miya'c*

‘Cook’s son’. This gloss is mistaken, however. The sentence is an applicative construction showing objective case on the affected possessor argument *kuks* ‘Cook’.

- (498) *poo-pci’yaw-na’y-sa-na* *kuks-ne* *miya’c*
 3/3-kill-APPL:AFF-IMPERF-REM.PAST Cook-OBJ child
 They killed Cook’s son (Aoki, 1979, 98)

Importantly, even though (498) is not the right sentence on which to stake the case, the problem for hypothesis 3c is a real one, and can be established on the basis of other examples. In fact Rude (1985) himself distinguished, in addition to a class of caseless clauses with “non-topical objects”, a class of caseless clauses where the object is not subject to topicality constraints. Sentence (499c) exemplifies this class.

- (499) [From *Scabby Boy*, Aoki 1979, 60. Scabby Boy has just approached a rich, beautiful girl, who tells him to go away.]

- a. *met’u ki-nm* *haacwal-m* *likip* *pee-kiy-e’ny-0-e* *’ip-ne*
 but this-ERG boy-ERG touch 3/3-do-APPL:AFF-P-REM.PAST 3SG-OBJ
sam’x̂
 shirt
 But this boy touched her shirt.
- b. *kawa pee-x-n-e* *likip* *hii-ku-s-0* *’iin-e*
 then 3/3-see-P-REM.PAST touch 3SUBJ-do-P-PRES 1SG-OBJ
 Then she saw, "He touched me!"
- c. *lamlamat-ki* ***pit’iin’*** *hi-’cesu’up-0-e* ***’ip-nim*** ***sam’x̂***
 quickly-INST girl 3SUBJ-cut-P-REM.PAST 3SG-GEN shirt
ka-kona *likip* *pee-ku-0-ye*
 REL-there touch 3/3-do-P-REM.PAST
 Quickly the girl cut her shirt where he touched.

Here the object *’ipnim sam’x̂* ‘her shirt’ seems perfectly referential and indeed topical or discourse-old—not like a weak indefinite. In addition, it contains a genitive possessor nom-

inal, which would seem to require functional structure above NP. Nevertheless, the object does not mark objective, and the subject does not mark ergative.

Caseless sentences like (499c) spell trouble for Hypothesis 3c at two levels. In the first place they undermine the claim that ergative subjects appear whenever the object is larger than NP. Sometimes, what are plausibly DP objects appear without conditioning ergative for the subject. In the second place they challenge the hypothesis that it is weak indefiniteness or NP status that drives caselessness for objects. Sometimes, caseless objects are neither weak indefinites nor NPs.

Does the existence of cases like (499c) show that the apparent connection between caseless objects and weak indefiniteness is entirely spurious? No—the question is rather more nuanced, and in a way that will prove crucial for our analysis and for our theory of case. As we will see in the next section, there is indeed a weak indefinite object construction in Nez Perce that requires a caseless object (in line with which Hypothesis 3c was half right); there is in addition a binding construction in Nez Perce that likewise requires a caseless object (in line with which Hypothesis 3c was half wrong). Many caseless clauses are ambiguous, then. There must be *some* commonality between their two structures and interpretations that proves crucial for their shared caselessness. The common thread is not NP structure; it is not weak indefiniteness. What then could be the trigger?

The search for the missing common factor will lead us to consider the syntax of each construction separately and in some depth. We will spend the rest of this chapter and the bulk of chapters 6 and 7 looking closely at structures and distinctions analytically one step away from ergative case, exploring proposals that ultimately will determine the analysis we give of the case system and the contrast between case and caselessness. Our first step is to show that two kinds of caseless clauses can indeed be systematically distinguished. This is the piece that will allow us to salvage part of Hypothesis 3c—the part that links weak indefinite objects to caselessness—while extending our treatment of case and caselessness to deal with caseless clauses like (499c).

5.2 The heterogeneity of caselessness

A distinction between two types or functions of caseless clauses is recognized in the literature on Nez Perce dating to Rude (1985). Rude noted that caselessness has two functions: to encode a “non-topical” object (in his sense discussed above), and to encode that the referent of the subject possesses the referent of the object. Examples of each type are given below.

(500) “Non-topical object”

paaʔloo haʔayat hi-ʔʔni-siix-∅ qeʔmes.

five.HUM women 3SUBJ-dig-IMPERF.PL-PRES camas
Five women are digging camas. (Phinney, 1934, 185)

(501) Referent of subject possesses referent of object

hi-wewluq-se-∅ cʔolakstimt ʔaʔaac.

3SUBJ-want-IMPERF-PRES hand.drum grizzly
Grizzly wants his hand-drum. (Phinney, 1934, 83)

For Rude, both (500) and (501) instantiate the same grammatical phenomenon, which he calls *antipassive*. (We have been using the term *caseless clause* in a similarly indiscriminating way.) At the same time, he makes an important first distinction between the two classes of caseless clauses. In the first class, where the object is merely “non-topical”, Rude reports that caselessness is grammatically optional; the transitive construction may also be used with a comparable meaning. We saw just this fact when we initially considered cased/caseless pairs, as in (462). Any difference in meaning between those examples did not come across in their English translations. In the second type of caseless clause, by contrast, Rude reports that caselessness is obligatory. If a transitive construction is used, there is a clear change in meaning: the meaning of possession is lost. This we can see in translations, e.g. in the following pair from Aoki (1994, 381).

(502) a. ʔiin lawlimq-sa-∅ piskis.

1SG fix-IMPERF-PRES door

I am fixing my door.

b. 'iin 'a-lawlimq-sa-Ø piskis-ne.

1SG 3OBJ-fix-IMPERF-PRES door-OBJ

I am fixing a door.

At this point some terminology is in order to help us keep straight the two types of caseless clause. Rude's label *antipassive* has proven contentious over the years,⁵ though at any rate Rude never intended this label to be applied differently to (500) and (501). (For him, both are antipassives, though the *function* of antipassive is different in the two cases.) It is certainly true that Nez Perce caseless clauses do not display the cluster of morphosyntactic properties to which typologists most readily give the label 'antipassive'.⁶ The question of whether or not Nez Perce "has an antipassive" becomes a real one only when we have in mind a different or further characterization with which to compare the Nez Perce facts. In previous discussions of Nez Perce case patterns, I used 'antipassive' as a label for the "optionally" caseless construction identified by Rude, on the basis of certain

⁵Woolford (1997), Carnie and Cash (2006)

⁶For instance Polinsky says:

An antipassive construction is a *derived detransitivized* construction with a two-place predicate, related to a corresponding transitive construction whose predicate is the same lexical item. In the basic transitive construction, the patient-like argument is realized as a direct object; in the antipassive construction, that argument is *either suppressed (left implicit) or realized as an oblique complement*. (Polinsky 2005, 438, emphasis added)

Dixon gives the following criteria for granting the label 'antipassive':

- a. [antipassive] applies to an underlying transitive clause and forms a derived intransitive
- b. the underlying A NP [transitive subject] becomes S [intransitive subject] of the antipassive;
- c. the underlying O NP [object] goes into a peripheral function [becomes an adjunct], being marked by non-core case, preposition, etc.; this NP can be omitted, although there is always the option of including it;
- d. there is some explicit formal marking of an antipassive construction (same preference and possibilities as for passive) (Dixon 1994, 146, bracketed material added)

Both characterizations emphasize the derivation of an antipassive verb form from a transitive form, which is not morphologically apparent in Nez Perce caseless clauses. Both also emphasize the obliqueness of the antipassive object, which contrasts with the simple unmarkedness of the caseless object in Nez Perce.

semantic and syntactic similarities between this class of caseless clauses and a phenomenon in West Greenlandic and Inuktitut called by that label.⁷ This terminology is appealing only insofar as the comparison is sound, and it has been pointed out to me by an anonymous reviewer of Deal 2008 that this may not be the case. For that reason it is probably better to avoid the term ‘antipassive’ altogether in discussions of case and caselessness in Nez Perce.

The language I will use to talk about the two varieties of caseless clause foreshadows their analysis below, particularly their semantics. I will talk about the distinction in terms of the distinct factors that condition caselessness (perhaps parallel to how Rude characterized the two ‘functions of antipassive’). One factor is weak indefiniteness of the object (given certain constraints). For this type of construction I will use the descriptive label *indefiniteness-conditioned caseless clause*. The other factor, which we see at work in (501), has to do with the relation between the subject nominal and the object possessor nominal. Rude characterized this relation as coreference between the subject (possibly covert) and a genitive in the object (also possibly covert)⁸; I will argue that a more general characterization can be given in terms of binding. For a clause where the subject nominal binds the object possessor nominal I will use the term *extended reflexive*, which I take from Aissen (1999, 473). Note that this label is a label for a binding pattern and is not intended to suggest that there is any constituent in a special reflexive form in such sentences.

The task for this section is, on one hand, to show that these are the correct characterizations of the factors that condition caselessness, and on the other hand, to explore how the factors can be distinguished. On the latter count I want to show in particular that there is plausibly a structural distinction between the two types of caseless clauses, rather than a

⁷Those phenomena are discussed by Wharram (2003) for Inuktitut and Bittner (1987) for West Greenlandic.

⁸While in (501) and (502a), there is no overt possessor term in the object nominal, we see a genitive phrase appearing overtly in the object nominal in (499c).

single structure that is semantically underspecified in some way, permitting our two interpretations.

We will explore two means by which the phenomenon of indefiniteness-conditioned caselessness may be distinguished from the phenomenon of extended reflexive caselessness. First, while many caseless sentences are ambiguous, some are not; these receive only extended reflexive interpretations. We will see that the distribution of indefiniteness-conditioned caselessness, but not of extended reflexive caselessness, is limited to simple monotransitives. Second, we will start to flesh out our claim that caseless clauses have either weak indefinite objects or possessive objects with bound possessor terms. We will see that caseless clauses do not allow various other readings for the object, e.g. definite without possession.

5.2.1 The distribution of caseless clauses

All of the caseless clauses we have seen thus far are ambiguous. They may be translated either with an indefinite object or with an object containing a possessor nominal bound by the subject.

(503) pit'iin' hi-'yaaŋ-n-a picpic.

girl 3SUBJ-find-P-REM.PAST cat

(a) The girl_i found her_i cat.

(b) The girl found a cat.

(504) haacwal hi-hip-∅-e timaanit

boy 3SUBJ-eat-P-REM.PAST apple

(a) The boy ate an apple.

(b) The boy_j ate his_j apple.

These sentences are simple monotransitives.

Ditransitive sentences behave differently. First consider a cased ditransitive: here the agent nominal marks ergative, the goal or source nominal marks objective, and the theme nominal is unmarked. We saw the following examples above in (478)-(479).

(505) 'ip-nim pee-ken'wi- \emptyset -ye qeqepe' meri-ne
 3SG-ERG 3/3-knit-P-REM.PAST corn.husk.bag(-*OBJ) Mary-OBJ
 She knitted Mary a corn husk bag (Aoki, 1994, 206)

(506) \hat{x} a \hat{x} aas-na 'aatim puu-tkuy'k- \emptyset -e
 grizzly-OBJ arm(-*OBJ) 3/3-take.away-P-REM.PAST
 He took away the arm from grizzly bear. (Aoki and Walker, 1989, 122)

In a Nez Perce ditransitive, it is not possible to mark objective case on the theme nominal. It doesn't matter how the theme nominal is interpreted. The interpretation of the theme nominal is also of no consequence for the case of other arguments; it is excluded from considerations of case quite completely. The goal or source nominal, by contrast, marks objective case in the cased sentences above, but may alternatively be caseless. When the goal/source nominal is caseless, the agent nominal is caseless as well; we produce a caseless clause. Crucially, this happens *only when the subject binds a possessor phrase in the goal/source nominal*.

(507) 'aayat hi-kiwyek-se- \emptyset picpic cuu'yem.
 woman 3SUBJ-feed-IMPERF-PRES cat fish
 The woman_i is feeding fish to her_i cat.
 *The woman_i is feeding fish to her_j / the / a cat

(508) kal'a 'iweepne saqsin hi-'nii-qa-na
 just wife pitch 3SUBJ-give-HAB.PAST-REM.PAST
 He_i would just give his_{i/*j} wife pitch gum (Phinney, 1934, 17:6)

The ambiguity of caseless simple monotransitives does not extend to caseless ditransitives. These receive only the extended reflexive interpretation.⁹

The same pattern crops up in applicative constructions. In an applicative construction, only the applicative argument may mark objective case and participate in object agreement; the verbal object, if there is one, must be caseless and cannot agree.

(509) qo'c taɬc kii(*-ne) 'ew-nehki-**yuu**-yu' qiiwn-e.
 yet soon this(*-OBJ) 3OBJ-take-APPL:GOAL-PROSP old.man-OBJ
 I will soon take this to the old man. (Phinney, 1934, 146)

(510) 'a-'np-**aapii**-k-sa-∅ nukt(*-ne) toni-na
 3OBJ-take-APPL:AWAY-SF-IMPERF-PRES meat(*-OBJ) Tony-OBJ
 I grab away the meat from Tony (Crook, 1999, 172)

Applicative objects, like goal/source arguments in basic ditransitives, may be caseless only when they contain a possessor phrase bound by the subject. When this is so, we have an extended reflexive caseless clause.¹⁰

(511) sik'em hi-k-yuu-∅-ye.
 horse 3SUBJ-go-APPL:GOAL-P-REM.PAST
 He_i went over to his_j horse.
 *He_i went over to horses/a horse/the horse/his_j horse.

(512) k'omay-naapii-k-sa-∅ miya'c
 sick-APPL:AWAY-SF-IMPERF-PRES child
 My sickness took me away from my child. I, being sick, am kept away from my child. (Aoki, 1994, 285)

⁹Interestingly, my consultant noted that the order *picpic cuu'yem* is required in (507); the goal must precede the theme. This is notable as there are generally few constraints on admissible word orders in Nez Perce.

¹⁰The third-person subject of (511) is covert (as is the possessor pronoun). Were this subject overt, it would lack ergative case. The first-person subject of (512) would also lack ergative case, but this is a more general fact for first and second person pronouns, and not a consequence of clausal caselessness.

lit. I sick-away my child.

*I sick-away children/a child/the child

Again, the ambiguity we find in caseless simple monotransitives is not to be found. We find caseless clauses only of the extended reflexive type.

A third instance of this pattern can be seen in sentences formed with the verb *heki* ‘see’ – sentences that are apparently simple monotransitives. With this verb, the cased clause type is required even when we have a negative indefinite object (‘nothing’) or a plain indefinite object (‘something’).

(513) weet’u ’ituu-ne ’ee-ki-ce- \emptyset
not INDEF-OBJ 3OBJ-see-IMPERF-PRES

(’etke hii-we-s- \emptyset cik’eet’is).

(because 3SUBJ-be-P-PRES dark)

I don’t see anything (because it’s dark).

(514) a. ku-x ’ituu-ne ’ee-ki-ce- \emptyset ’ilpilp
dunno-1sg what-OBJ 3OBJ-see-IMPERF-PRES red
I see something red

b. *ku-x ’ituu heki-ce- \emptyset ’ilpilp
dunno what see-IMPERF-PRES red
Intended: I see something red

Even a property object, e.g. *’ilp’ilp* ‘red’, requires the cased clause type. In the following instance we recognize this clause type in virtue of the object agreement on the verb. (Plausibly we have a null object noun here (rather than zero-nominalization of the adjective), which, if overt, would show objective case. Case concord between noun and adjective is generally optional in Nez Perce.)

(515) ’ee-ki-ce- \emptyset ’ilp’ilp.
3OBJ-see-IMPERF-PRES red
I see red.

However, it is possible to produce caseless clauses with *heki* ‘see’ if we have an extended reflexive pattern– if the subject binds a possessor phrase within the object.

(516) *heki-ce-∅* *’iin-im* *’iniit*.
 see-IMPERF-PRES 1SG-GEN house
 I see my house.

This replicates the pattern we saw with goal/source arguments in ditransitives and with applicative objects. The distribution of extended reflexive caselessness is wider than that of the indefiniteness-conditioned caselessness.

Why should indefiniteness-conditioned caselessness be unavailable in the three environments we have just seen? The data from applicative constructions in particular are suggestive. In this environment, the applicative suffix introduces a new argument into the verbal projection, an argument separate from any argument introduced by the verb itself.¹¹ By contrast to the verbal argument in a simple monotransitive (temporarily setting aside *heki* ‘see’), an indefinite argument introduced by an applicative head cannot be caseless. Indefiniteness-conditioned caselessness seems to be restricted to environments where the nominal that would mark objective case in a cased sentence is an argument of the verb itself. Simple monotransitives meet this description; applicative constructions do not.

Generalizations of this character pop up frequently in discussions of various constructions used to encode weak indefinite objects cross-linguistically. For instance Baker (1988, §7.2.3.2) notes that regardless of which nominal is chosen for case-marking or agreement in a particular language, only theme arguments can incorporate and antipassivize. For Baker, all and only first (nominal) arguments of verbs are theme arguments. Goal arguments in ditransitives are introduced in a slightly different way. For Baker and for Pylkkänen (2002), ditransitives are themselves a kind of hidden applicative construction where the goal argument is not directly an argument of the verb. From this perspective, it would not be

¹¹Thus Nez Perce applicatives are “high” in the sense of Pylkkänen (2002), as discussed in more detail in section 5.3.3.

surprising that ditransitive constructions should pattern with applicative constructions in disallowing indefiniteness-conditioned caselessness. The nominals targeted by objective case in these constructions are not arguments of the verb itself.

If for ditransitive constructions we make the move to a covert applicative structure—a structure where the goal/source argument is not introduced by the verb itself—it is tempting to extend this analysis to *heki* ‘see’ as well. There is not a distinction in Nez Perce between a verb like English *look at* and a verb like English *see*. It might be that *heki* is akin to *look at* in using a PP structure to introduce its argument. We would have to conclude that in Nez Perce, unlike in English, this PP structure is phonologically covert; it shows its face in its interference with indefiniteness-conditioned caselessness. On the other hand, the unusual behavior of *heki* might be a matter of lexical stipulation divorced from any structural or thematic motivation. When we return to the structure of indefiniteness-conditioned caseless clauses in chapter 7, we will consider both approaches for sentences with *heki*.

5.2.2 Caseless objects and (in)definiteness

We have now seen that our two types of caseless clause can be differentiated by their distribution. One type can be found only in simple monotransitives; the other is not so restricted. In making that argument we started out with ambiguous caseless clauses like (517).

- (517) pit’iin’ hi-’yaaŋ-n-a picpic.
 girl 3SUBJ-find-P-REM.PAST cat
 (a) The girl_i found her_i cat.
 (b) The girl found a cat.

I have described sentences like (517) on the (b) reading as showing indefiniteness-conditioned caselessness. It is now time to back up this characterization with evidence. In doing so we put on firmer footing a second argument for distinguishing the two types of caseless clause.

In one type, the object must be indefinite; in the other type, no indefiniteness requirement is imposed.

We have already seen two suggestions of a correlation between caselessness and indefiniteness of objects. On the one hand there is evidence from translation: in addition to extended reflexive translations like (517a), speakers also translate simple monotransitive caseless clauses using indefinite objects, as in (517b). In addition there is evidence from corpora, in particular from Rude's work reviewed above, linking the objects of caseless clauses to discourse novelty. Recall that Rude measured an average of 13.86 clauses separating a caseless clause's object from the most recent term that could be construed as co-referential with it.¹²

The pattern Rude observed in the corpus is brought into relief in elicitation. Where speakers are presented with a discourse introducing an individual to which an object nominal subsequently refers,—setting aside extended reflexive interpretations for a moment—they require that object to be expressed in a cased clause, not a caseless one.

(518) English pre-discourse: One house in Lewiston is red, and yesterday, John found that house.

a. Caan-nim paa-'yaâ-n-a 'inii-ne.

John-ERG 3/3-find-P-REM.PAST house-OBJ
John found the house.

b. Caan hi-'yaaâ-n-a 'iniit.

John 3SUBJ-find-P-REM.PAST house
John found a house.

Comment: "It's not referring to the red house or anything, it's just he just found a house that he's been looking for"

¹²Rude's discussion strongly suggests that he included both extended reflexive caseless clauses and indefiniteness-conditioned caseless clauses in producing this statistic. Had he separated out extended reflexive caseless clauses, it is plausible that this measurement would have been even higher.

The speaker comment in this case makes clear that the caseless clause (518b) must introduce a new house into the discourse, rather than referring to that red house already under discussion. Notice that in this context the extended reflexive interpretation of (518b) is not plausible. It is the indefiniteness-conditioned parse of this caseless clause that produces the judgment.¹³

In addition to novelty effects of this type, we observe an interesting pattern with caseless clauses where the object is a proper name. In contexts where proper names are employed in their standard usage as referring terms, speakers reject such caseless clauses outright.

(519) # Weet cuukwe-ce- \emptyset Angel?

Y.N know-IMPERF-PRES Angel

Intended: Do you know Angel?

(520) Context: we're organizing a ballgame and picking players for our teams.

a. nuun 'e-wewluq-siix- \emptyset Harold-ne po \hat{x} pok'liit-ki.

1PL 3OBJ-want-IMPERF.PL-PRES Harold-OBJ ballgame-INST

We want Harold for the ballgame. [cased]

b. # nuun wewluq-siix- \emptyset Harold po \hat{x} pok'liit-ki.

1PL want-IMPERF.PL-PRES Harold ballgame-INST

Intended: We want Harold for the ballgame. [caseless]

In other instances, speakers accept caseless clauses with proper name objects. The acceptable examples look very much like the rejected sentences in (519) and (520b), but they present an important semantic difference. Acceptable caseless clauses with proper name objects have in common that the proper name is interpreted *not as a referring term but as an indefinite description*.

¹³We might make the extended reflexive parse more plausible by switching to a context where John is lost and cannot locate his own house. In this revised context the novelty effect is predicted to be lost, as we will see below.

(521) kismis-pe sapatk'ayn wewluq-siix- \emptyset Meeli kaa Coosef
 christmas-LOC show want-IMPERF.PL-PRES Mary and Joseph
 For the Christmas show we want a Mary and a Joseph

(522) a. Weet timiipn'i-se- \emptyset Rhode-Island

Y.N remember-IMPERF-PRES RI
 Do you remember a Rhode Island? [caseless]

Comment: "Sounds more like you're asking about the word 'Rhode Island'"

b. Weet 'e-tmiipn'i-se- \emptyset Rhode-Island-ne

Y.N 3OBJ-remember-IMPERF-PRES RI-OBJ
 Do you remember Rhode Island? [cased]

Comment: "That's more like a direct question about Rhode Island"

The requirement that a caseless clause's proper name object be interpreted as an indefinite description means that (521) does not express a desire for the individuals Mary and Joseph to be in the show. These names are used rather as descriptions that a variety of individuals might meet. In our second example, (522a), the question is not whether the hearer remembers a particular US state, but whether she remembers anything called 'Rhode Island'. In the English translations of these sentences, the indefinite description is signalled overtly by the use of the indefinite article. In Nez Perce, lacking articles of any sort, the indefiniteness of these names is signalled only by their caselessness.¹⁴

¹⁴The Nez Perce pattern is highly reminiscent of the data on South Baffin Inuktitut presented by Douglas Wharram (2003). Wharram notes that by contrast to the canonical (i.a), antipassive (i.b) cannot be used by two speakers who know him to discuss him.

(i) Antipassive in South Baffin Inuktitut (Wharram, 2003, p. 31)

a. Tuglasi taku-lauq-t-a-ra
 Douglas see-PAST-PART-TRANS-1SERG.3SABS
 I saw Douglas

b. Ippaksak Tuglasi-mik taku-lauq-t-u-nga
 yesterday Douglas-MOD see-PAST-PART-INTRANS-1SABS
 Yesterday, I saw someone named Douglas ("a Douglas")

Both Nez Perce and South Baffin Inuktitut use a specialized clause type, rather than an indefinite article, to mark the indefinite description use of what is otherwise a proper name.

These examples linking caselessness to indefiniteness of objects have been chosen to avoid ambiguity between indefiniteness-conditioned caselessness and extended reflexive caselessness. When we turn our attention to extended reflexive caseless clauses, we find that indefiniteness restrictions are no longer in effect. We saw this in our example (499c) above. We see it again in clause (523e), a caseless clause whose object refers to an individual (Coldweather's father) who has been mentioned in each of the four previous clauses.

(523) [From *Warmweather and Coldweather*, Aoki and Walker (1989, 62)] One day Coldweather's father ordered her, "Go and visit your uncles [the Warmweathers] and see how they are." Then she started from there. Coldweather dashed into the Warmweather teepee. She sat down and squatted there. "You are the image of hunger," said the old man [Warmweather], and he threw a piece of liver at her. She caught it and gobbled it as she ran back.

- a. pist hi-weeylek-uu- \emptyset -ki-ke,
 father 3SUBJ-run-APPL:GOAL-P-TRANS-REM.PAST
 She ran into her father,
- b. 'isiimet hi-waawsiqatk-sa- \emptyset qiwn
 behold 3SUBJ-sit.with.legs.spread-IMPERF-PRES old.man
 behold, the old man is sitting there
- c. kaa 'ip-nim-ke paa-tamy-a'ny- \emptyset -a k'iima-ki sit'e \acute{x} s-ki
 and 3SG-ERG-too 3/3-throw-APPL:AFF-P-REM.PAST half-INST liver-INST
 And she too threw a half liver at him
- d. kaa pa-tamtay-n-a,
 and 3/3-tell-P-REM.PAST
 and she told him,
- e. **pist** hi-hi-n-e ku'us hi-wyaakaa'aw-cix- \emptyset .
 father 3SUBJ-say-P-REM.PAST thus 3SUBJ-live-IMPERF.PL-PRES
 to her father she said, "Thus they are living."

What is crucial is that caseless clauses with discourse-old objects are acceptable only given an extended reflexive interpretation—the subject binds a possessor phrase within the object. If there is no such binding pattern, the clause may be caseless only if the object is indefinite.

5.2.3 Prospects

We have now seen convergent evidence from three sources for a distinction between indefiniteness-conditioned caseless clauses and extended reflexive caseless clauses. First, indefiniteness-conditioned caseless clauses alternate with cased clauses in a way that can fail to produce meaning differences detectable via translation; extended reflexive caseless clauses cannot alternate with cased clauses without losing their binding pattern. Second, the phenomenon of extended reflexive caselessness is more widely distributed than the phenomenon of indefiniteness-conditioned caselessness. The latter is restricted to simple monotransitives. Third, a definite interpretation of the object of a caseless clause is possible only in an extended reflexive. When the extended reflexive binding pattern does not obtain in a caseless clause, the object must be indefinite.

The first and third of these factors reveal a semantic difference between the two types of caseless clause. The second factor betrays a syntactic difference as well. Taken together, these points of diversity present us with a complication of the most fortunate type. We have the chance to triangulate from two quite different types of clauses to a common factor determining the absence of morphological case. The syntactic and semantic heterogeneity of caselessness reduces our risk of inadvertently seizing upon some spurious aspect of the grammar of caseless clauses, or some concomitant of the determining factor, rather than the determining factor itself.

We saw that the indefiniteness of the object could not be the determining factor for caselessness; nor could caselessness be reflective simply of small, NP objects. The problem for proposals of this type lay in extended reflexive clauses. These, then, will be our first target.

On the way there, we will first need to develop a few tools and pieces of the background apparatus. To this, we turn now.

5.3 Agreement and the structure of transitive clauses

To make progress past this point, we are going to have to start being specific about the structure of the Nez Perce clause. We also need to make explicit certain pieces of the theoretical apparatus within which our proposals should be understood.

To understand extended reflexive clauses, the phenomenon of agreement in particular deserves our attention. This section introduces tools for dealing with agreement as a syntactic phenomenon, and builds up a basic structure for certain types of Nez Perce clauses involving agreement. In putting together these clauses, we will have occasion to introduce some of the semantic tools that we will draw on throughout the rest of the dissertation. In particular, we will introduce a neo-Davidsonian treatment of clauses with external arguments, together with the basics of the generalized event semantics on which it is based.

The morphological basics of Nez Perce agreement came out in chapter 1. The Nez Perce verb agrees both with the subject and with the object. Agreement encodes the person (1/2 vs. 3) and number (singular vs. plural) of the subject and object. On a more abstract level, agreement markers reflect a relationship between a nominal and (some part of) the complex structure making up the inflected verb. Theories of agreement offer a wide range of approaches to this relationship.¹⁵ The general outlook I will draw on here comes from seminal work in Government and Binding theory by Pollock (1989) and Kayne (1989). These authors argue that the clausal spine contains functional projections which are (at least in part) specialized for participation in agreement relationships. Agreement morphology realizes the heads of such projections overtly, and morphological devices ensure that the realizations of agreement attach to verbs.

¹⁵Some of these are reviewed in Corbett's textbook (2006), and many are represented in the Surrey Morphology Group's comprehensive annotated bibliography of works on agreement (Tiberius et al., 2009).

5.3.1 Mechanics of the agreement relationship

Agreement is concerned with the featural content of a nominal, in particular its ϕ -features: person, number and gender. Recognizing a DP structure for nominal projections (Abney, 1987), I assume that these features start off as part of the lexical entry of the determiner D. (This is an assumption we will return to in section 7.2.) Just as the determiner projects a DP category label, it projects its ϕ -features (or allows them to “percolate”) up to the DP level.



For agreement to take place between a functional head and a DP, there is clearly a requirement that the head and the DP stand in an appropriate structural relationship. In English, agreement cannot reflect the features of any nominal at random, but must choose those of the overall subject DP. Following the tradition of Relational Grammar (e.g. Aissen 1990), I will refer to the nominal that participates in an agreement relationship as the *controller* of agreement.

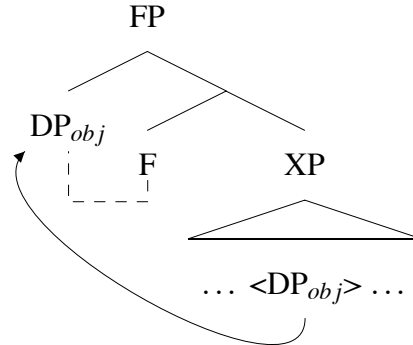
- (525) a. The children’s friend likes us.
b. * The children’s friend like us.

(No agreement with possessor inside subject, or with object)

What structural relationship between the functional head and the controller is the crucial one? Two types of proposals enjoy some currency in contemporary syntactic theory. The analysis I will give will accord a role to each.

On the first proposal, the agreement relationship between functional head and controller nominal takes place in a Spec-head configuration. If necessary, to produce this configuration, the nominal may be moved to the specifier of the functional head. (Here and throughout the dissertation I depict agreement relationships using dotted lines, and movement relationships using solid lines.)

(526) Spec-head agreement

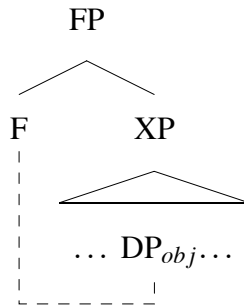


This approach posits a grammatical operation whereby specifiers and heads enter into dependencies which result in feature sharing. I will call this dependency-forming operation, indicated by a dotted line in the tree above, *SH-Agree*. Approaches of this type predominated throughout the 1980s, with detailed arguments for the Spec-head agreement configuration coming to light (of particular interest are the complementizer agreement patterns of Bantu languages; see Kinyalolo 1991, but also Collins 2004, Carstens 2005 for continuing debate). An in-depth defense of this general approach can be found in Chung (1998).

At the same time, in the recent literature especially, much attention has been devoted to an alternative approach to the mechanics of agreement. This alternative, which has received empirical support from languages such as Hindi (Bhatt, 2005) and constructions such as expletive-*there* sentences (Chomsky, 2000),¹⁶ centers on c-command as the appropriate structural relation under which agreement is established. On this conception no Spec-head configuration is required to establish an agreement dependency.

(527) Agreement under c-command

¹⁶On the English case, see Deal (2009b) for references and discussion.



We had better be clear about which of the many possible definitions of c-command is at stake here. Throughout this dissertation, c-command is understood as follows:

(528) C-command

A c-commands B iff every branching node dominating A reflexively dominates B and A does not dominate B.

This definition provides for a node to c-command its sister and every node dominated by its sister, as is standard. It also provides for a node to c-command the first branching node dominating it, which will become crucial in our discussion of locality effects below. (Thus the specifier of XP c-commands XP.¹⁷) The operation whereby the functional head and the nominal are related under c-command is simply called *Agree* (following Chomsky 2000).

In positing both types of agreement dependency-forming mechanisms, I assume that a head F can in principle agree *both* with a DP in its specifier position (via SH-Agree) and with a DP in its c-command domain (via plain Agree). This possibility will play an important role in our analysis of the ergative case in chapter 8.

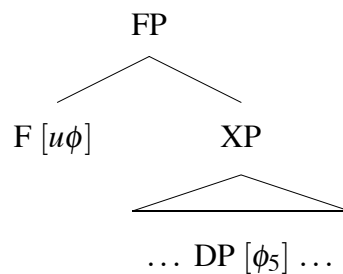
This brings us to a second issue of mechanics. How does dependency construction actually take place in the appropriate structural configuration?

The conception of syntactic agreement I will work with treats it as an essentially asymmetric relation: the functional head forms an agreement dependency to *acquire* certain

¹⁷Our definition can be contrasted with the original definition given by Reinhart (1976), which explicitly ruled out a case where either A or B dominates the other. It can also be contrasted with the definition given by Kayne (1994), according to which a specifier c-commands *out* of the XP it specifies.

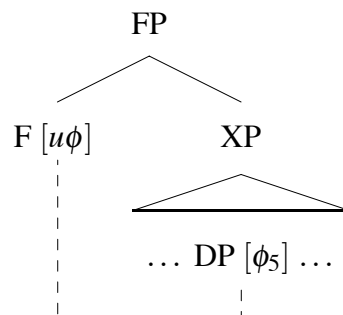
features from the nominal controller.¹⁸ In minimalist theory, a functional head that can morphologically acquire ϕ -features from a nominal has a special type of lexical entry indicating its potential to enter into an agreement dependency. It is marked with its own set of ϕ -features, but of a very particular sort. These features are empty or *unvalued* (Chomsky 2001); they are placeholders for real ϕ -features, which the nominal controller will provide when the agreement dependency is morphologically interpreted. A bundle of unvalued features is standardly notated $[u\phi]$. Let us schematize the ϕ features of an arbitrary nominal as $[\phi_n]$, where n is a real number. In the example below, head F starts off with unvalued ϕ features, and the object DP starts off with a feature bundle $[\phi_5]$.

(529) Input configuration for Agree



This is the input configuration for agreement. When the Agree (or SH-Agree) relation obtains between F and a nominal (here DP), a syntactic dependency is established.

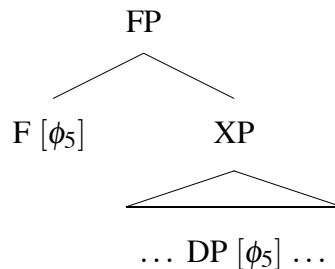
(530) Syntactic dependency



¹⁸This syntactic asymmetry can be to some degree concealed by morphological realizations of agreement dependencies which result in visible additions or changes to *both* controller and agreeing head. On these, see chapter 8.

Ultimately – in a morphological component of grammar, as I will propose in chapter 8 – this dependency will be cashed out via feature-sharing.

(531) Agree and its output (Syntax + Morphology)



In the morphology, the syntax of agreement is interpreted as introducing redundancy between the features of the nominal controller and the features of the functional head. When we come to the morphological component in chapter 8, it will turn out that the picture in (531) is actually a bit of a simplification. When the agreement dependency is interpreted morphologically, not only ϕ -features will be shared; features of agreement heads have a role to play as well.

5.3.2 Agreement heads and event semantics

What is the nature of the functional heads responsible for subject and object agreement?

In Nez Perce, as in many other languages, what we call “object agreement” is only possible in transitive clauses. It does not appear in intransitives, even those that are plausibly unaccusative. This type of fact has led many to understand object agreement as a consequence of the special structure of transitive verbal projections.¹⁹

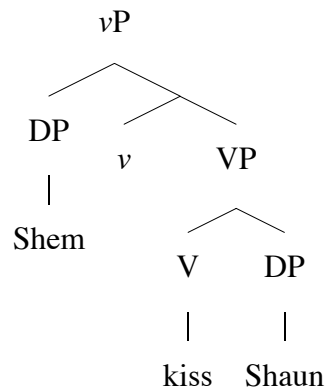
A few words on this structure and its consequences for semantic theory. Subsequent to influential work by Bowers (1993), Chomsky (1995) and Kratzer (1996), it has become standard to treat transitive clauses as involving both a lexical verb (sometimes called a

¹⁹This connection is tied to the more famous correlation between external arguments and object *case*, known as Burzio’s generalization. See Burzio (1986) for the original formulation, and the papers in Reuland (2000) for discussion of the many issues this generalization raises.

(*verb*) root; see Pesetsky 1995, Marantz 1997 for different perspectives), which takes the object as its semantic argument, and a functional head *v* or *Voice*, which takes the subject as its semantic argument. A verb like *kiss* is thus “decomposed” in the syntax into a lexical verb root and a functional *v* head.

(532) Shem kissed Shaun.

(533)

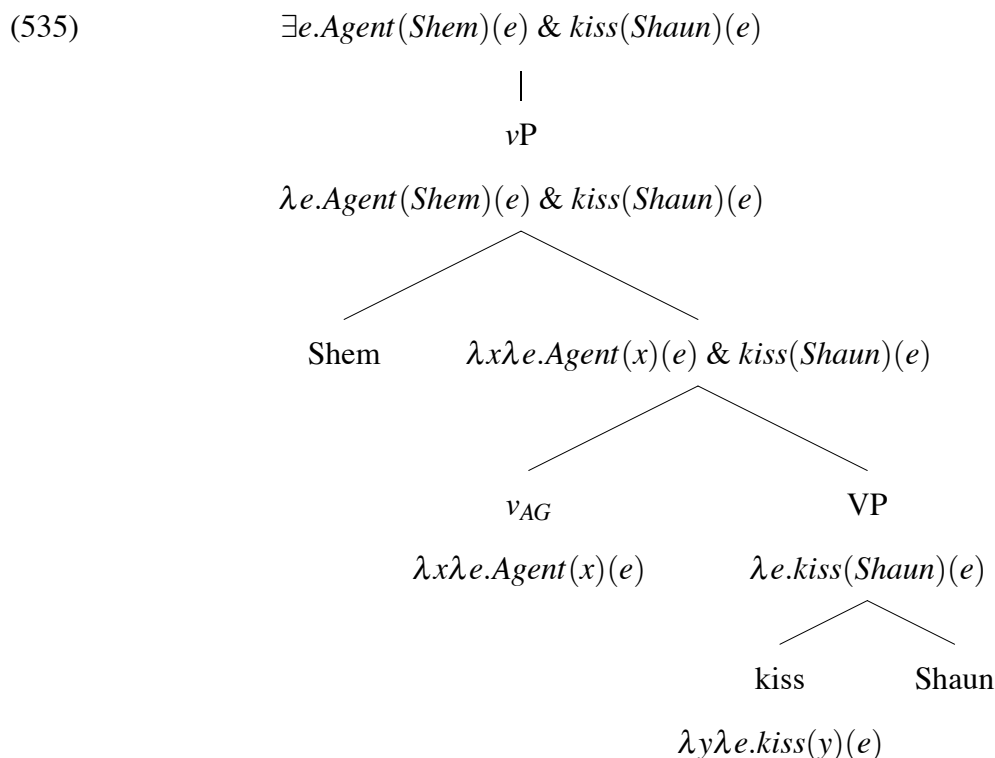


The semantic means to interpret structures like (533) are provided by *event arguments*. Following Davidson (1967), we will recognize a domain of events, which may serve as arguments for predicates in natural languages. To make sure that our semantic system distinguishes event arguments from regular individual arguments, we will introduce a type system that recognizes events and ordinary entities as belonging to different types. Below is a standard recursive type-definition for an (extensional) event semantic system.

- (534)
- i. *e* is a type, the type of individuals (distinguished variables: x, y, x_n for any real number n)
 - ii. *t* is a type, the type of truth-values
 - iii. *s* is a type, the type of events (distinguished variables: e, s)
 - iv. If α and β are types, $\langle \alpha, \beta \rangle$ is a type, the type of functions from expressions of type α to expressions of type β
 - v. Nothing else is a type.

Davidson makes a persuasive argument that declarative sentences involve existential quantification over events. A sentence like (532) is true iff there is an event which is a kissing

of Shaun by Shem.²⁰ Following Kratzer (1996), let us assume the semantic computation of *vP* meaning for (532) proceeds along the lines of (535).



The denotations of the verb root and *v* head given here follow the outlines of Kratzer (1996). Since *kiss* is an action verb, it combines with a *v* head which introduces an agent argument. The subscript on *v* records this semantic fact in a convenient way, and can be used to distinguish the *v* head we find with *kiss* and other action verbs from semantically distinct *v* heads we find with stative verbs such as *resemble*, *indicate* and *know*.

Our overall *vP* structure is put together semantically by function application, with two exceptions. *v_{AG}* and *VP* combine by a modification operation of *Event Identification*, intro-

²⁰For Davidson, this would be cashed out in a logical form as:

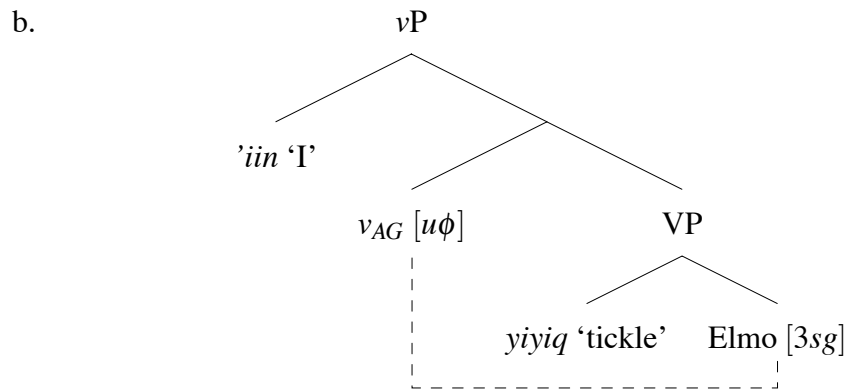
(i) $\exists e. kiss(Shem, Shaun, e)$

This picture contrasts with the “neo-Davidsonian” picture adopted here in that it does not make use of θ -roles. For different perspectives on the usefulness of θ -roles in an event semantics, see Davidson (1967) and Parsons (1990).

duced by Kratzer (1996). In addition to this, an operation of existential closure over event arguments applies above vP .²¹

The move to a “split VP” structure like (535) for transitive clauses invites us to consider that the functional head responsible for object agreement may be v , or some head in a strict selectional relationship with v .²² This would allow us to explain why it is that object agreement appears only in a transitive clause. Suppose for simplicity that object agreement spells out v itself. To account for object agreement, the lexical entry for a v head will need to specify two things: that v has unvalued features ($[u\phi]$) and that these features must enter into an Agree dependency under c-command.²³ In a transitive, v agrees with the object under c-command, as in (536b).

- (536) a. 'iin 'ee-yiyiq-ce- \emptyset elmuu-ne
 1SG 3OBJ-tickle-IMPERF-PRES E-OBJ
 I'm tickling Elmo



²¹Interesting discussion of the locus of existential closure can be found in Zimmermann (2007).

²²These are translations into the realm of object agreement of the proposals of Kratzer (1996) and von Stechow (1996), respectively, for accusative case.

²³We will see in section 5.3.4 that this is only part of the picture. The Nez Perce v heads also participate in SH-Agree with the subject, in addition to Agree with the object.

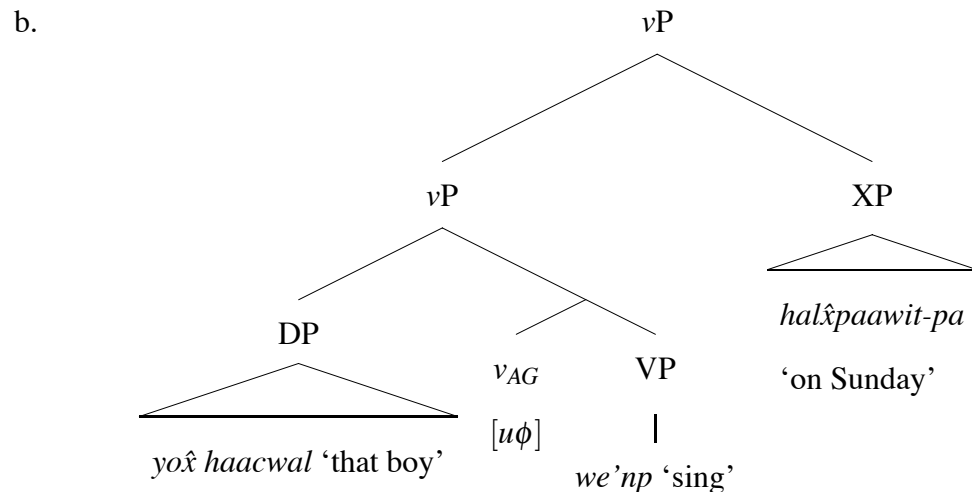
Such agreement requires two pieces: (i) there must be a v head, and (ii) it must c-command an object. In intransitives, this pair of conditions is not met. In an unaccusative, v is not present.²⁴

- (537) a. Meeli hi-pay-n-a
 Mary 3SUBJ-arrive-P-REM.PAST
 Mary arrived



In an unergative, v is present, but does not c-command any nominal with which it might agree. Thus the ϕ features on v in an unergative do not obtain a value via Agree.²⁵

- (538) a. yo \hat{x} haacwal hi-we'np-u' hal \hat{x} paawit-pa
 that boy 3SUBJ-sing-PROSP Sunday-LOC
 That boy is going to sing on Sunday



²⁴It is certainly the case that a functional head that introduces an external argument is not present in unaccusatives. This is the sense in which I use the label vP in this dissertation. At the same time, we may want to recognize a functional head which appears directly above VP in unaccusatives and which shares certain of the syntactic behaviors attributed to v in transitives. Authors (including myself) who have argued for vP in unaccusatives have this broader conception of the v category in mind. Arguments for generalized vP *sensu lato* can be found in Legate (2003) on the basis of successive cyclic movement (though see the critical remarks in den Dikken 2006) and in Deal (2009b) on the basis of English expletive *there* constructions.

²⁵On the label and attachment site of the temporal modifier *hal \hat{x} paawit-pa* 'on Sunday', see section 5.3.3.

In this way, association of object agreement with *v* allows us a simple, first-pass account for the fact that this agreement is restricted to transitive clauses.

Subject agreement in Nez Perce is subject to a partially distinct set of restrictions. As in many other languages, it is a feature of full, verbal clauses; it does not appear in participles.²⁶ Also barred from participles are various pieces of the high functional structure of the clause: aspect/mood, tense, and space marking. Recall from chapter 2 that the form of subject number agreement depends on aspect/mood. In the imperfective, present and past habitual, and imperative, subject plural is marked in the inflectional suffix complex; in the P aspect, optative, and the various prospectives, it is marked via a prefix in the argument marking zone.

- (539) a. hi-pay-**ciix**- \emptyset
3SUBJ-arrive-IMPERF.PL-PRES
They are arriving.
- b. hi-pay-**taa'nix**- \emptyset
3SUBJ-arrive-HAB.PRES.PL-PRES
They arrive (habitually).
- (540) a. hi-**pa**-pay-n-a
3SUBJ-S.PL-arrive-P-REM.PAST
They arrived.
- b. hi-**pa**-pay-no'
3SUBJ-S.PL-arrive-PROSP
They will arrive.

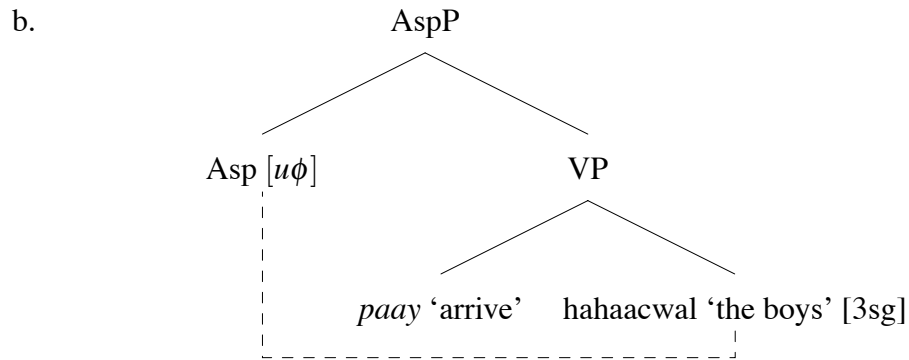
For the purposes of this dissertation, I will make a first stab at this dependency by positing that the functional head involved in subject agreement is Aspect.²⁷ I will assume that

²⁶This pattern also extends to object agreement, a fact that will become important in section 5.3.4. The reasons this should hold for object agreement are discussed in section 8.4.4.

²⁷This departs from Deal (2010), where I posited that subject agreement involves Tense.

Aspect participates in agreement under c-command–via Agree. This analysis makes the absence of subject agreement in participles a straightforward consequence of the absence of Asp in participles.

- (541) a. Ha-haacwal hi-pay-ciix- \emptyset
 PL-boy 3SUBJ-arrive-IMPERF.PL-PRES
 The boys are arriving



These pieces of the syntax of agreement take us part though not all of the way toward an ultimate picture of the construction of the Nez Perce morphological verb. Identifying *v* with object agreement and Asp with subject agreement, we can account for facts that are essentially distributional: object agreement does not appear in intransitives, and subject agreement does not appear in participles. Our syntactic structures will have to be augmented with further machinery to account for the surface forms agreement takes. In the morphology, subject agreement often appears in two pieces: one a prefix on the verb (*hi* in (541a)), and one an aspectual suffix (*ciix* in (541a)). The combination of prefixation and suffixation raises morphological issues which await further investigation; so too does the complex relationship between subject and object prefixes discussed in section 1.7.2.1. For my purposes here, I assume that the assembly of a complex verb from an articulated syntactic structure as in (541b) is to be accomplished in a morphological component of grammar, as discussed in chapter 8. If this is so – a working hypothesis – the syntax of agreement and its morphology can be studied quite independently. The former can operate on tree structures, and the latter on richer objects at the interface between phonology and syntax.

To a large degree, the morphological processes responsible for the position of affixes in the verb word remain to be well-understood, particularly insofar as prefixation and suffixation must be combined. This makes for an interesting project for further research, part of which provides an opportunity to test the syntactic proposals for the syntax of agreement here.

5.3.3 Constraints of relative and absolute locality

Given our syntactic devices for agreement, how can we predict which nominal will control object agreement, and which will control subject agreement?

For object agreement, there are two kinds of cases that require discussion. On one hand we have ditransitive and applicative constructions, where there are two potential controllers, but only one agrees. We see this clearly in the ditransitive examples below, which have a 3rd person theme and a 1st person goal. Agreement must be controlled by the 1st person goal: since the goal is non-third and singular in (542), object agreement is null; since it is non-third and plural in (543), object agreement is only overt for number.

(542) kii nukt 'ini- \emptyset -ye qiiwn-im cicqi'iic-nim
 this meat give-P-REM.PAST old.man-ERG generous-ERG
 The generous old man gave me this meat (Aoki and Walker, 1989, 503)

(543) 'uuyit 'ee neec-'ni- \emptyset -m- \emptyset ti-tamtaaynaat
 first you O.PL-give-P-CIS-PRES PL-preacher
 First you gave us preachers

On the other hand we have nominals marked with oblique case, which, as a class, do not participate in agreement.

(544) Lepwei-pe hi-weqi- \emptyset -ye
 Lapwai-LOC 3SUBJ-rain-P-REM.PAST
 It rained in Lapwai

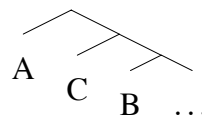
(545) soyapo-timt-ki hi-c'iq-tetu- \emptyset
 white.person-language-INST 3SUBJ-speak-HAB.PRES-PRES
 He speaks in English

- (546) hi-qew- \emptyset -ye hiicanwas-kin'ix
 3SUBJ-fall-P-REM.PAST ladder-from
 He fell from the ladder

Our general approach to object agreement suggests the shape that an account of these restrictions might take. Object agreement involves a relation between a functional head and a nominal in its c-command domain. A number of authors have explored the idea that syntactic agreement relationships of this type might be subject to locality constraints. Chomsky (2000) proposed that Agree be held to *relative locality* constraints.

- (547) Relative locality

A head A cannot participate in Agree with a nominal B if there is a nominal C which A asymmetrically c-commands and which asymmetrically c-commands B.



The idea behind relative locality is that a head must agree with the nominal that is closest to it, where calculations of closeness are made in terms of c-command.²⁸

Looking at a different set of data, Bobaljik and Wurmbrand (2005) argued that Agree is constrained by conditions of *absolute locality*. Theories of absolute locality treat certain structural configurations as “bounding nodes” or “barriers” for agreement or movement relations.²⁹ If Agree is subject to absolute locality constraints, a head A might be unable to agree with a nominal B which it c-commands even if there is no nominal C intervening between A and B. A and B might simply find themselves on opposite ends of a locality barrier.

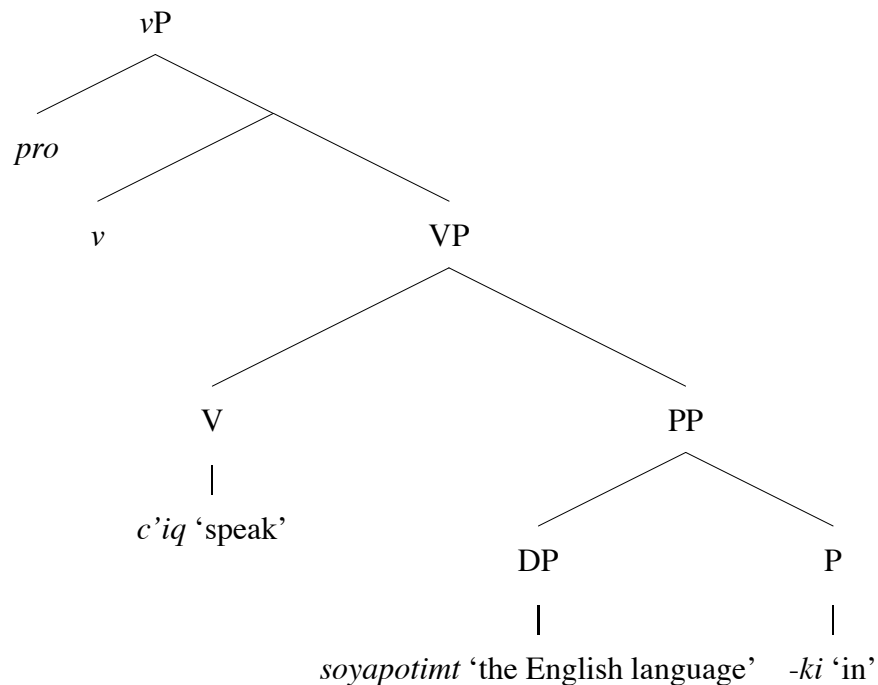
²⁸In the contemporary syntax literature, principles of relative locality go by several names: Relativized Minimality (Rizzi, 1990), Minimal Link Condition (Chomsky, 1995), Attract Closest (Chomsky, 1995).

²⁹Not coincidentally, these are terms used for nodes creating such configurations in Chomsky (1981) and Chomsky (1986), respectively. In the recent literature, the theory of absolute locality is known as Phase Theory, and the barrier nodes as phases; see Chomsky (2001).

The ban on agreement with obliques is reminiscent of conditions of absolute locality. Nominals marked with oblique case in Nez Perce seem to behave syntactically and semantically as PPs do in languages with adpositions. They are optional, and plausibly adjuncts (though recall we have not yet produced any serious tests for an adjunct/argument distinction in Nez Perce); they specify instruments, times, locations, sources, reasons and the like. In the English translation of (545), repeated below, the preposition *in* introduces a relation between the English language and an event of speaking. It is plausible that the Nez Perce instrumental case suffix *ki* plays a similar semantic role, and thus plausible that it be analyzed as an adposition. This conclusion would be forced were a principle like Baker (1988)'s *Uniformity of Theta Assignment Hypothesis* (UTAH) to hold.

- (548) soyapo-timt-ki hi-c'iq-tetu- \emptyset
white.person-language-INST 3SUBJ-speak-HAB.PRES-PRES
He speaks in English

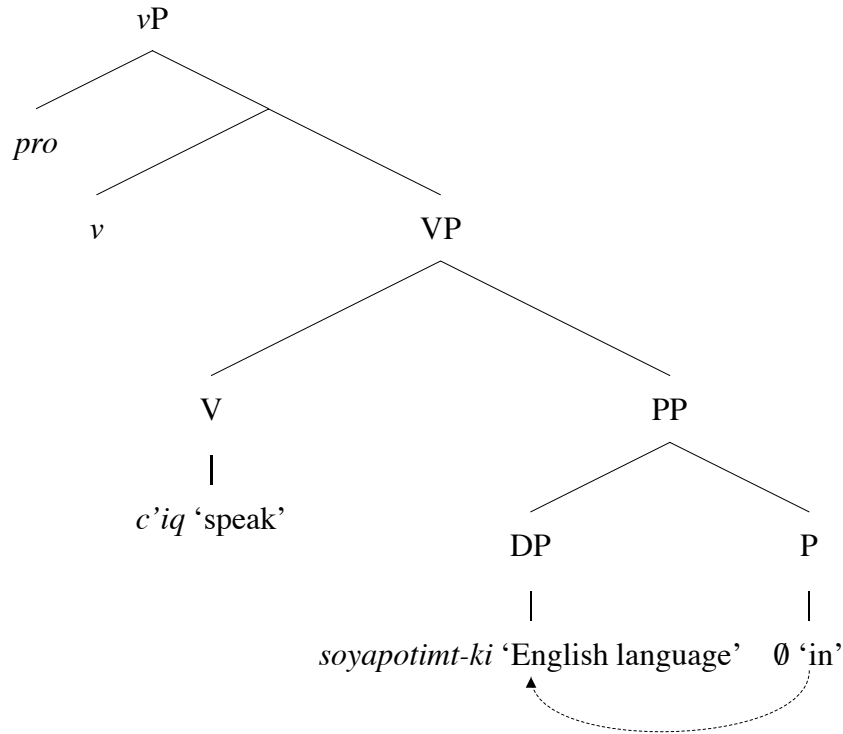
- (549) Oblique case as P⁰



On the other hand, given that oblique cases participate in case concord (see section 1.4.3), the parallel between oblique nominals and PP might be captured by positing a null P head

that is responsible in some way for the marking of a particular case on every word in its c-command domain.

(550) Oblique case as conditioned by null P^0



Both variants of the PP proposal allow us to treat the ban on agreement with obliques as a consequence of absolute locality. It is well known that in certain languages, P behaves as a barrier to agreement and movement; in such languages, prepositions cannot be “stranded”. If Nez Perce obliques are PPs, and P imposes a locality barrier in Nez Perce, we expect oblique nominals to be invisible for processes of agreement (except insofar as agreement targets PP, not DP). There is no object agreement in (548) because the DP *soyapotimt* ‘the English language’ is insufficiently local to the v head. It is c-commanded by v , but a locality barrier is in the way.³⁰

The other set of constraints on object agreement—those that hold in ditransitives and applicative constructions—suggests an approach in terms of relative locality. Applicative

³⁰It might also be the case that certain oblique nominals form PPs which are added outside the c-command domain of v . Should this be so, the absolute locality proposal would be relevant only for those obliques that merge low.

constructions in particular fall into place in a pleasing way if we assume that the object *structurally closest* to the *v* head is the one that participates in object agreement.

We saw in section 1.7.4.2 that Nez Perce makes use of four applicative suffixes, suffixes which augment the argument structure of the verb root. These applicative suffixes may appear with otherwise transitive verbs or with otherwise intransitive ones. The representative examples below are repeated from chapter 1, examples (250) and (258).

(551) Applicative of intransitive → transitive

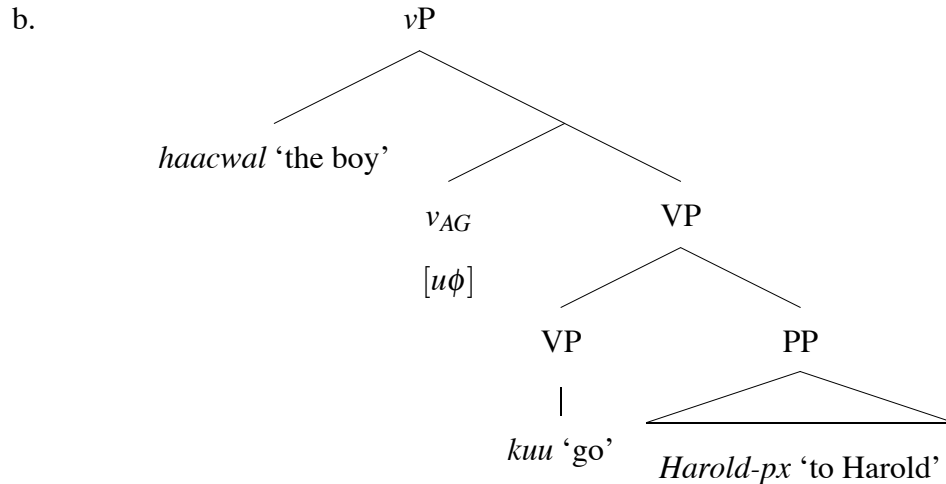
- a. haacwal hi-kuu- \emptyset -ye Harold-px
 boy 3SUBJ-go-P-REM.PAST Harold-to
 The boy went over to Harold
- b. haacwal-nim pee-k-yuu- \emptyset -ye Harold-ne
 boy-ERG 3/3-go-APPL:GOAL-P-REM.PAST Harold-OBJ
 The boy went over to Harold

(552) Applicative of transitive → ditransitive

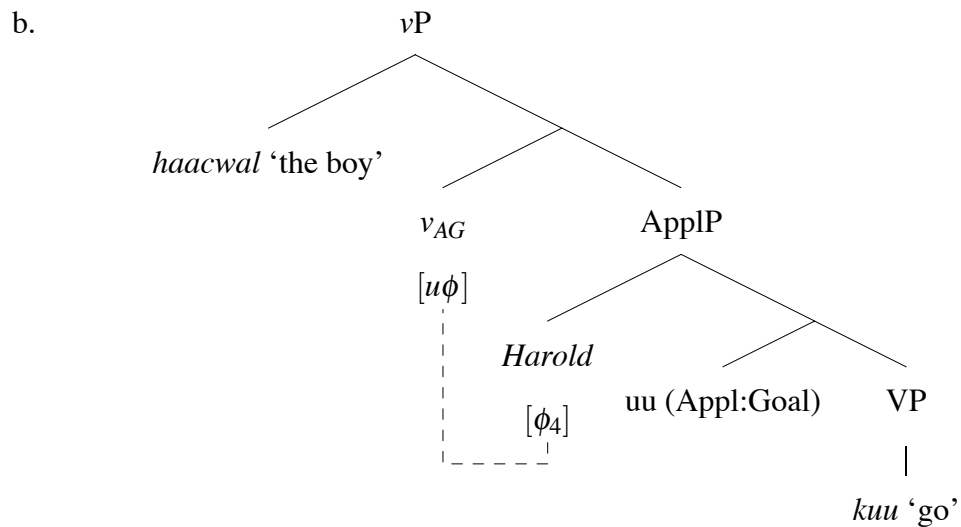
- a. 'e-'npi-se- \emptyset nuku-ne
 3OBJ-take-IMPERF-PRES meat-OBJ
 I am taking the meat. (Crook, 1999, 172)
- b. 'a-'np-aapii-k-sa- \emptyset nukt toni-na
 3OBJ-take-APPL:AWAY-SF-IMPERF-PRES meat Tony-OBJ
 I am grabbing away the meat from Tony (Crook, 1999, 172)

An applicative suffix added to an otherwise intransitive verb, as in (551b), produces a clause showing behavior quite parallel to what we find in a simple transitive. The applicative object (or *applied object*, in Baker (1988)'s terms) participates in object agreement and marks objective case. An applicative suffixed to an otherwise transitive verb, as in (552b), forms a ditransitive construction of a particular typological sort. This is a construction of what Bresnan and Moshi (1990) call the *asymmetric type*: only the applicative object, and not the theme object, shows behaviors characteristic of the sole object of a monotransitive.

- (553) a. *haacwal hi-kuu-0-ye* Harold-px
 boy 3SUBJ-go-P-REM.PAST Harold-to
 The boy went over to Harold



- (554) a. *haacwal-nim pee-k-yuu-0-ye* Harold-ne
 boy-ERG 3/3-go-APPL:GOAL-P-REM.PAST Harold-OBJ
 The boy went over to Harold

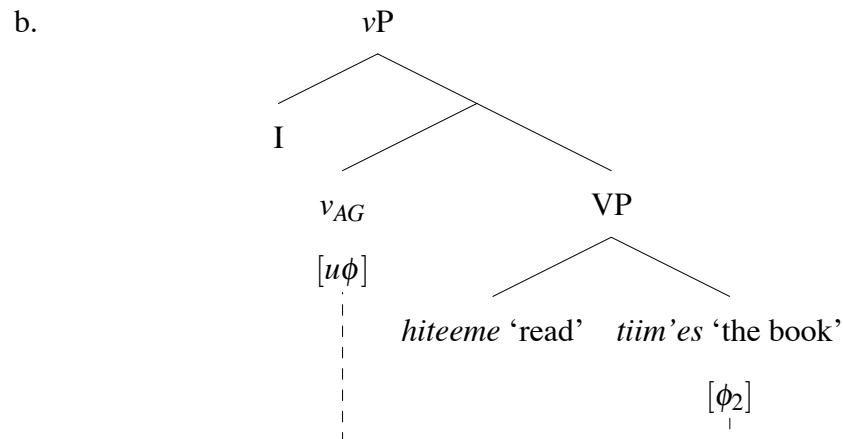


In intransitive (553), *Haroldpx* ‘to Harold’ specifies a goal, but does not behave as an object of the verb. It does not participate in object agreement, and marks oblique case. (I have shown it as a VP-adjoined PP; it might also be adjoined higher, potentially to vP.) In applicative construction (554) matters are different. The nominal *Harold* is not encased in an independent functional structure adjoined to the clausal spine; rather, it sits in the

specifier position of an applicative head. This structural difference means that *Harold* can agree with *v* in the applicative construction; it is c-commanded by *v* and not separated from it by a barrier to absolute locality.

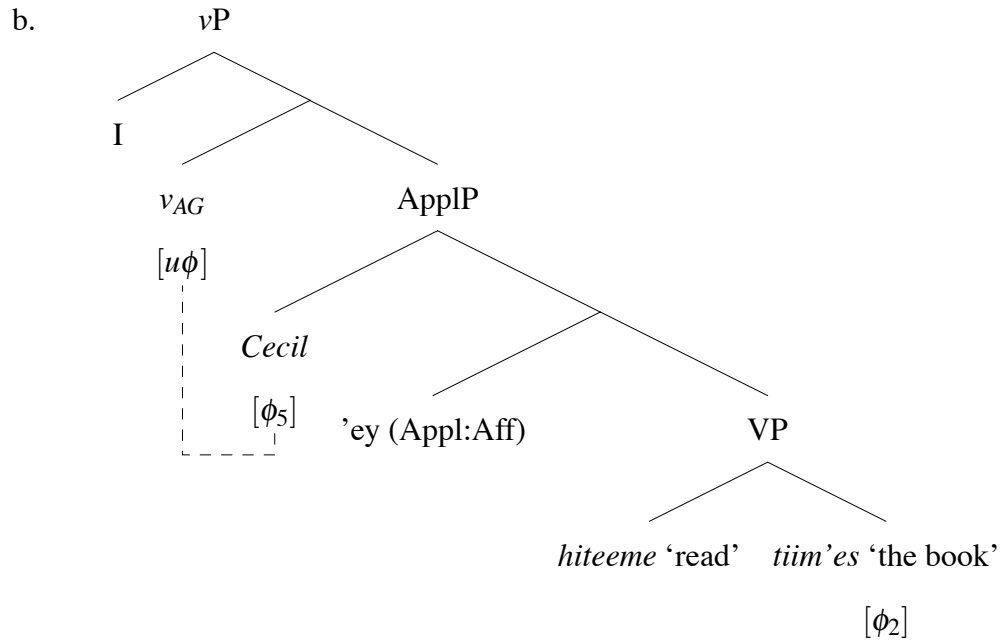
Consider now an applicative added to a transitive sentence, as in the sentences below from Crook (1999, 178). In the simple monotransitive baseline example, *tiim'es* 'the book' participates in object agreement: it is c-commanded by *v*, and (absolutely) local to it.

- (555) a. 'e-hiteeme-ce- \emptyset tiim'es-ne
 3OBJ-read-IMPERF-PRES book-OBJ
 I'm reading the book



When an applicative is added, it does not change the relationship between the verb root and its object; these continue to form a constituent. The applicative is “high” in that it adds an argument that sits atop the VP projection and thus intervenes between *v* and the original object *tiim'es* ‘the book’.

- (556) a. 'e-hiteeme-nee'y'-se- \emptyset siisel-ne tiim'es
 3OBJ-read-APPL:AFF-IMPERF-PRES Cecil-OBJ book
 I'm reading Cecil the book (Crook, 1999, 178)



In structure (556b), applicative object *Cecil* asymmetrically c-commands verbal object *tiim'es* ‘the book’. Therefore, if Agree is subject to relative locality, we expect that *v* will agree with the applicative object *Cecil* rather than the verbal object *tiim'es*. In this particular example, the choice of one potential controller over another will not affect the ϕ -features ultimately obtained by *v*, as both applicative object and verbal object are [3sg]. The choice does have an effect on case-marking patterns, however. As we will generalize in quite broad terms: the object that participates in syntactic agreement is the object that marks objective case.

This analysis of applicative constructions makes an important prediction for future research. Applicative objects, given structures like (556b), systematically have theme objects in their c-command domain in Nez Perce. The import of this asymmetry should not be confined to the calculation of agreement patterns; rather, *any* pattern sensitive to c-command between nominals should reveal the asymmetry. Quantifier scope and NPI licensing might provide a means of testing this prediction; so too, modulo certain concerns described in section 6.2.2, might principles of the binding theory.

In addition to applicative constructions, we would also like our relative locality approach to extend to simple ditransitives. Ditransitive constructions cross-linguistically have

been subject to a range of analyses motivated in large part by the alternation in English and certain other languages between two modes of argument expression: a double object structure (557a), and a prepositional-object structure (557b).

- (557) a. Henry gave Michael a coffee
b. Henry gave a coffee to Michael

Nez Perce allows only one means of encoding ditransitives, akin to the double object construction in (557a). In a Nez Perce ditransitive there is no preposition or oblique case marking the goal/source nominal. Rather, the goal/source nominal behaves for case, agreement, reflexivization and reciprocalization in a way parallel to the sole object of a monotransitive (in other terms, the goal/source nominal behaves as *direct object*). Like applicative ditransitives, simple ditransitives in Nez Perce are fundamentally asymmetrical.

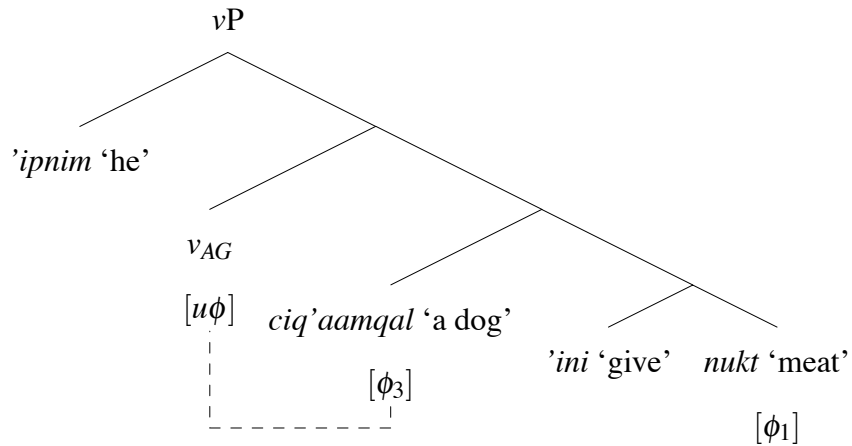
- (558) 'ip-nim pe-'eny- \emptyset -e nukt ciq'aamqal-a
3SG-ERG 3/3-give-P-REM.PAST meat dog-OBJ
He gave meat to a dog (Aoki, 1994, 1035)

- (559) âaâaas-na 'aatim puu-tkuy'k- \emptyset -e
grizzly-OBJ arm 3/3-take.away-P-REM.PAST
He took away the arm from grizzly bear. (Aoki and Walker, 1989, 122)

Barss and Lasnik (1986) present a litany of tests revealing that in English sentences like (557a), the goal nominal asymmetrically c-commands the theme nominal. If a parallel analysis could be given for Nez Perce ditransitives, the pattern of object agreement in ditransitives would follow straightforwardly as another instance of relative locality. The goal/source nominal is structurally closer to *v* than the theme nominal is, and so controls object agreement.³³

³³I have omitted certain contentious details from structure (560), notably the label of the sister of *v* and any functional structure above or below the verb. What is crucial for our purposes here is merely that the goal/source nominal c-commands the theme nominal asymmetrically in such structures.

(560)



This analysis, too, makes predictions beyond the calculation of agreement which future research must confirm. Any test for asymmetric c-command should reveal that goal/source nominals in ditransitive constructions c-command theme nominals asymmetrically.

Our analysis, pending these independent points of confirmation, is in part a tentative one. It is nevertheless one that makes it possible to state a structural condition on object agreement in a concise, construction-independent way.

(561) *Object Agreement Generalization*

The second-highest nominal in a vP (in terms of asymmetric c-command) is the controller of object agreement.

The structural description of this pattern is no accident, given our supposition that relative locality constraints play a role in the selection of an agreement controller. Relative locality in object agreement means the observed controller of agreement must always asymmetrically c-command other potential controller nominals. Granted that *v* appears in a structure only when an argument is introduced in its specifier position, the nominal in *v*'s c-command domain that is closest to it will always be the second-highest nominal in vP. It is interesting to observe that the structures we are led to adopt on this line of thinking are extremely familiar on a cross-linguistic basis.

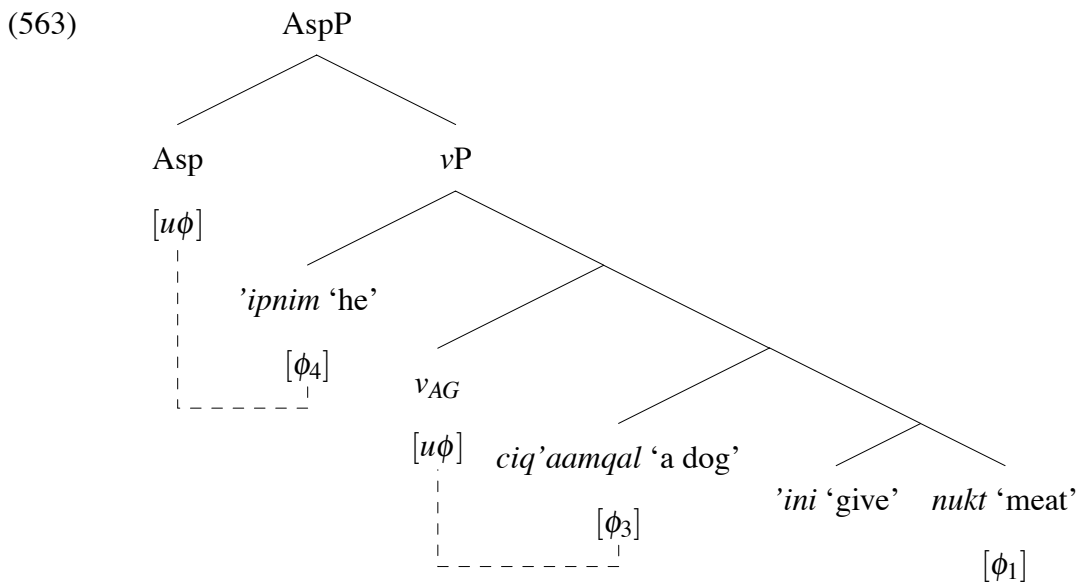
The structural generalization for object agreement relates closely to a further, more directly observable correlation connecting agreement with case-marking – a pattern that will be of utmost importance in our treatment of case.

(562) *Object Case Generalization*

A nominal controls object agreement iff it is marked with objective case.

The pattern is again most visible in ditransitives and applicative constructions. Second-highest nominals control agreement and mark case; third-highest nominals show neither behavior.

What about subject agreement—agreement with Asp? The single argument of an intransitive is relatively and absolutely local to Asp, and thus participates in subject agreement (see (541b)). In a transitive, *v* introduces an argument; this argument will be at the very top of the argument-structural subtree, and will be the closest nominal to Asp.



Parallel to what we find for object agreement, we can generalize as follows:

(564) *Subject Agreement Generalization*

The highest nominal in the argument-structural subtree is the controller of subject agreement.

5.3.4 Spec-head agreement in the reflexive

Our discussion of agreement would not be complete without mention of a third type of agreement which we see most clearly in the reflexive construction. This is Spec-head agreement which takes place in vP between a DP and the head v . To see this agreement, we will need to develop an analysis of the reflexive construction's syntax.

The most striking morphosyntactic feature of reflexive sentences is a series of prefixes in the argument-marking zone. We see two of these prefixes, *'imemee* and *'ipnee*, in the examples below. Other members of the paradigm express different combinations of person and number features; the complete listing can be found in section 1.7.2.3.

(565) ha-haacwal 'imemee-pipc'e-siix- \emptyset

PL-boy 3PL.REFL-wash.hair-IMPERF.PL-PRES

The boys are shampooing themselves.

(566) waaqi 'im-'yaas 'ipnee-p- \emptyset -e

now 2SG-older.brother 3SG.REFL-eat-P-REM.PAST

Your older brother has now eaten himself up. (Aoki and Walker, 1989, 339)

The reflexive prefixes are in complementary distribution with agreement prefixes of all types – subject, object, person, number. At the same time, their own sensitivity to person and number clearly reflects agreement of some type. What is the controller of this agreement?

Two major possibilities should be compared. It might be that the reflexive prefixes are indicative of agreement with a bound variable object term—a silent version of *themselves*, *himself*, etc. Then the reflexive marker might be seen as object agreement plain and simple. The agreement takes a special form when the object is anaphoric, much as the object itself takes a special form when locally bound in a language like English. This analysis requires the reflexive vP to have a transitive structure – there must be an object to participate in object agreement.

(567) [_{VP} ha-haacwal v [_{VP} 'imemee-pipc'e pro]
 boys [3PL.REFL-shampoo ANAPHOR]
 The boys are shampooing themselves

This analysis finds a proponent in the work of Woolford (1999, 267), who treats the reflexive markers as a “a special anaphoric form of agreement” that surfaces when there is an anaphoric object.

Equally plausible from a morphological point of view is that the reflexive prefixes involve a special type of *subject* agreement. After all, both subject agreement and object agreement occupy the same argument-marking prefix zone taken up by the reflexive. Of course, it might initially strike us as odd that subjects should show special agreement behavior in reflexive constructions. Subjects aren't locally bound in these constructions, and need be in no way anaphoric; for all semantic purposes they behave like ordinary nominals or names. Special subject agreement in a reflexive construction is unlikely to reflect special features of the subject, then. It would presumably reflect something special about the verbal structure. A likely candidate would be detransitivization. This second type of analysis ends up corresponding rather closely to one of Grimshaw (1982)'s analyses of French reflexive clitic *se*. According to Grimshaw, *se* should be treated as a marker of detransitivization that also encodes features of the subject.

How shall we tell these analyses apart? The standard diagnostics are tests for transitivity, tests that by necessity vary from language to language. The most obvious transitivity diagnostic for Nez Perce is marking for ergative case, but this test must be handled with care. We saw in our discussion of caseless clauses that while the *presence* of ergative marking is evidence of transitivity, the *absence* of ergative marking is consistent with either transitivity or intransitivity (section 5.1.1). If we had ergative case in reflexives, we could conclude that they have a transitive structure; but as it turns out, ergative is uniformly missing in reflexive constructions, leaving us with no clear transitivity diagnosis.

- (568) * ha-haacwal-nim 'imemee-pipc'e-siix-Ø
 PL-boy-ERG 3PL.REFL-wash.hair-IMPERF.PL-PRES
 intended: The boys are shampooing themselves.

Another point of difference between our two analyses must be brought to bear, then. One factor we might consider is the degree to which reflexive markers track the behavior of object agreement markers across morphosyntactic contexts. If Woolford is correct in analyzing reflexive marking as object agreement, we expect reflexive marking to have the same privilege of occurrence as regular object agreement does. Participials are a key place to look: object agreement is not found in participles, even when the participle takes an objective case-marked object.³⁴

- (569) kaa kine hi-pe-ku-Ø-ye
 and here 3SUBJ-S.PL-go-P-REM.PAST
 hi-pe-'niik-Ø-e yik'iwn taklay
 3SUBJ-S.PL-put-P-REM.PAST sunshine at.the.same.time
 [**wewkuni-t'es** kon-ya yaw'iis-na sic'e-ne.]
 [meet-PART that-OBJ coldness-OBJ freezing-OBJ]

They [Warmweather people] went and met the freezing cold with sunshine. (Aoki and Walker, 1989, 521)

lit. And here they went, at the same time they placed sunshine to meet that freezing coldness.

Object agreement prefixes behave, on this count, crucially as *inflectional* morphology. Verbal agreement for subject and object and inflection for aspect, space and tense cannot appear in participles. Derivational morphology is permitted, however. It turns out that reflexive

³⁴This is a *prima facie* challenge to the Object Case Generalization (562), a problem which becomes a real one if syntactic agreement necessarily results in agreement morphology. We return to this issue in chapter 8.

markers behave like derivational morphology: reflexive markers are quite readily found in participles.

- (570) a. 'ipnee-ku-t'es
3SG.REFL-get.water-PART2
cup, mug ("for self-watering")
- b. 'ipnee-x-n'es
3SG.REFL-see-PART2
mirror ("for looking at oneself")
- c. 'inaa-tamapayk-t
1SG.REFL-report.on-PART1
testimony (of myself) ("self-reporting")
- d. 'ipnee-wle-ke'yk-e'i
3SG.REFL-run-go-INST.NOM
car ("self-going thing")

Given that pure verbal inflection is not permitted in participles, this pattern suggests that reflexive markers are not pure inflection. They behave like derivational morphology. If we treat the reflexive as involving some type of detransitivizing operator, we have an initial hypothesis about why this should be. Detransitivization is not a function of verbal inflection; it belongs to a category of derivational, argument-structure changing items. So we have turned up some preliminary evidence in favor of treating reflexive markers as detransitivizing operators that agree with subjects, rather than as pure object agreement of a special anaphoric type.

Patterns of idiom formation underline the same point: the reflexive involves derivational morphology. Much of the derivational morphology of Nez Perce can be used to form idioms; the inflectional morphology cannot. The verb *hiinaq'i* 'to finish, complete' has an idiomatic meaning both with the causative (a clearly derivational category) and with the reflexive. The causative form of the verb can be translated 'ready' (transitive) and the reflexive form can be translated 'get ready' (intransitive).

(571) 'aayat 'ipnaa-hiinaq'i-s- \emptyset .

woman 3REFL-finish-P-PRES

The woman is ready.

Comment: "She's all set, prepared from head to toe, ready to go out."

(572) paa-sapa-hiin'aqi-sa- \emptyset

3/3-CAUSE-finish-IMPERF-PRES

She's getting him ready

(573) 'aayat-om paa-hiinaq'i-s- \emptyset haacwal-a.

woman-ERG 3/3-finish-P-PRES boy-OBJ

The woman finished (with) the boy.

NOT: The woman got the boy ready.

Comment: "She's finished with that guy."

Simple transitive (573), showing object agreement via portmanteau *pee*, is grammatically well-formed, but lacks the special meaning we might expect based on the causative and reflexive forms.

A more extreme type of case concerns the verb *kuu* 'get water'. This verb is only intransitive (unergative). However, the reflexive combines with the bare verb to give the meaning 'drink'.

(574) teqe-kuu-se- \emptyset .

quickly-get.water-IMPERF-PRES

I am going to get water briefly. (Aoki, 1994, 249)

(575) 'inee-kuu-se- \emptyset .

1 SG.REFL-?-IMPERF-PRES

I am drinking.

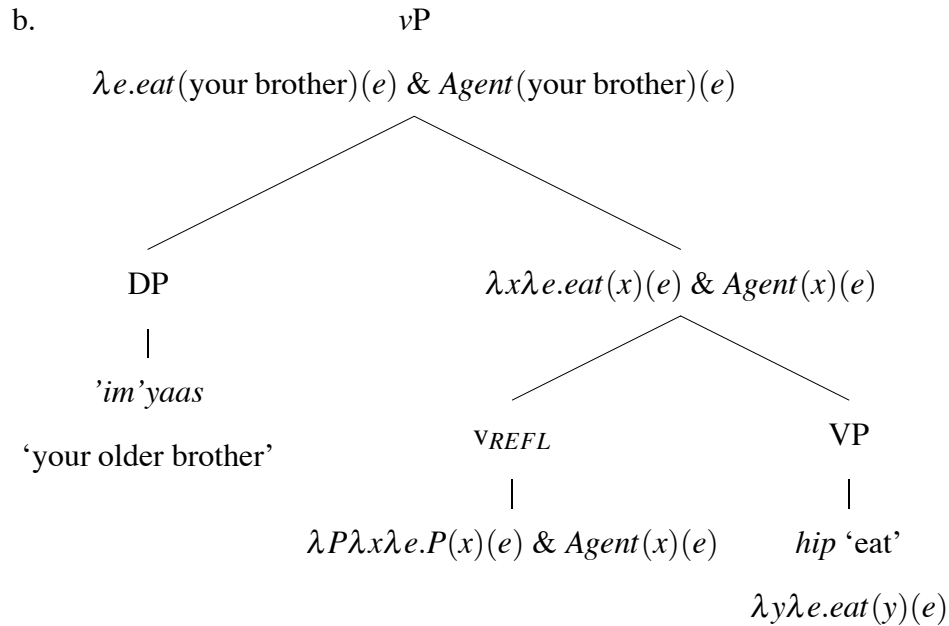
If the reflexive prefix in a case like (575) were a special form of agreement marking an anaphoric object, we would need to posit a transitive verb root *kuu* that takes the anaphoric term as its object. Yet this transitive verb root is not otherwise attested, and indeed, it is

not clear what it would mean. The simpler analysis is that this is a case where derivational morphology has fused to a verb stem to the point where compositional analysis is no longer possible. Idiomatic fusion of this type does not target the inflectional agreement prefixes.

Examples of this type inveigh against an analysis of the reflexive markers as anaphoric object agreement. They are consistent, however, with derivational, detransitivizing analysis of the reflexive. On this analysis, reflexives of monotransitives like the examples we started with in (565) and (566) are to be given a purely intransitive structure. There isn't a bound variable object somewhere in the VP to participate in agreement; agreement involves only the subject. Subject agreement in the reflexive takes a special form, and can surface in a participle. How do these properties come about?

Intuitively, a detransitivizing reflexive is responsible for reducing the valence of a predicate. Given our *v*P structure for transitive clauses, valence reduction will not be stated as an operation on a single predicate, however. Instead, it will have to do with the way that two predicates are put together to form a reflexive relation. What we will want to do is find a way to make the external argument—the argument of *v*—also serve as argument for a functor found in the VP. A relatively intuitive way would be for reflexive morphology to realize a special version of the head *v* – a version which combines with unsaturated predicates of individuals.

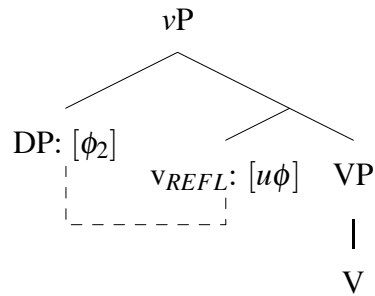
- (576) a. 'im-'yaas 'ipnee-p- \emptyset -e
 2SG-older.brother 3SG.REFL-eat-P-REM.PAST
 Your older brother has eaten himself up.



The ν heads of transitive clauses combine with saturated constituents denoting predicates of events, as in (535); reflexive ν heads combine with unsaturated constituents denoting functions from individuals to predicates of events. For this reason, a structure built with a reflexive ν has an unusual sub- νP geometry; an object is never introduced. This structural effect presumably determines the classification of ν_{REFL} as a derivational morpheme, unlike its object-agreement counterparts found in simple transitive sentences.

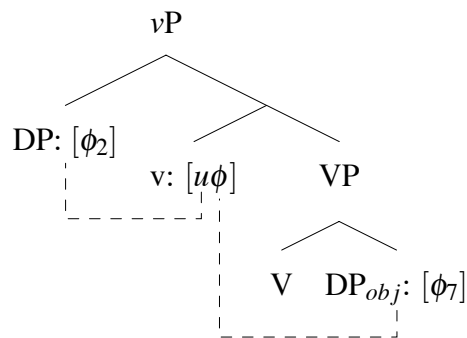
If reflexives involve special ν heads, we have to ask how much of the syntactic behavior of these ν heads is idiosyncratic, and how much is reflective of general properties of the ν category in Nez Perce. We might assume as a null hypothesis that the syntax of all ν heads in the language is the same: any syntactic property of reflexive ν is a property of all ν heads in Nez Perce. This has a consequence for the agreement behavior of ν concerning specifiers. To account for agreement with the reflexive ν head, we posit that ν_{REFL} agrees via SH-Agree with the nominal in its specifier position.

(577) Reflexive νP



There is no reason to expect that this behavior should be limited to reflexive v . Let us suppose, then, that participation in SH-Agree is a general property of v in Nez Perce. It occurs in transitive clauses *in addition* to Agree under c-command between v and an object DP.

(578) Non-reflexive v P



The resulting *pair* of agreement relationships will turn out to play a crucial role when we come to the treatment of ergative case in chapter 8.

Another of the behaviors of the reflexive v proves *not* to hold for Nez Perce v heads in general. If all v heads in Nez Perce agree with the nominals in their specifier positions, some will do so, as in (578), in addition to agreeing with nominals in their c-command domains. Reflexive v turns out not to enjoy this possibility. It cannot agree under c-command with an object.

The inability of reflexive v to participate in object agreement can be ascertained from patterns of case-marking. According to the Object Case Generalization (562), an object that participates in object agreement – agreement under c-command with v – will mark objective case; according to Rude’s Generalization (476), a third-person subject will mark ergative

iff an object marks objective. Therefore, if the object participates in object agreement, it should mark objective, and the subject should mark ergative. Given these predictions, we can probe the object agreement behavior of reflexives by examining reflexives of ditransitives. In such constructions, the reflexive relation relates the subject argument to what would be the goal/source argument:

(579) haacwal 'ipnee-'ny- \emptyset -e nukt
 boy 3SG.REFL-give-P-REM.PAST meat
 The boy gave meat to himself

(580) haacwal 'ipne-tquyte-yuu- \emptyset -ye poxpok'ala
 boy 3SG.REFL-throw-APPL:GOAL-P-REM.PAST ball
 The boy threw the ball to himself

It turns out that it is no more possible in these reflexives than in any others to mark ergative case on the subject, or to mark objective case on the object.

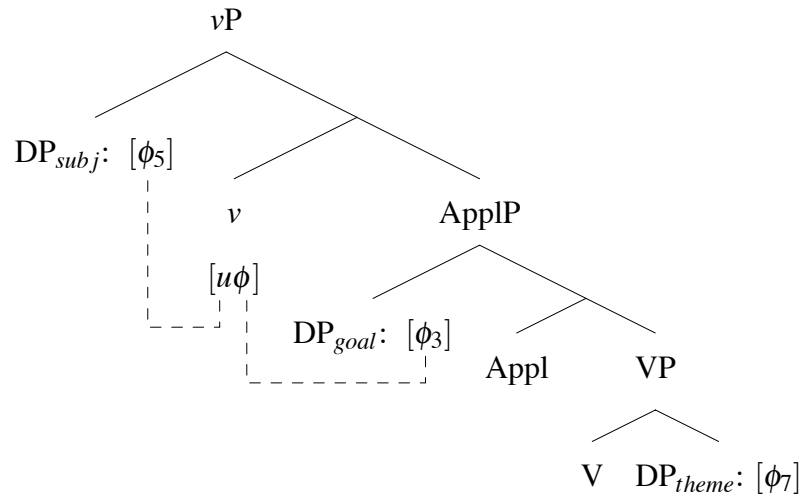
(581) * haacwal-nim 'ipne-'eeny- \emptyset -e nuku-ne
 boy-ERG 3SG.REFL-give-P-REM.PAST meat-OBJ
 intended: The boy gave meat to himself

(582) * haacwal-nim 'ipne-tquyte-yuu- \emptyset -ye poxpok'ala-na
 boy-ERG 3SG.REFL-throw-APPL:GOAL-P-REM.PAST ball-OBJ
 intended: The boy threw the ball to himself

Speakers reject these versions and correct the sentences to the caseless versions in (579), (580).

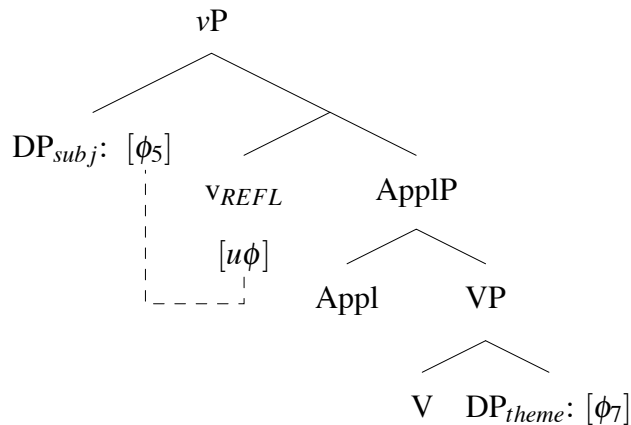
These facts show that the hypothesis of syntactic uniformity for *v* heads in Nez Perce can only be maintained in a weakened form. Reflexive *v* heads differ semantically from non-reflexive *v* heads, and they also differ syntactically in the types of agreement dependencies they can enter into. In a non-reflexive ditransitive, the [*u* ϕ] features of non-reflexive *v* heads enter into SH-Agree with the subject and Agree with the object. This is schematized for a ditransitive formed via applicative suffixation.

(583) Non-reflexive ditransitive *v*P



In a reflexive ditransitive *v*P, the goal DP is syntactically missing; the reflexive *v* head can participate in an agreement dependency only via SH-Agree.

(584) Reflexive ditransitive *v*P



Given this unusual behavior for the *v* head of the reflexive construction, reflexives form an interesting exception to the general pattern of object case marking: the theme DP in a reflexive ditransitive is the second-highest nominal in *v*P, but does not control object agreement or mark objective case. This nominal is excepted from the Object Agreement Generalization (561), repeated below.

(585) *Object Agreement Generalization*

The second-highest nominal in a *v*P (in terms of asymmetric c-command) is the controller of object agreement.

The generalization supposes that object agreement is available when ν P is projected. In a reflexive, ν P is projected, but $[u\phi]$ features needing to be valued under c-command are exceptionally missing. The behavior of the theme DP in the reflexivized ditransitive falls out from this.

5.3.5 Summary

We come to a picture of agreement and clausal structure along the following lines. Agreement involves a relationship between a nominal and a functional head; this is our inheritance from Pollock (1989) and Kayne (1989). In order for this relationship to take place, one of two structural descriptions must obtain. In one type of case, the functional head c-commands the nominal it is to agree with. Agreement of this type is subject to two flavors of locality constraints. The functional head must be local to the nominal absolutely (locality barriers cannot intervene) and relatively (other nominals that could participate in agreement instead of our nominal cannot structurally intervene). Of course, locality constraints of both types are primarily a feature of agreement under c-command. Our other structural condition for agreement, the Spec-head relation, does not lend itself readily either to the formulation of absolute locality barriers or to questions of structural intervention by one nominal between another nominal and its agreeing head.

Given the link between aspect/mood and the morphology of subject agreement, we identified the functional head responsible for subject agreement as Asp. This head bears $[u\phi]$ features which must be valued through a dependency formed under c-command. Given the connection between transitivity and object agreement, we were also led to postulate a functional head ν which we tasked with introducing external arguments in a neo-Davidsonian fashion. The lexical entries for Nez Perce ν heads are specified for participation in agreement in virtue of $[u\phi]$ features, which are ultimately to be valued by the nominal with which ν agrees. We hypothesized on the basis of reflexive constructions that ν heads in Nez

Perce always participate in SH-Agree with their specifier DPs; when non-reflexive, they also participate under c-command with a relatively and absolutely local DP object.

CHAPTER 6

THE SYNTAX OF BINDING AND POSSESSION

Caseless clauses are a heterogeneous lot. Some of them have indefinite objects. From a cross-linguistic perspective, this type of caselessness squares well with patterns that have become familiar; it is not at all infrequent to find considerations of indefiniteness playing an important role in typologies of non-canonical case-marking. The other class of caseless clauses is made up of extended reflexives, used (roughly) to describe scenarios where one acts on one's own possessions in various ways. The extended reflexive caseless construction comes as more of a typological surprise. What does possession have to do with clause-level case-marking? Why should the relationship between the subject and a possessor phrase within the object make such a big difference for the morphosyntax of the clause overall?

6.1 Approaching extended reflexive

6.1.1 Binding

Let's take our first step toward the big questions with the help of a little question. What is the semantic profile of an extended reflexive caseless clause?

Rude (1985) gave a characterization in terms of coreference: the object possessor phrase is coreferential with the subject. As we noted in passing above, this conception requires positing a null possessor phrase in extended reflexive sentences that lack an overt one, making (586) the “*pro*-dropped” version of (587).

(586) pit'iin' hi-'yaaŋ-n-a [*pro* picpic]
 girl 3SUBJ-find-P-REM.PAST [(possessor) cat]

The girl_i found her_i cat

- (587) pit'iin' hi-'yaaŋ-n-a ['ip-nim picpic]
girl 3SUBJ-find-P-REM.PAST [3SG-GEN cat]
The girl_i found her_i cat

I adopt this analysis of (586) from Rude given that argument omission is extremely common in the language and that speakers find examples like (586) semantically indistinguishable from examples like (587) (setting aside the alternative, indefinite-object analysis of the former). However, my approach to extended reflexives diverges from Rude's in that I see the relationship between the subject and object possessor phrases not as coreference but as binding.

A binding analysis is clearly necessary when the subject is a quantificational phrase, rather than a referential one.

- (588) 'oykala ha-haacwal [*pro* pike] hi-hetewi-tee'nix-∅.
all PL-boy [(possessor) mother] 3SUBJ-love-HAB.PRES.PL-PRES
All boys love their mothers.

- (589) Weet 'isii hi-'nix-peleey-k-∅-e [*pro* taqmaŋ]
Y.N who 3SUBJ-put-get.lost-SF-P-REM.PAST [(possessor) hat]
Did anyone lose their hat?

Sentence (588) tells us that for all boys x , x loves x 's mother; sentence (589) inquires if any person x is such that x lost x 's hat. The object possessor phrase behaves like a variable bound by the subject quantifier.

What about extended reflexives where the subject is not quantificational? A sentence like (587) would have the same interpretation if '*ipnim* 'her' were bound by the subject and if the two were simply coreferential. The way the grammar deals with potential ambiguities like this one has received a lot of attention in the literature on binding.¹ In a language

¹Reinhart (1983), Grodzinsky and Reinhart (1993), Buring (2005, ch 6).

like English, the possibility of both binding and coreference feeds the famous strict/sloppy identity ambiguity in VP ellipsis. When a VP which serves as the antecedent for an ellipsis contains a referential possessor pronoun which happens to co-refer with a subject, the strict reading of the ellipsis results; when a possessor pronoun in the antecedent VP is bound by a subject, the sloppy reading results.

(590) Reggie₁ consulted his₁ mother, but Stewart₂ didn't Δ_{VP} .

a. Stewart₂ didn't consult his₁ mother.

[Strict interpretation: *his* is referential in antecedent VP, retains its reference in interpretation of ellipsis-containing clause]

b. Stewart₂ didn't consult his₂ mother.

[Sloppy interpretation: *his* is bound in antecedent VP, in ellipsis-containing clause is interpreted as bound by local subject]

If we could identify a form of VP ellipsis in Nez Perce (perhaps of the “V-stranding” type discussed by Goldberg (2005)), a binding analysis and a coreference analysis of sentences like (587) could be distinguished. If the possessor phrase must be bound by the subject, the extended reflexive sentence should only antecede sloppy VP ellipsis. If the possessor phrase can be either bound by the subject *or* co-referential with it, the extended reflexive sentence should be able to antecede ellipsis of VPs that receive either strict or sloppy interpretations. The testing of these predictions, assuming an appropriate ellipsis construction can be identified in Nez Perce, awaits further research; until the results are in, we will have to precede tentatively. I would like to suggest that we tentatively treat *all* possessor phrase in extended reflexives as bound, whether the subject is a quantificational expression (as in (588), (589)) or not (as in (586), (587)). This gives a unified analysis of extended reflexives with referential subjects and with quantificational ones, in keeping with the absence of any morphosyntactic difference between the two.

Binding, unlike coreference, is an asymmetrical relation. For a coreference relation to hold between two terms, both must be referential (a requirement that clearly does not hold of subjects of extended reflexives). A binding relation imposes different requirements on the binder and the bound. The binder term may be referential, as in (592a), or quantificational, as in (593a). In either case the *bound* term is treated in the logical representation as a variable, rather than as a referential expression.

- (592) a. pit'iin' hi-'yaaâ-n-a ['ip-nim picpic]
 girl 3SUBJ-find-P-REM.PAST [3SG-GEN cat]
 The girl_i found her_i cat
- b. (the girl) ($\lambda x. x$ found x 's cat)
- (593) a. 'oykala hahaacwal [*pro* pike] hi-hetewi-tee'nix- \emptyset .
 all boys [(possessor) mother] 3SUBJ-love-HAB.PRES.PL-PRES
 All boys love their mothers.
- b. ($\forall x.$ boy(x)) ($\lambda x. x$ loves x 's mother)

The asymmetry between binder and bound term suggests where we should focus our attention in our exploration of extended reflexive caseless clauses. It is the object possessor phrases in these sentences that are subject to a special requirement: they must be translated as bound variables.

(594) *Extended reflexive generalization*

When an independent possessor nominal in the object DP behaves semantically as a bound variable, the clause is caseless.

It turns out that this generalization is part of two broader generalizations about the syntax of Nez Perce. The first concerns the prominence of independent possessor nominals relative to object nominals that contain them. The second concerns the status of agreement with locally bound terms.

These examples show both that object agreement is controlled by the object possessor nominal and that the object possessor nominal, when overt, can be marked with objective case.

A slightly different version of the possessor raising phenomenon is shown in (600) and (599).

(599) tewliki-nm pe-wiw-likeec-e'n-yu' 'aayat-onm 'iniit
 tree-ERG 3/3-fall[of trees]-on.top-APPL:AFF-PROSP woman-GEN house
 The tree is going to fall on *the woman's* house

(600) tewliki-nm hi-wiw-likeec-e'n-yo'qa 'iin-im 'iniit
 tree-ERG 3SUBJ-fall[of trees]-on.top-APPL:AFF-QA.PROSP 1SG-GEN house
 The tree could fall on *my* house

Here we see again that the choice of verbal agreement depends on the features of the possessor nominal. Agreement registers a 1st/2nd person object in (600) and a 3rd person object in (599). However, by contrast to the previous set of examples, the nominal that participates in agreement in these sentences is not expressed in the objective case. It is expressed in the genitive. These cases are apparent counterexamples to the Object Case Generalization (562). We will come back to the difference between the two types of possessor raising sentences below.

As with many interesting facets of Nez Perce clausal syntax, an excellent survey of the properties of possessor raising constructions can be found in the work of Noel Rude (1985, 1986a, 1999). Rude observes three crucial properties of possessor raising in Nez Perce.

- i. It is obligatory where possible.
- ii. It behaves differently for subjects and for objects.
- iii. Object possessor raising always involves an applicative construction.

Property (iii) can be seen in our examples (595)-(599) above. In each case the verb contains applicative suffix *ey'* (or an allomorph thereof), which introduces affected arguments.

(We saw in chapter 1 that the referents of arguments introduced by *ey'* may be affected for the better or for the worse; they may be benefactives or malefactives.) This suffix always appears in object possessor raising, but never in subject possessor raising—one of the differences making up property (ii).⁵ The obligatoriness of possessor raising, part of property (i), can be seen in that sentences like (595)-(599) do not productively alternate with sentences in which the possessum nominal marks objective case and participates in agreement and the applicative suffix is not present. Speakers correct such sentences to their possessor-raised counterparts. The content of the “where possible” rider of property (iii) is tied to locality effects, and will become clear once we have developed the structure of possessor raising sentences below.

Possessor raising constructions are of interest quite independently of the concerns outlined in the previous chapter. At the same time, their analysis will lead us to conclusions that prove crucial for our understanding of the syntax of the extended reflexive. It is important at the outset to be clear about the relationship between these two constructions. *Extended reflexive sentences are not instances of object possessor raising* as in (595)-(599), nor are they simply versions of such sentences stripped of morphological case. Extended reflexives differ from object possessor raising constructions in that they need not contain an applicative suffix. What will prove crucial here is that extended reflexive constructions and object possessor raising constructions both reveal a special role for the object possessor phrase in the syntax of the clause. I will argue that this special role concerns the way that object agreement proceeds when the nominal it would otherwise be controlled by has a possessive structure.

(601) *Object Possessor Generalization*

⁵Subject possessor raising is possible only in intransitives and is recognizable morphologically with the help of a special form of subject person agreement for 3rd person subjects. There are many unknowns in subject possessor raising, including the question of whether the construction functions as an unaccusativity diagnostic. Research on this topic is ongoing.

When an independent possessor nominal is added to the nominal controlling object agreement, agreement becomes controlled by the possessor nominal, rather than the possessum nominal.

There are several aspects of this generalization whose truth is perhaps not immediately obvious. I will argue for the generalization first on distributional grounds. We will see that both extended reflexive and possessor raising are triggered only by possessor phrases inside nominals otherwise controlling object agreement. This justifies the *when*-clause in (601). I will then argue that when the *when*-clause condition obtains, agreement is in fact controlled by the possessor nominal, rather than the possessum nominal. For possessor raising sentences, where this pattern of agreement is fairly morphologically transparent, I will give an analysis whereupon the participation of the possessor phrase in agreement relations proves crucial for its raising to an applicative projection. In extended reflexive sentences, control of object agreement by the bound variable possessor phrase will be linked to the *absence* of object agreement morphology.

6.1.3 Possessor phrases interfere with object agreement

In both extended reflexive and possessor raising sentence types, the presence of a possessor nominal in some way deflects control of object agreement from the possessum nominal. Under possessor raising, it is instead the possessor nominal whose features are realized by object agreement. Under extended reflexive, no nominal's features are realized by object agreement.

Precisely the same range of possessum objects is relevant for the two phenomena. The objects in question are those that are relevant for object agreement, as we saw in section 5.3.3: the single object of a monotransitive, the goal/source argument of a ditransitive, and the applicative argument in an applicative construction. Oblique nominals, theme nominals in ditransitives, and verbal objects in applicative constructions all fail to participate in object agreement and are not relevant for either possessor raising or extended reflexive.

In a ditransitive, object agreement is controlled by the goal/source nominal, never the theme nominal. In the following case we have plural object agreement indicating a plurality of ducks; the ducks are the goal of the woman's feeding.

- (606) 'aayat-om hi-nees-kiwyek- \emptyset -e 'ipee \hat{x} qetqheet-ne
 woman-ERG 3SUBJ-O.PL-feed-P-REM.PAST bread duck-OBJ
 The woman fed bread to the ducks.

Extended reflexive and possessor raising track object agreement in hinging on the goal/source nominal in ditransitives. When the subject binds a possessor phrase in the goal/source nominal (making an extended reflexive), the clause becomes caseless, as we saw in (507), repeated below.

- (607) 'aayat hi-kiwyek-se- \emptyset [*pro* picpic] cuu'yem.
 woman 3SUBJ-feed-IMPERF-PRES [(possessor) cat] fish
 The woman_i is feeding fish to her_i cat.
 *The woman_i is feeding fish to her_j / the / a cat

When the goal/source nominal contains a possessor phrase *not* bound by the subject, possessor raising ensues.

- (608) 'aayat-om hi-kiwyek-ey'-k-se- \emptyset 'iin-e picpic cuu'yem.
 woman-ERG 3SUBJ-feed-APPL:AFF-SF-IMPERF-PRES 1SG-OBJ cat fish
 The woman fed *my* cat the fish.
 *The woman fed the cat *my* fish.

Agreement is not controlled by the theme nominal in a ditransitive. Accordingly, neither extended reflexive caselessness nor possessor raising are sensitive to possessive structure in the theme nominal. When the subject binds a possessor phrase in the ditransitive theme, the clause does *not* become caseless.

- (609) 'iin 'ew-'ni- \emptyset -ye ['iin-im ciq'aamqal] haama-na.
 1SG 3OBJ-give-P-REM.PAST [1SG-GEN dog] man-OBJ
 I gave *the man* my dog. (Aoki, 1994, p. 40)

- (610) 'iweep-nim waaqo' pe-'eny- \emptyset -e laqaas-na [*pro* c'olaakstimt]
 wife-ERG already 3/3-give-P-REM.PAST mouse-OBJ [(possessor) hand.drum]
 The wife already gave *the mouse* her hand-drum. (Phinney, 1934, 82)

Possessor raising is likewise not possible from the theme nominal in a ditransitive. We see this in the impossibility of parsing possessor raising sentence (608) with the applicative argument *'iine* 'me' as the possessor of the theme.

In an applicative construction, agreement is controlled by the applicative object. The following examples show plural agreement with a plural applicative object.

- (611) weet'u weet'u 'ee 'e-nees-ki-yuu-yu' kon-ma-na weet'u
 no no you 3OBJ-O.PL-go-APPL:GOAL-PROSP that-PL-OBJ no
 No, no, you will not go toward *them* [marry them], no! (Aoki and Walker, 1989, 419)

- (612) 'e-nees-tquy-te-yuu-y pi-pit'in-e poxpok'ala
 3OBJ-O.PL-throw-go.to-APPL:GOAL-IMPER PL-girl-OBJ ball
 Throw *the girls* the ball!
 (Consultant suggests that this might be uttered in a volleyball game)

When the applicative object contains a possessor phrase bound by the subject, the clause is a caseless extended reflexive.

- (613) kaa hi-kiy-uu-se- \emptyset ['ip-nim 'iniit]
 then 3SUBJ-go-APPL:GOAL-IMPERF-PRES [3SG-GEN house]

 ke yo \hat{x} 'e-week- \emptyset -e piye \hat{x} c-'iniit
 REL that 3GEN-be-P-REM.PAST buffalo.hide-house
 Then he_i goes to his_{i/*j} house, which was a buffalo hide tepee (Aoki and Walker, 1989, 77)

(614) kaa naaqc-ki leehey-ki [*pro* paha-ma]
 then one-INST day-INST [(possessor) man's.daughter-PL]
 hi-ki-yuu-Ø-ye
 3SUBJ-go-APPL:GOAL-P-REM.PAST
 Then one day he went to his daughters. (Aoki and Walker, 1989, 430)

When the applicative object contains a possessor nominal not bound by the subject, possessor raising ensues.

(615) kaa waaqo' wepteese-ne simees
 and now eagle-OBJ bed
 pee-x-yuu-'ey-se-ne weŋweqe-nm.
 3/3-go-APPL:GOAL-APPL:AFF-IMPERF-REM.PAST frog-ERG
 And now the frogs went to the *eagle's* bed. (Phinney, 1934, 229)

Once again, possessor phrases within nominals that are not controllers of object agreement in applicative constructions do not trigger either extended reflexive caseless or possessor raising.

(616) 'e-tquy-te-yuu-y Meeli-ne 'im-im kapoo
 3OBJ-throw-go.to-APPL:GOAL-IMPER Mary-OBJ 2SG-GEN coat
 Throw *Mary* your coat!

(617) * tuquy-te-yuu-y Meeli [*pro* kapoo]
 throw-go.to-APPL:GOAL-IMPER Mary [(possessor) coat]
 Intended: throw *Mary* your coat! [extended reflexive caseless clause, binding of verbal object possessor phrase by subject]

This range of facts establishes a tight link between the nominals relevant for extended reflexive caselessness, possessor raising, and object agreement.

6.2 Syntax and semantics of possessor raising

We have now seen that possessor nominals are relevant for extended reflexive and possessor raising only if they occupy nominals that would, modulo the possessive construction, control object agreement. In both extended reflexive and possessor raising constructions, the presence of a possessor nominal interferes with the agreement behavior of the possessum nominal. In this section I'll work to link this interference to the participation of the possessor nominal (rather than the possessum nominal) in agreement. Doing so will expose us to some of the inner workings of the possessor raising construction.

In examining possessor raising constructions I will make a larger case and a smaller case. The larger case concerns the syntax of possessor raising sentences. For these sentences I will argue for a movement analysis and against a non-movement analysis, and I will chase down some of the consequences that fall out of the analysis I favor. The smaller case concerns a particular detail of this proposal. It turns out that possessor raising movement is subject to constraints of relative locality exactly parallel to those that constrain Agree relations. Movement as I will consequently treat it crucially involves an Agree relation (a proposal made by Chomsky (2000)).

This leads us back to the Object Possessor Generalization: when an independent possessor nominal is added to the nominal controlling object agreement, agreement is controlled by the possessor nominal, rather than the possessed nominal. The penultimate piece of this section investigates the syntax of possession in Nez Perce with this generalization as a guide, producing a series of structural conclusions that will subsequently guide our analysis of the extended reflexive. The final piece of the section returns to the larger issues the movement analysis raises, and pursues some of its consequences for the semantic treatment of movement dependencies.

6.2.1 Possessor raising as an applicative construction

Recall the basic situation: in possessor raising sentences, object agreement does not reflect the features of the possessum object. Rather, it reflects the features of the possessor nominal. In (618) below I gloss the null 1st person object agreement for clarity.

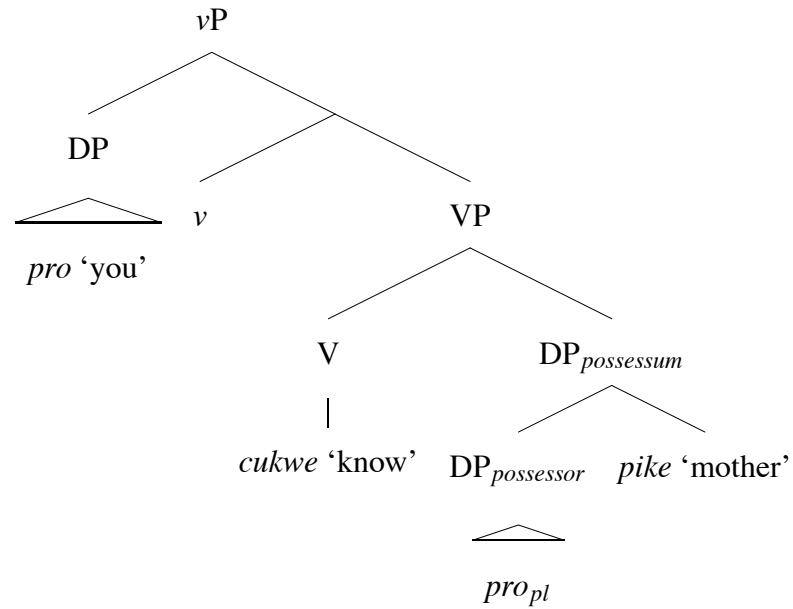
(618) tewliki-nm hi-∅-wiw-likeec-e'n-yo'qa ['iin-im
 tree-ERG 3SUBJ-1OBJ-fall[of trees]-on.top-APPL:AFF-QA.PROSP [1SG-GEN
 'iniit]
 house]
 The tree could fall on *my* house

(619) Weet 'e-nees-cukwe-ney'-se-∅ [*pro*_{pl} pike]
 Y.N 3OBJ-O.PL-know-APPL:AFF-IMPERF-PRES [(possessor) mother]
 Do you know *their* (*the children's*) mother?

(620) pee-c'ix-ne'y-se-∅ miyooxato-na c'iiqin
 3/3-speak-APPL:AFF-IMPERF-PRES chief-OBJ word
 He speaks *the chief's* words.

In view of the picture we have adopted for agreement relationships, this pattern raises the question of where the possessor nominal is located in the possessor raising structure. Is the possessor nominal plausibly located closest to v —closer than the possessum nominal? A quite simple structure that would place the possessor DP structurally closer to v than the possessum DP could look like (621), for sentence (619).

(621)



Given our definition of c-command in (528), $DP_{possessor}$ in this phrase marker is structurally the second-highest nominal in vP . Structure (621) therefore predicts that the possessor DP will participate in object agreement; given that object agreement is linked to objective case in Nez Perce (our *Object Case Generalization*, (562)), we could imagine that this agreement relationship also explains the objective case that surfaces on the possessor phrase in examples like (620).

Yet this attractively simple structural treatment is frustrated by the fact that the possessor raising verb is never morphologically simple in Nez Perce.⁶ Recall Rude’s observation that object possessor raising sentences are invariably applicative sentences – applicative sentences with affected argument applicative suffix *’ey*, in particular. Morphologically, the verb in (618) behaves like its counterparts in (622)-(623).⁷

(622) *’e-hiteeme-nee’y-se-∅* *siisel-ne tiim’es*
 3OBJ-read-APPL:AFF-IMPERF-PRES Cecil-OBJ book
 I’m reading Cecil the book (Crook, 1999, 178)

(623) *’e-npe-e’ny-∅-e* *Angel-ne tam’aamin*
 3OBJ-buy-APPL:AFF-P-REM.PAST Angel-OBJ cake
 I bought a cake for Angel

In sentence (622) the applicative suffix *ey’* introduces a DP, *Cecil*, whose referent is affected by a reading of the book. In section 5.3.3, I proposed to treat applicative sentences like this one with phrase markers as in (625). To prefigure some of the semantic discussion to come, I have added step-by-step semantic interpretations for each node. The applicative meaning,

⁶The required morphological complexity of the possessor raising verb is not a universal in constructions where possessor phrases show unusual case and/or agreement behavior. It could be, therefore, that structures like (621) are indeed what feeds object agreement and perhaps also case of an apparently exceptional sort in possessor constructions in certain other languages. This analysis could be applicable to South German (dialectal) dative possessor constructions such as (i), as Angelika Kratzer (p.c.) suggests.

- (i) *Ich hab’ dem Josef seine Frau getroffen*
 I have the.DAT Joseph his woman met
 I met Josef’s wife

In this sentence the possessor phrase *dem Josef* bears an exceptional dative case. It cannot, however, move away from the (rest of the) possessum DP, for instance in topicalization:

- (ii) **Dem Josef hab’ ich seine Frau getroffen*
 the.DAT Joseph have I his woman met
 intended: I met Josef’s wife

If sentence (i) has a structure akin to (621), sentence (ii) can be ruled out as a left-branch island violation.

⁷The affected argument applicative is the same in (622) and (623). The segmental differences (*e’ny* versus *nee’y*) are due to allomorphy conditioned by both the segment to the right and the stem class of the constituent to the left.

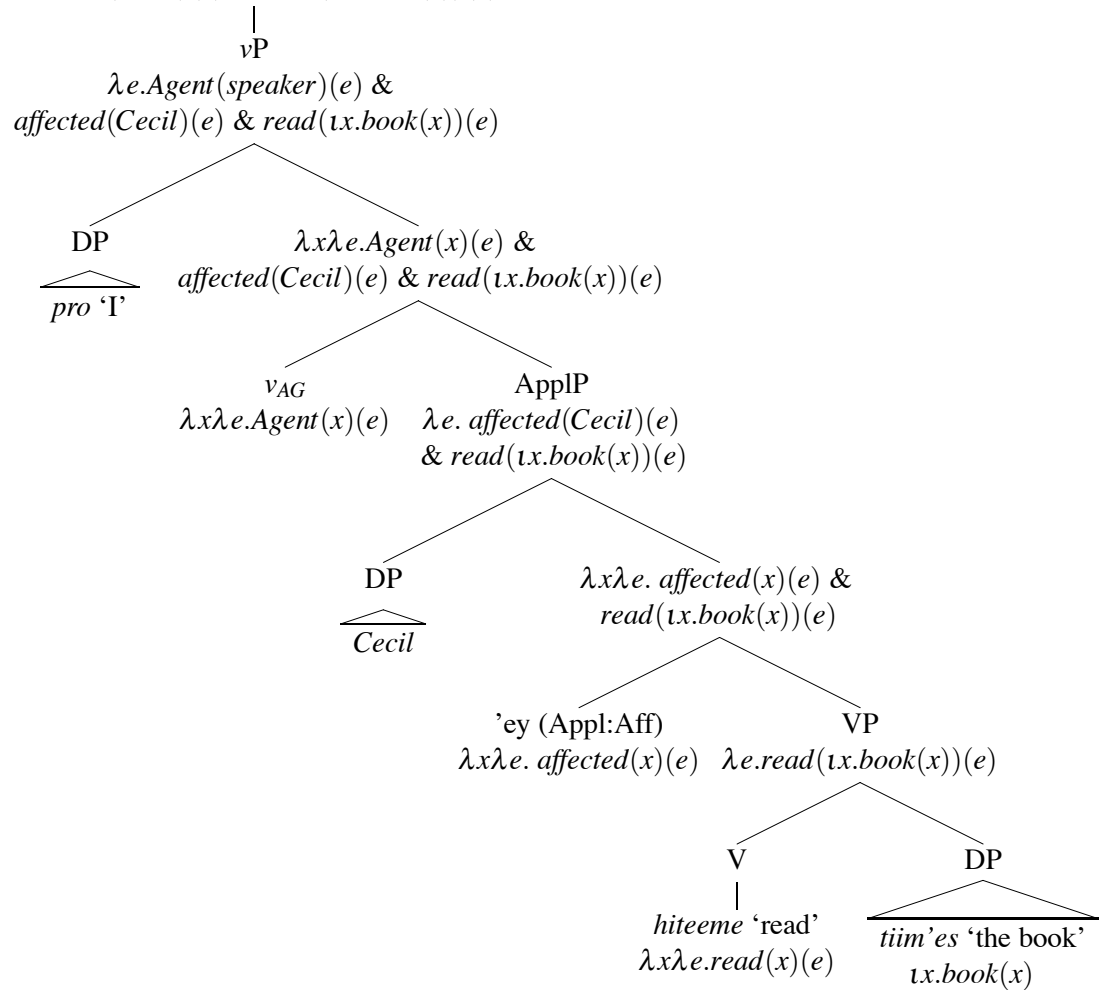
relating an individual to an event, is given in (624); other pieces follow the model of the examples discussed in section 5.3.

(624) Semantics of Appl:Aff:

$\lambda x \lambda e. affected(x)(e)$

(625) Affected argument applicative without possessor raising

$\exists e. Agent(speaker)(e) \&$
 $affected(Cecil)(e) \& read(\iota x. book(x))(e)$



possessor be an affected party.⁸ The following pair from Northern Pomo (O'Connor, 1992, 268) illustrates: without possessor raising, as in (626a), the sentence merely makes a comment about the positive appearance of the addressee's hair, but with possessor raising, as in (626b), it implicates in addition that the addressee is (positively) affected by her hair being attractive.

(626) Possessor raising and affectedness in Northern Pomo

- a. No possessor raising, no implication of affectedness:

mi? ?e:-nam k'edi p^hit'a
 you.OBL hair-D good appear
 Your hair looks nice.

Comment: "Would mean that its color, or something about it (the hair) was pretty."

- b. Possessor raising, implication of affectedness:

mito ?e:-nam k'edi p^hit'a
 you.ACC hair-D good appear
 You look nice with that hairstyle.

Comment: "Would mean it LOOKED pretty on her, not particularly the color, just that it looked nice."

If Nez Perce possessor raising is subject to a similar possessor-affectedness requirement, the presence of an affectedness applicative in the possessor raising verb falls into place. In venture, therefore, the following hypothesis about a subtle aspect of the meaning of object possessor raising sentences.

(627) *Possessor affectedness hypothesis*

⁸See Payne and Barshi (1999) and O'Connor (2007) for discussion of the generalization and typological picture. It is also sometimes proposed that the possessum must be affected in some way for possessor raising to be licit; on this point see Landau (1999) for critical discussion based on the facts in Hebrew.

Nez Perce object possessor raising sentences entail that the possessor stands in an *affectee* relation to an event in the VP denotation.

Because (unlike in Northern Pomo) object possessor raising in Nez Perce is obligatory in simple transitives (an observation due to Rude), the possessor affectedness hypothesis cannot be tested straightforwardly, as in (626), by comparing simple sentences where a possessor phrase surfaces within the object nominal with those where possessor raising takes place, bringing its associated affectedness applicative. A very curious fact about Nez Perce is that simple sentences of the former type are simply not allowed.⁹ Given the possessor affectedness hypothesis, we expect, then, that in contexts like those in (628), a periphrastic means of indicating possession will have to be called upon.¹⁰ Possessor raising will be ruled out; no alternative, simple transitive clause with a possessor phrase within the object nominal will be allowed.

(628) Test scenarios

- a. X died many years ago. I visited the town where X used to live, and I saw X's old house. Other people live there now.
- b. The dog's foot got infected and had to be amputated. The vet performed the amputation and then buried the dog's (amputated) foot.

To the degree that the possessor is *not* affected by the seeing and burying in these scenarios, an object possessive construction will be, I predict, simply impossible.

⁹This holds modulo synthetic possessives, discussed in section 6.2.3.

¹⁰Speakers do sometimes resort to periphrastic expressions of possession other cases, as (i) exemplifies.

(i) Prompt: Where is the girl whose cat ran away?

Mine hii-we-s- \emptyset pit'iin' ke yo \hat{x} 'uu- \emptyset -s- \emptyset picpic kaa
where 3SUBJ-be-P-PRES girl REL DEM 3GEN-be-P-PRES cat and
hi-wuyi-n-e
3SUBJ-run.away-P-REM.PAST
lit. Where is the girl that had a cat and it ran away?

The tree is going to fall on *the woman's* house

Now, for this first challenge to rise to the level of a serious argument, we would have to be assured of two auxiliary facts. We would first need to assure that genitive forms like *'ipnim* 'his/her/its' are purely pronominal, and not subject to an alternative, anaphoric analysis. Importantly, it does indeed appear that such proforms can be used as bound possessor terms in extended reflexives.

(633) pit'iin' hi-'yaaŋ-n-a ['ip-nim picpic]
girl 3SUBJ-find-P-REM.PAST [3SG-GEN cat]
The girl_i found her_i cat

We would not want *'ipnim* 'her' to be subject to condition B in this new sentence. This weakens the argument from parse (631), which relied on condition B being in force.

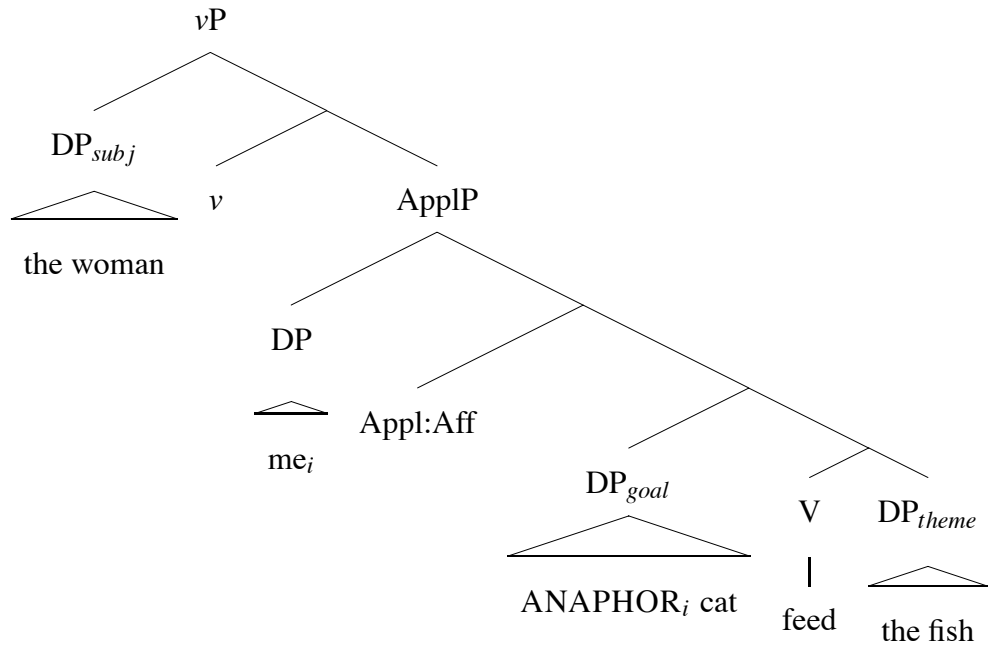
Condition C turns out to raise similar problems. Condition C effects are known to be absent or mitigated in various languages of the Pacific Northwest; a particularly nice case is made for Nuu-chah-nulth by Davis et al. (2007). Like a handful of other non-trivial semantic and syntactic properties, this complication is plausibly areal in scope. There is preliminary evidence that Nez Perce also allows violations or mitigations of Condition C.

(634) hi-wahoo-no' ke-m kaa 'e-wehne-ce-∅ ciq'aamqal-na
3SUBJ-howl-PROSP REL-2SG then 3OBJ-leave-IMPERF-PRES dog-OBJ
The dog will howl when you are leaving him.
lit. He'll howl when you are leaving the dog.

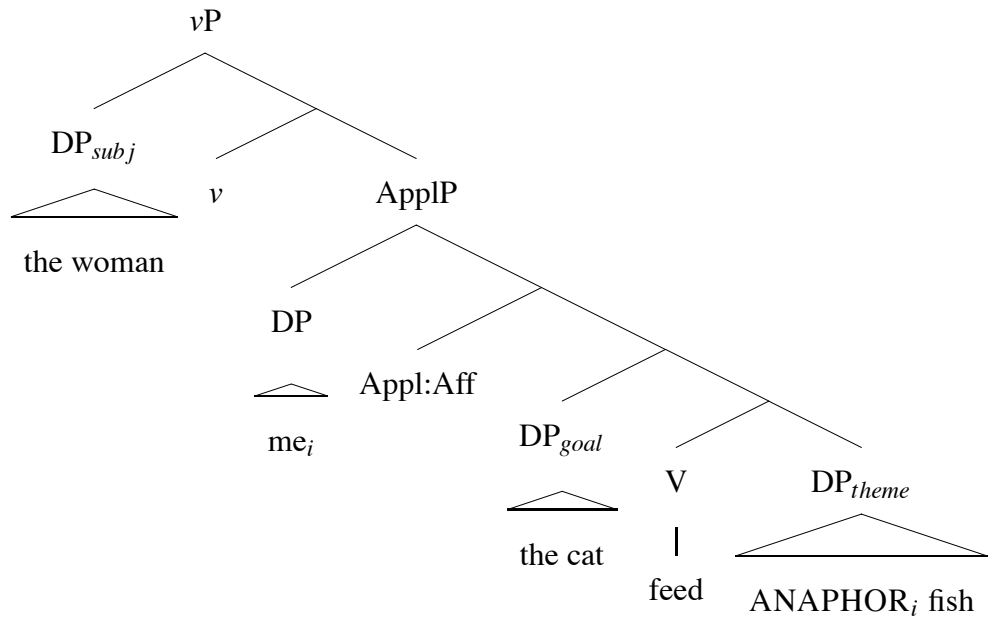
While not yet conclusive, sentences like this one should lead us to a precautionary rejection of arguments that accord too central a role to Condition C. It may well turn out that this condition is simply not in force in the language.

Two additional, related challenges to the proposal in (629b) crop up independently of genitive-possessor variants like (630) and the binding-theoretic issues they entail. First, merely positing an anaphor in possessor position is not enough to derive the interpretation

(637)



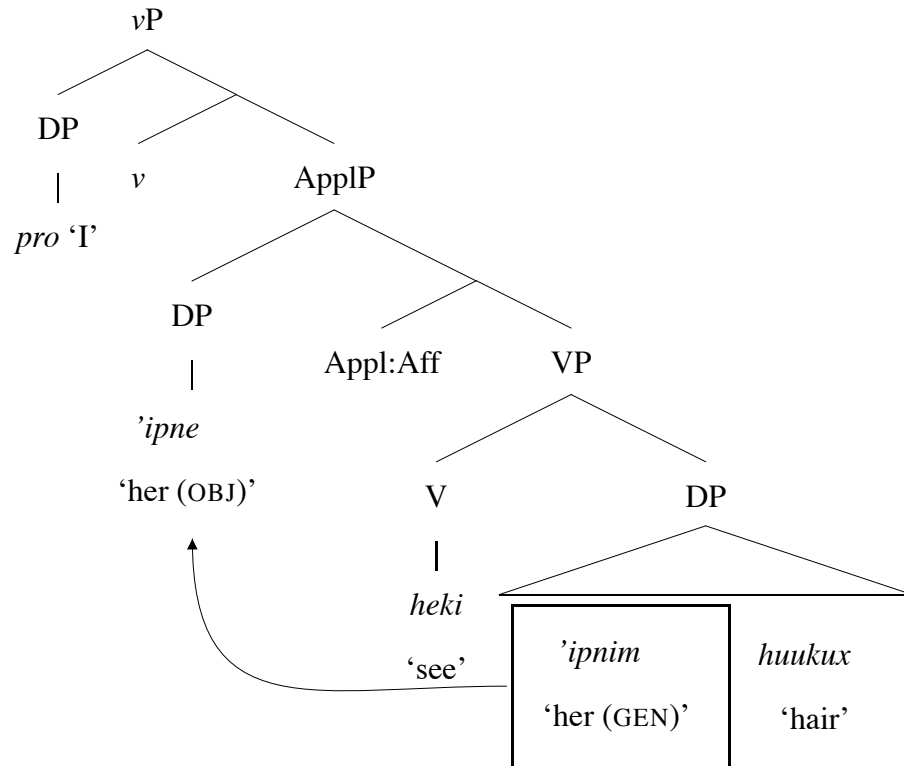
(638) *



The stipulations that would have to be added to the independent anaphor approach to ensure its descriptive adequacy in the face of these constraints would have to take something like the following form:

- i. The nominal in possessor position must be anaphorically dependent on the nominal in Spec,ApplP (not on some other nominal in the clause, for instance a subject).

(640)



The movement analysis squares with the derivational treatment of possessor raising that has been argued to be necessary in various languages (see Szabolcsi (1984) on Hungarian, Landau (1999) on Hebrew, and Ravinsky (2007) on Nu-chah-nulth). It has interesting consequences for the way we treat the syntax of possession in Nez Perce—consequences that will prove crucial to our account of extended reflexive. Before we adopt it, we will want to establish that the revised analysis leads to improvements in the various areas where the independent anaphor approach stumbled. In particular, we will want to establish the following:

1. The movement analysis lets us explain why possessor raising sentences do not run afoul of the binding theory (in whatever version proves empirically adequate).
2. The movement analysis gives us the means to account for both objective marking and genitive marking on affectee/possessor nominals.
3. The movement analysis explains why possessor raising is only possible from nominals that would, were the possessor phrase not present, participate in object agreement.

6.2.2.1 Binding and copies

While it is true that—particularly with respect to condition C—the precise form of the binding conditions that we will want to adopt for Nez Perce (and perhaps in general) has not yet been established, the adoption of a movement approach puts us in a position where considerations of binding are largely orthogonal to our analysis of possessor raising. This is because movement generally absolves us of binding theoretic violations by granting a special status to the two (or more) parts of the movement dependency. The form of this special status depends on our precise theory of such dependencies, henceforth *chains*.

The movement theory of Chomsky (1981) granted a special binding status to chains in virtue of a special representation for their non-topmost members. All instances of a moving element other than the structurally highest are to be represented using a special anaphoric element, a *trace*. Of course, positing movement which leaves a trace in the base position is a variant of the proposal we started with above, and faces a challenge in the form of genitive-type possessor raising sentences. In these cases there looks to be a full nominal in the lower, possessor position, rather than a simple anaphoric trace element.

Syntactic theory in the last two decades has largely moved to a different conception of how movement chains are formed. The move changes the form of the binding-theoretic question. According to this new conception, rather than involving traces, movement creates chains consisting of *copies* of the moving element (Chomsky, 1995). A number of proposals have been put forward regarding why it is that the lower copy in an A-movement structure like (640) does not trigger a principle C violation, given that it is bound by the higher copy in the chain. The issue is not tied to the cross-linguistic viability of principle C, but rather is a general problem of A-movement: the relationship between two copies of the same element does not trigger a binding violation even in languages like English where condition C is generally in force.

- (641) a. Vernon was [_{VP} kissed ~~Vernon~~]
b. Vernon seemed [_{TP} ~~Vernon~~ to smile]

In the face of such examples, Hornstein (1995, 186) proposes that copies in A-chains can be freely deleted. A variant of this proposal according to which copies in A-chains are not deleted per se, but systematically rendered invisible for purposes of binding, would suffice for the case at hand. Safir (2004, ch 5) proposes that copies of R-expressions in A-chains can undergo a process of *vehicle change* (Fiengo and May, 1994) transforming them into pronominals, which (together with a modification of principle B) allows them to escape binding violations. A similar approach is pursued in a semantically more explicit way by Takahashi (2006).

6.2.2.2 Multiply case-marked chains

The movement analysis raises a series of questions about the interaction of movement with case-marking. That there should be two means of case-marking the moved nominal, objective and genitive, seems to be a straightforward reflection of the fact that the two copies in the movement chain occupy positions associated with different case properties. Applicative arguments mark objective; possessor nominals mark genitive. This may give us pause. Should movement even be licit in this circumstance?

Certainly, according to the classic GB case theory of Chomsky (1981), multiply case-marked chains are expressly ruled out. While there are indeed languages that conform to the classic case-theoretic approach on this point, English being a (surely noncoincidental) example, in fact a range of languages do seem to allow movement from a position associated with one case to a position associated with another. Bejar and Massam (1999) provide a typology of languages which show such behavior, bringing together nearly two decades of investigation in this area. The examples on which these authors focus are largely instances of cross-clausal raising. We see one of their Niuean pairs below, demonstrating raising from a position where ergative is observed to a position where absolutive is observed.

- (642) a. Teitei [ke fakatau [e Sione] taha fale]
 nearly [SUBJUNCTIVE buy [ERG Sione] one house]

It nearly happened that Sione bought a house

- b. Teitei [a Sione] [ke fakatau ~~e-Sione~~ taha fale]
 nearly ABS Sione [SUBJUNCTIVE buy one house]
 Sione nearly bought a house

How can we predict which case form a nominal will surface in, if it is part of a chain marked with two cases? Bejar and Massam observe a high degree of consistency across languages on this count: the moved nominal surfaces in the case associated with the higher position (here absolutive), rather than that associated with the base position (here ergative). It can be no accident that the link of the chain that is pronounced bears the case appropriate to its own structural position; a nominal is not pronounced in one position with the case appropriate to a distinct position occupied by part of its movement chain. In other terms, the generalization that the higher position's case prevails looks like a natural consequence of overt displacement in movement. Given Bejar and Massam's data, we could just as easily state the generalization in a modified form: *a moved nominal surfaces in the case associated with the position in which it is pronounced*. Thus we would expect that when a Nez Perce raised possessor nominal surfaces in objective case, it is the head of the movement chain that is pronounced. In Spec,ApplP we pronounce the nominal 'ipi 'her'; we do not pronounce the tail of the chain in DP-internal position.

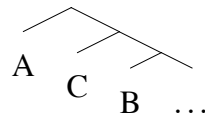
- (643) a. 'a-x-nay'-sa-qa 'ip-ne huukux
 3OBJ-see-APPL:AFF-IMPERF-REC.PAST 3sg-OBJ hair
 I saw *her* hair.
 b. [_{VP} I [_v [_{ApplP} her [Appl:Aff [_{VP} see [_{DP} ~~her~~ hair]]]]]]

What would happen if a nominal remained in its base position in overt syntax but moved covertly to a position associated with a different case? Suppose we understand covert movement as involving the same type of chain formation rule as in overt movement, but with a difference in pronunciation, as argued by Bobaljik (2002). In overt movement, we pronounce the higher copy, whereas in covert movement, we pronounce the lower copy.

a head like *v*, which participates in Agree under c-command, must enter into an agreement relation with the closest nominal, closeness being defined in terms of asymmetric c-command:

(645) Relative locality

A head A cannot participate in Agree with a nominal B if there is a nominal C which A asymmetrically c-commands and which asymmetrically c-commands B.



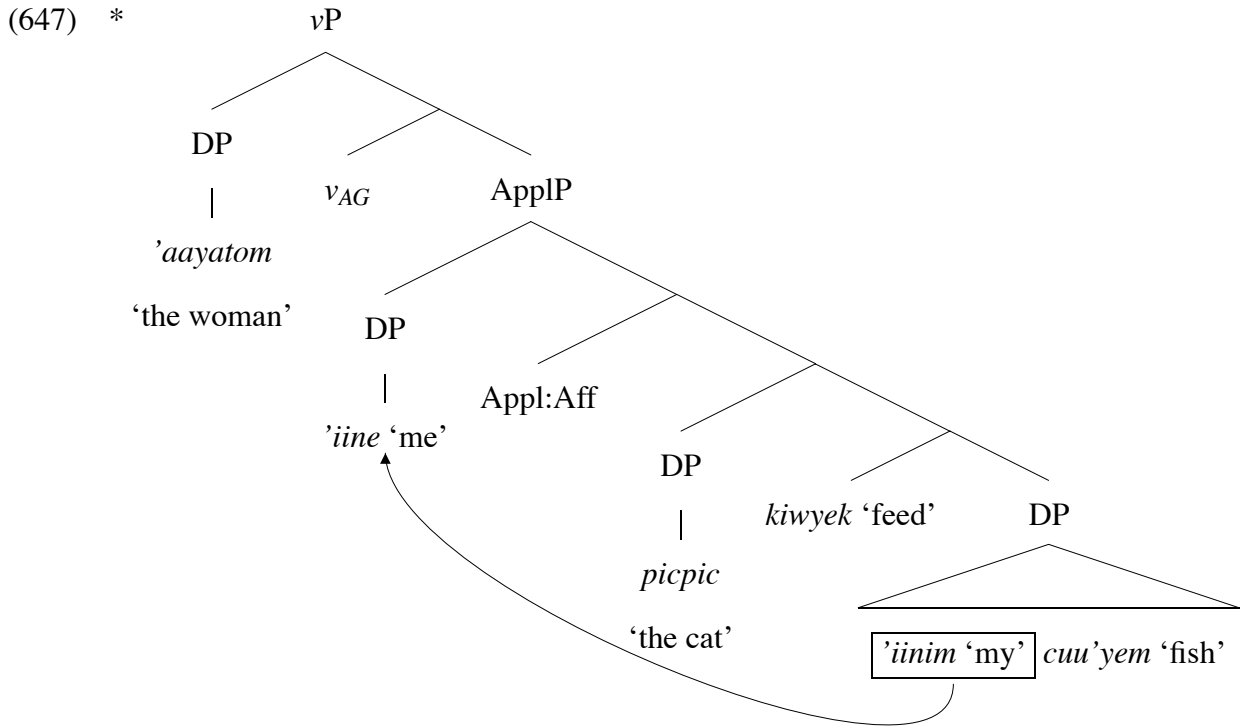
Building relative locality into our Agree operation helps us understand why in ditransitives object agreement is controlled by goal/source nominals, but not theme nominals. The object agreement relation can only be established between *v* and the nominal in its c-command domain that is closest to it. Possessor raising, as (ii) makes clear, is subject to a very similar constraint. Consider the structure that would be required for the unattested reading of ditransitive possessor raising sentence (646).

(646) 'aayat-om hi-kiwyek-ey'-k-se- \emptyset 'iin-e picpic cuu'yem.

woman-ERG 3SUBJ-feed-APPL:AFF-SF-IMPERF-PRES 1SG-OBJ cat fish

The woman fed *my* cat the fish.

*The woman fed the cat *my* fish.

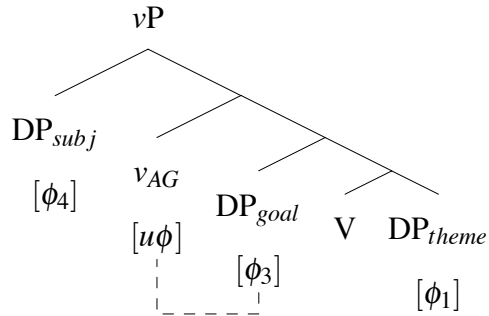


In (ii), we stated what went wrong in a case like this descriptively by pointing out that the goal nominal *picpic* ‘the cat’ intervenes between Appl:Aff and the lower possessor nominal. But why should the grammar be sensitive to *that* relationship? Perhaps for the same reason it is sensitive to the relationship between *v* and the nominal controlling object agreement. In both cases, an agreement relationship is established.

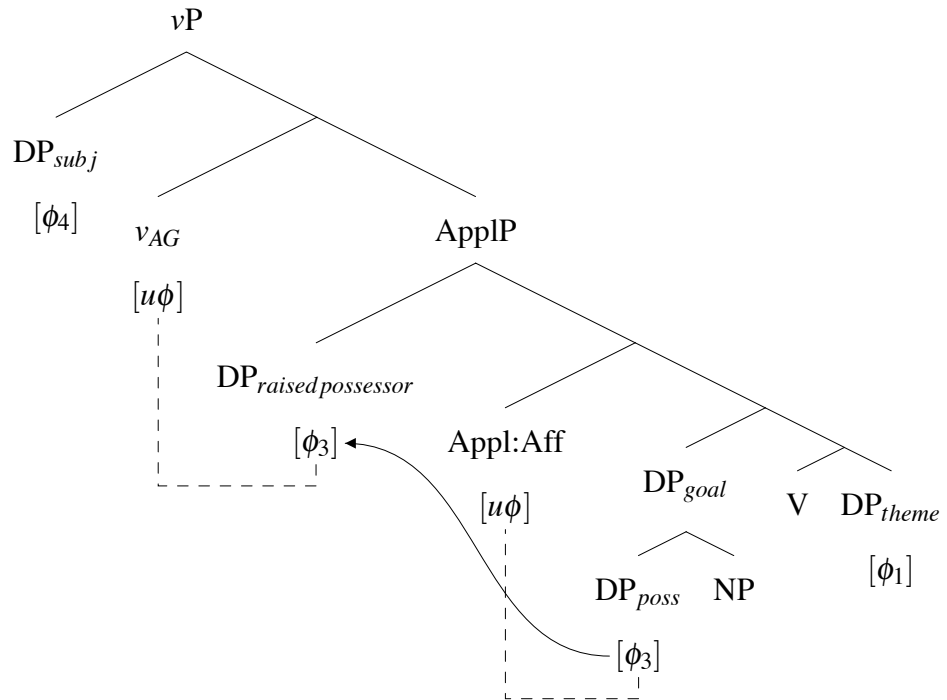
Non-reflexive *v* heads, we proposed, are marked for participation in the object agreement system in virtue of the unvalued features $[u\phi]$ that make up part of their lexical entries. This built-in deficiency (i.e., that its features lack a value) leads *v* to enter into an Agree relation with the closest nominal in its c-command domain—a relationship with consequences for the morphology of the verb. Suppose the applicative head we find in possessor raising were similarly featurally deficient. Then we expect that it, too, would seek out the closest nominal with which it might establish an Agree relationship. We do not see any trace of that relationship in the morphology of Appl:Aff, but maybe we see the same effect in a rather different way. When Appl:Aff enters into an Agree relationship with a nominal, that nominal has to move – be copied – into the specifier of ApplP. Movement of agreement controllers could be seen as simply a funny way of spelling out the relation established by

DP within this nominal is targeted by agreement, and raised to Spec,Appl:Aff (where it is closest to and agrees with *v*).

(650) a. Ditransitive without Appl:Aff (No possessor raising)

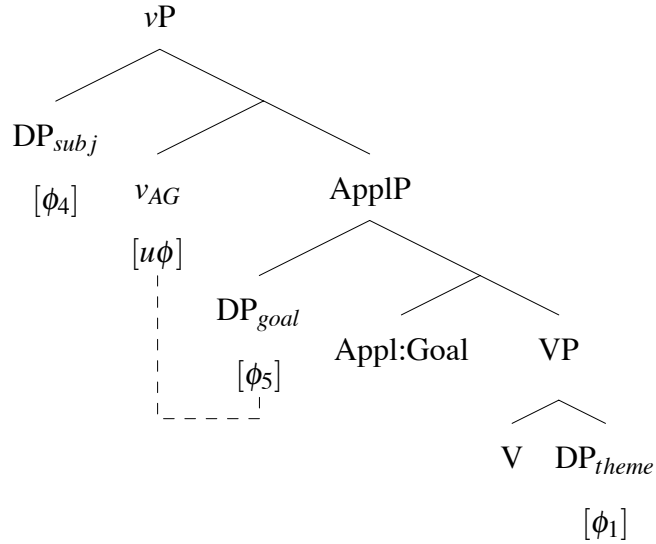


b. Ditransitive with Appl:Aff (Possessor raising)

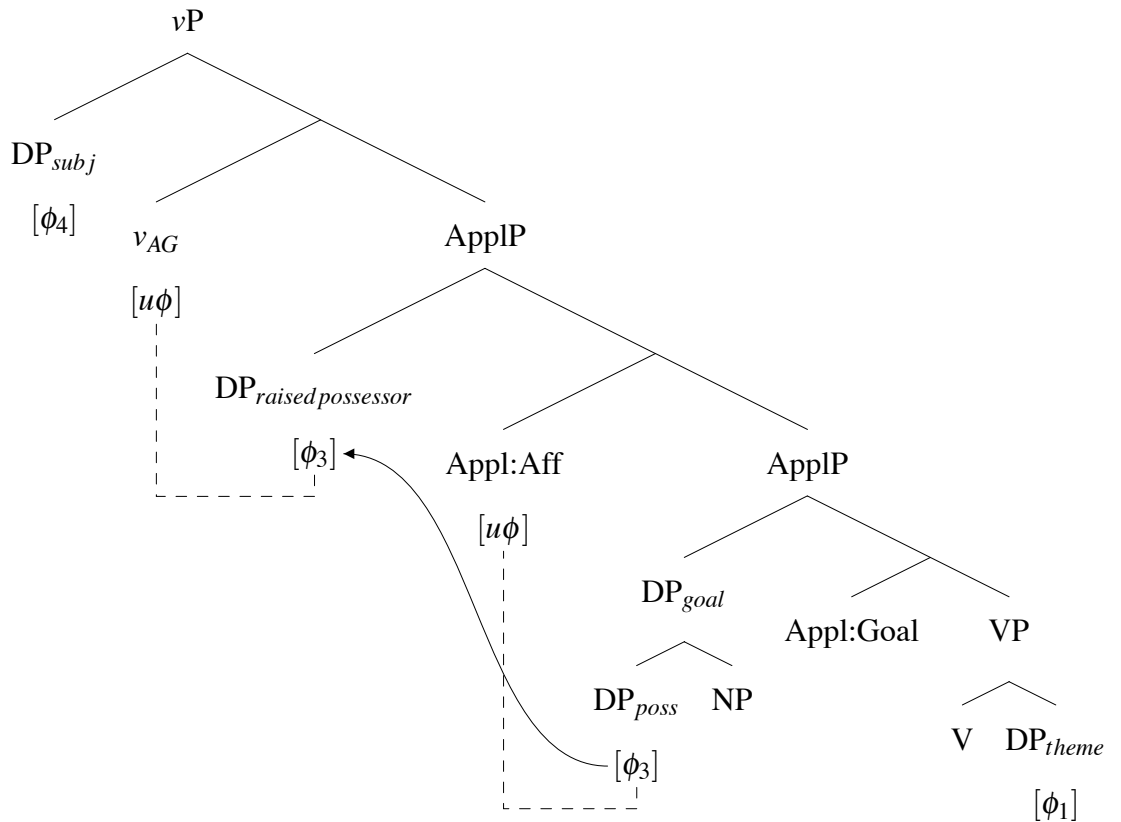


Likewise, what is closest to *v* in an Appl:Goal structure without Appl:Aff is closest to Appl:Aff when it is present.

(651) a. Goal applicative construction without Appl:Aff (No possessor raising)



b. Goal applicative construction with Appl:Aff (Possessor raising)



Now we know, then, why the Object Possessor Generalization should be stated in terms of nominals otherwise controlling object agreement. When Appl:Aff is present, these are the nominals that are closest to it.

(652) *Object Possessor Generalization*

When an independent possessor nominal is added to the nominal controlling object agreement, agreement becomes controlled by the possessor nominal, rather than the possessum nominal.

This partial picture from relative locality still leaves an important area quite mysterious, however. If Appl:Aff agrees with the nominal that is closest to it, why should this be a possessor nominal, rather than the possessum nominal that includes it? We come to this question now.

6.2.3 The structure of possessive DPs

The movement analysis of possessor raising, if correct, places constraints on the possible structures for possessive DPs in Nez Perce. This is a topic about which we have so far said little, but which will prove crucial to our account of the extended reflexive construction. The movement analysis of possessor raising leads us in particular to the following conclusions:

1. The structure of possessive DPs must be asymmetric. The possessum and possessor nominals must not c-command each other.
2. The structures of possessive DPs must be diverse. Possessive subjects and objects systematically differ; analytic and synthetic possessives differ.

Possessive DPs must be structured asymmetrically to account for pervasive agreement asymmetries between possessor and possessum nominals. A possessive occupying object position permits agreement with the possessor nominal, leading to possessor raising, but does *not* permit agreement with the possessum nominal. We see this in the ungrammaticality of sentences like (653), where we see person agreement with the possessum nominal, rather than the possessor nominal.

- (653) * 'aayat-om pee-kiwyek-('ey-k-)se- \emptyset ['iin-im picpic-ne]
 woman-ERG 3/3-feed-(APPL:AFF-SF-)IMPERF-PRES [1SG-GEN cat-OBJ]
 cuu'yem.
 fish
 The woman fed *my cat* the fish.

We would not want a symmetric structure permitting agreement with either possessor or possessum nominal in object position, then. The possessor nominal must be close enough to higher heads to agree with them (for this is what drives raising to the applicative projection), and the possessum nominal must not be.

A minimal structure for possessive object DPs that deals with this asymmetry might look like (654).



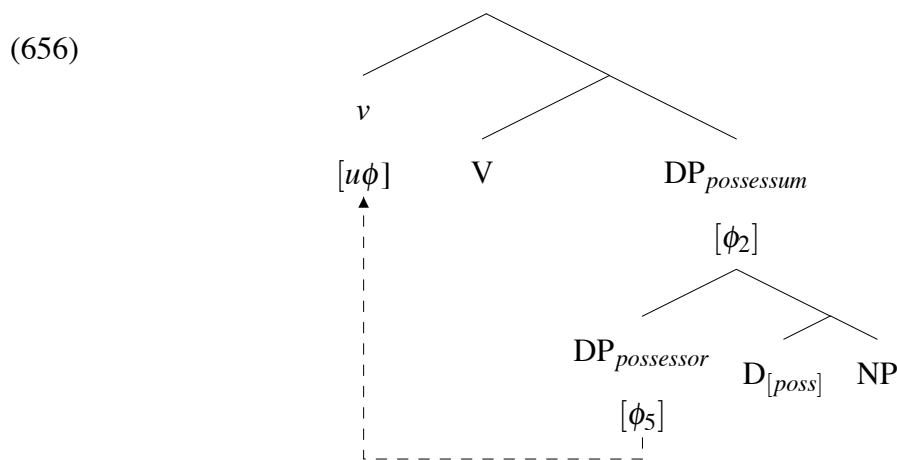
This structure follows Barker's (1995) proposal for the structure of the prenominal ("Saxon") possessive construction in modern English. The head $D_{[poss]}$ stands for a class of special possessive determiners which (in addition to traditional determiner meaning) provide a way of relating the possessor DP's denotation to the NP denotation.¹³ The determiner head projects a DP whose specifier position is occupied by the possessor DP. That this should give us an asymmetric structure falls out from our definition of c-command (repeated from (528)), which gives the general result that specifiers asymmetrically c-command the projections they specify.

(655) C-command

A c-commands B iff every branching node dominating A reflexively dominates B and A does not dominate B.

¹³To be clear, this is Barker's position only without the parenthesized material.

In (654), $DP_{possessor}$ does not dominate $DP_{possessum}$, and every branching node dominating $DP_{possessor}$ – here, only $DP_{possessum}$ itself – reflexively dominates $DP_{possessor}$. So $DP_{possessor}$ c-commands $DP_{possessum}$ in (654). This c-command is asymmetric: $DP_{possessum}$ dominates $DP_{possessor}$ and so is barred from c-commanding it by the definition of c-command. Therefore, when a structure like (654) appears in object position, agreement with the possessum nominal is ruled out as a matter of relative locality. That $DP_{possessor}$'s features appear graphically higher in the tree should not mislead us; $DP_{possessum}$ is the nominal structurally closest to v .

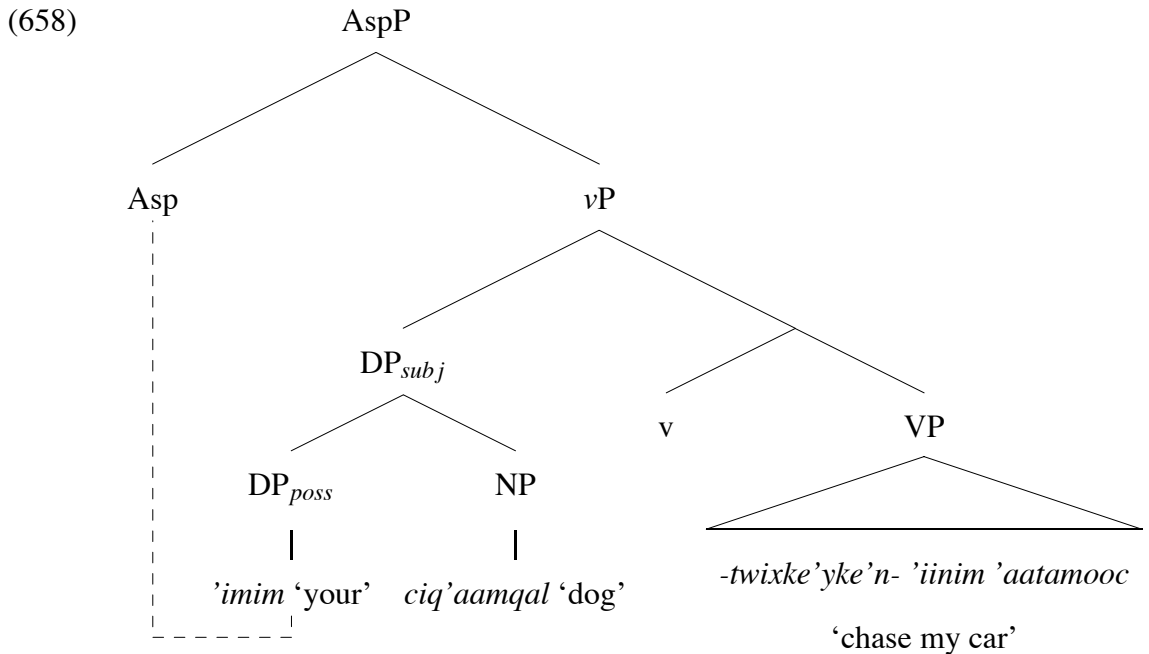


Again: object agreement head v cannot participate in Agree with $DP_{possessum}$ due to the intervention of $DP_{possessor}$, which v asymmetrically c-commands and which asymmetrically c-commands $DP_{possessum}$.

Possessive DPs must be structurally diverse to account for variation in agreement behavior between possessive DPs along two parameters. First, the agreement behavior of possessive transitive subjects systematically differs from that of possessive objects. While possessive objects allow only agreement with the possessor nominal (witness the ungrammaticality of possessum agreement in (653)), possessives that serve as subjects of transitive clauses allow only agreement with the possessum nominal. We see this in the following example, where the possessor is 2nd person and the possessum 3rd person; note that only 3rd person (possessum) agreement is possible.

(657) 'im-im ciq'aamqal hi-twix-ke'y-k-e'n-Ø-ye /
 2SG-GEN dog 3SUBJ-follow-go-SF-APPL:AFF-P-REM.PAST /
 *Ø-tiwix-ke'y-k-e'n-Ø-ye 'iinim 'aatamooc
 *1/2SUBJ-follow-go-SF-APPL:AFF-P-REM.PAST 1SG-GEN car
 Your dog chased my car.

We would not predict this pattern if possessor nominals *always* c-commanded possessum nominals, as in a structure like (654). We would expect that the subject agreement head – *ex hypothesi*, Aspect – would enter into an Agree relationship with the subject possessor phrase:

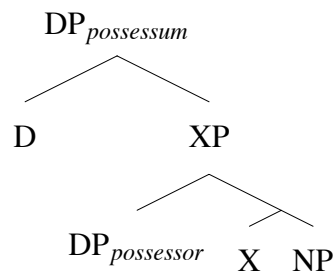


By the ungrammaticality of subject possessor agreement in (657) we see both that structure (658) must be ruled out and that an additional possessive structure must be posited for the language.

The need to posit more than one structure for possessive DPs in a single language should come as no surprise. Indeed it has become clear on the basis of a number of examples that single languages often make use of a range of possessive structures in different contexts

and with slightly varied meanings.¹⁴ Among the various structures posited for possessives of different types in different languages, the structure for transitive subject possessives in Nez Perce must distinguish itself in one particular respect: it must put the possessum DP's features in a position of asymmetric c-command over the possessor DP's features. A minimal structure for transitive subject possessives that produces this asymmetry might look like (659).

(659)

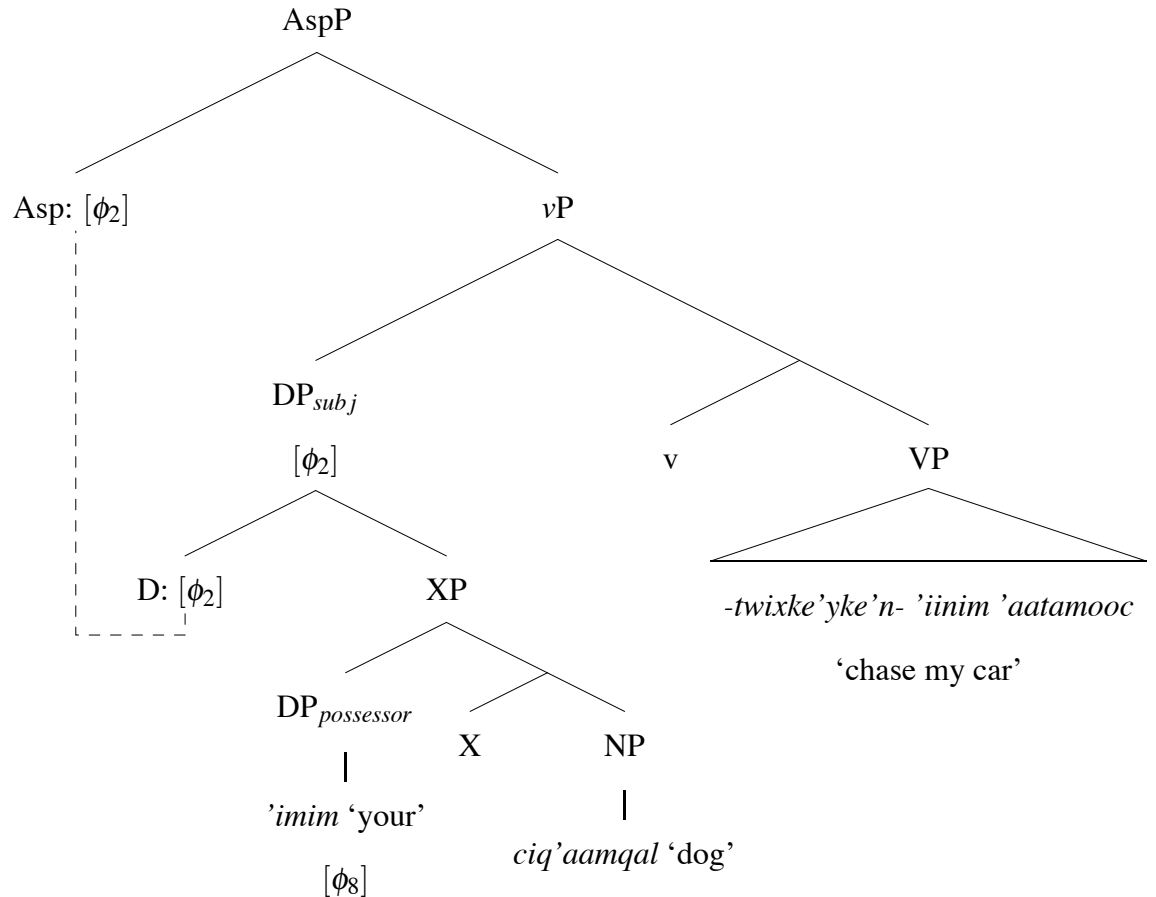


This structure follows Szabolcsi (1987) and many authors following in positing functional structure between NP and DP. The head X in (659) stands for one of a range of DP-internal functional heads.¹⁵ It would be reasonable to suppose that, like the special possessive determiner class $D_{[poss]}$, the head X has the semantic function of relating the possessor DP's denotation to the NP denotation. Unlike in structure (654), however, where this semantic function was rolled together with determiner meaning, in structure (659) X and the determiner are functionally separate. Their separation puts the possessor DP in a position of being asymmetrically c-commanded not by the overall $DP_{possessum}$ (as $DP_{possessum}$ dominates $DP_{possessor}$), but by its featurally identical head D. Therefore we expect that the head D will participate in Agree with Aspect; agreement with the possessor DP would violate relative locality.

¹⁴See Cardinaletti (1998), Delsing (1998), Julien (2005) for discussion of variation along morphosyntactic parameters, and Barker (1995) for some discussion of semantic variation between possessive structures in English.

¹⁵On the range of such animals, see Ritter (1991), Cinque (1994), the papers in Alexiadou and Wilder (1998) and Cinque (2002).

(660)



Why should (660) be a licit structure for a possessive in subject position, whereas (658) is not? The genitive constructions that are legal for subjects and for objects differ in their syntax but seem to express the same meaning. The choice between them must then be made by a syntactic or morphological mechanism of selection. How precisely this mechanism is to be implemented is likely to come down to certain complexities in the behavior of *intransitive* subjects. That topic has been treated by Rude (1986a, 1999) and I don't have much to add here. The proper means of constraining the distribution of possessive structures must remain a topic for future research, then.

The second parameter of diversity among possessive DPs distinguishes possessives not by their syntactic distribution but by their morphological shape. In addition to its productive possessive strategy, which involves genitive case marking on the possessor nominal, Nez Perce makes use of a special strategy for 1st and 2nd person possessors plus various kinship

terms. Special kinship possessives are synthetic forms made up of bound stems (several of them strikingly different in form from the corresponding free stems) and bound possessor prefixes. Independent, genitive-marked possessor nominals do not co-occur with the bound prefixes.¹⁶ There are, therefore, two entirely distinct ways to say ‘my father’ or ‘your father’ in Nez Perce: using the productive analytic (genitive) strategy, as in (661), or the special kinship term strategy, as in (662).

(661) Productive possessive marking:

- a. 'iin-im pist
1SG-GEN father
‘my father’
- b. 'im-im pist
2SG-GEN father
‘your father’

(662) Special kinship term marking:

- a. na-'toot
1SG-father
‘my father’
- b. im-'toot
2SG-father
‘your father’

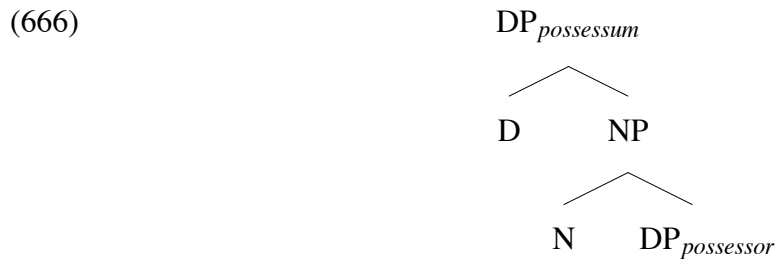
Synthetic possessives occur in both subject and object position. Regardless of their position, they show possessum agreement.

¹⁶I have not found any cases of synthetic kinship terms with independent possessives in textual corpora I have examined, nor have they been reported in previous grammatical descriptions. One consultant accepts (though never produces) forms such as (i); another rejects them.

(i) % 'iin-im ne'-iic
1SG-GEN 1SG-mother
intended: my mother

- (663) hoom nama 'etye leehey 'imam-yaas hi-'nehpinim-se-Ø.
 oh how certainly long 2PL-brother 3SUBJ-sleep-IMPERF-PRES
 Oh, *your brother* certainly is sleeping for a long time! (Aoki and Walker, 1989, 258)
- (664) hu'-ku'-x taɣc na'-yaaca-m hi-waapciy'aw-no'
 or-DUNNO-1SG soon 1SG-older.brother-ERG 3SUBJ-kill-PROSP
 or maybe *my older brother* will kill me. (Aoki and Walker, 1989, 558)
- (665) 'im-'iis-ep pa-'ploopciy'aw-n-a 'im-'toot-am
 2SG-mother-OBJ 3/3-beat.up-P-REM.PAST 2SG-father-ERG
Your father beat up *your mother*. (Aoki and Walker, 1989, 374)

Given their agreement properties, synthetic possessives require a structural analysis where the possessum nominal asymmetrically c-commands the possessee nominal, as is the case in subject possessive structure (659). Since kinship terms are relational nouns, the structure of kinship possessives could be extremely simple. The possessor DP serves as an argument of the noun within NP.



This structure makes a prediction for synthetic possessives in object position. They should not support possessor raising. In order for possessor raising to take place, Appl must agree with the possessor nominal inside the possessum DP; but given the structure in (666), such agreement would induce a relative locality violation. This prediction is correct. Whereas possessor raising is typically required with possessives in object position, it does not occur where the possessive is synthetic. We see this in (665), in (667), and in the near-minimal pair in (668) from Rude (1986a, 122).

(667) 'eete 'imam-yaas-ap poo-pciy'aw-ca- \emptyset

INFER 2PL-brother-OBJ 3/3-kill-IMPERF-PRES

Surely they are killing *your brother* (Aoki and Walker, 1989, 258)

(668) a. kaa waaqo' ne-'iice-p pee-tqecimk-cix- \emptyset titooqan-m

and now 1SG-mother-OBJ 3/3-dislike-IMPERF.PL-PRES Indians-ERG

And now the Indians dislike *my mother* (Aoki, 1979) [synthetic: possessum agreement]

b. kaa waaqo' 'iin-e pike hi-twecimk-e'y-cix- \emptyset

and now 1SG-OBJ mother 3SUBJ-dislike-APPL:AFF-IMPERF.PL-PRES

titooqan-m

Indians-ERG

And now the Indians dislike *my mother*. [analytic: possessor raising]

The absence of possessor raising in sentence (667) can be seen in the lack of an applicative suffix on the verb and in the pattern of object agreement with the possessum nominal (3rd person), rather than the possessor nominal (2nd person). The possessor nominal in a synthetic object possessive sentence, unlike its counterpart in an analytic object possessive sentence like (644a), is not the lower copy of a movement chain targeting an applicative projection. Such movement would have had to violate relative locality constraints on Agree.

6.2.4 Movement between θ -positions

The movement analysis of possessor raising also has some consequences from a semantic point of view. It would be fair to characterize our proposal as involving movement between θ -positions. The lower position is associated with the θ -role “possessor”, whereas the higher position is associated with the θ -role “affectee”.

Now, movement of this character, like movement between case positions, was explicitly ruled out both in Chomsky (1981)’s Government and Binding theory and in later Minimalist

work (Chomsky, 1995). This type of ban is interesting as it could be understood as a consequence of the semantics available to movement chains in natural language. Movement connecting θ -positions, should it exist, would require a slightly different semantic signature than movement connecting θ -positions only to non- θ -positions. Therefore movement between θ -positions could be ruled out purely semantically, if, say, the grammar made available a means of interpreting chains of movement from θ -positions to non- θ -positions, but not a means of interpreting movement chains connecting one θ -position to another. Structures involving movement between θ -positions might be constructed by the syntax, but they would not be semantically interpretable.

Proposals for the semantics of movement chains currently on the market are by and large designed for movement to non- θ -positions. This is the case for Fox's copy theory (2002), for instance.¹⁷ Whether this is a limitation or a success depends on the facts of natural language. The former view has become somewhat popular lately, with authors using movement between θ -positions to treat restructuring (Bošković, 1994), resultatives (Saito, 2001), control (Hornstein 1999, Boeckx and Hornstein 2004), and parasitic gaps (Nunes, 2004). Since I contend on the basis of the possessor raising construction that the ban on movement between θ -positions is not correct empirically, I will need to posit a slight revision to Fox's semantics for copy-movement dependencies, a move which in turn provides the means to understand certain of these prior proposals from a semantic point of view. (My analysis does not stand or fall with these proposals, of course, as it could be that movement between θ -positions does take place, but not in the particular contexts previous authors have identified.) This section is devoted to developing this analysis.

I'll note at the outset that, even limiting our attention to Nez Perce, the usefulness of our revision extends beyond the single issue of possessor raising. It also looks to be useful in dealing with the curious behavior of the 'bypassers' applicative *aat* that we observed in

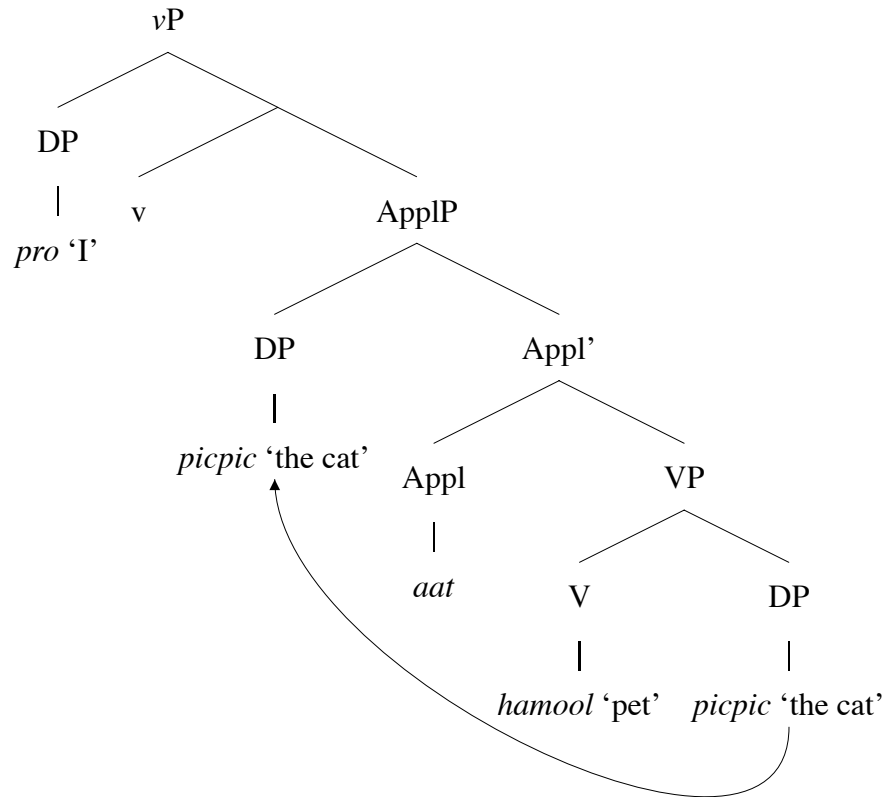
¹⁷See also Cresti (1995), Heim and Kratzer (1998), Sauerland (1998, 2004).

section 1.7.4.2. Recall that when *aat* is added to a transitive verb, the entity receiving the object θ -role must also receive the θ -role of bypasser.

- (669) a. 'a-amool-ca- \emptyset pipic-ne
 3OBJ-pet-IMPERF-PRES cat-OBJ
 I am petting the cat
- b. 'a-amol-aat-k-sa- \emptyset pipic-ne
 3OBJ-pet-APPL:BYPASSER-SF-IMPERF-PRES cat-OBJ
 I am petting the cat as it goes by
- c. * 'a-amol-aat-k-sa- \emptyset ciq'aamqal-na picpic
 3OBJ-pet-APPL:BYPASSER-SF-IMPERF-PRES dog-OBJ cat
 intended: I am petting the cat as the dog goes by

That the object participates in object agreement in applicative sentence (669b) suggests that it occupies Spec,ApplP. As in possessor raising, though, the sentence's meaning suggests that the entity receiving the applicative's θ -role must receive another θ -role as well. In this example, the cat is also the object of an event of petting, in addition to a party who passes by such an event's location. Sentence (669c) shows that *aat* applicative sentences in fact *require* this sort of role-sharing; we cannot specify separate individuals who are petted and who pass by. For this case, like for the possessor raising case, it seems reasonable to posit movement to Spec,ApplP from a θ -position, in this case the object position of the verb *hamool* 'pet'.

(670)



The two positions connected by movement in this structure, as in the structure for possessor raising, are each positions where a nominal can compose with a basic predicate of individuals. The predicates in question are basic in the sense that they are *not* created in the course of interpreting a movement dependency, in contrast to what we will see very shortly. Rather, the predicative nature of V in (670) is a matter of its lexical entry; the predicative nature of Appl' is a matter of its lexical entry and the way it composes with VP (as in (625)). Throughout the discussion I will understand θ -positions simply as positions where a DP can compose with a basic predicative node.¹⁸

6.2.4.1 How to rule movement between θ -positions out

Let's see now how it is that a semantics for movement might rule out interpreting a moved nominal in a second θ -position. As a starting place, we'll begin by building up

¹⁸Formally: In a binary-branching structure $[\gamma \alpha \beta]$, if α is a DP then its position in γ is a θ -position just in case β denotes a predicate of individuals and this denotation is not produced by a rule of index fission (defined below).

a toolkit for movement chains connecting a copy in a θ -position to a copy in a non- θ -position.

Heim and Kratzer (1998) provide an influential treatment of the semantics of such chains based on a particular way of handling DP indexing. Indexing is standardly used in describing movement dependencies to single out the nominal elements that make up a particular chain. Let us assume that all movable DPs enter the derivation marked with a numerical index drawn from the set of real numbers. This index is represented in the syntax as part of the label of a DP. So the DP corresponding to the string *the cat* can be represented as follows, where 6 is an arbitrarily chosen index:



Apart from its index, the DP *the cat* is a referential expression of type e . What does the index contribute semantically to this denotation? Heim and Kratzer propose that a DP's index is also an expression of type e . This proposal leads to a certain tension. If a DP such as $[_{DP} \text{ the cat}]$ denotes an individual, the indexed version $[_{DP} \text{ the cat}]_6$ is not a semantically interpretable object. Movement comes about as a way of resolving this uninterpretability.

A few English examples will help us get a sense for the way this proposal works. Consider first a simple A-chain connecting the base position of an unaccusative subject to Spec,TP.

(672) Joseph arrived.

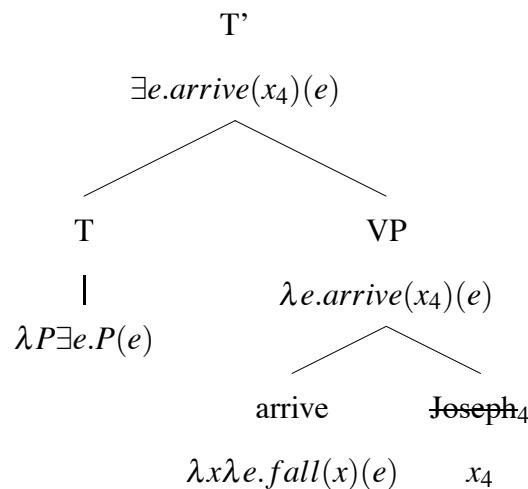
(673) $[_{TP} [_{DP} \text{ Joseph}]_4 [_{T'} \text{ T } [_{VP} \text{ arrived } [_{DP} \text{ Joseph}]_4]]]$

Given our copy theory of chain formation, when a DP moves from location A to location B in a tree, it leaves behind a copy in location A. On the Heim and Kratzer proposal, the copy $[_{DP} \text{ Joseph}]_4$ left in VP is not by itself an interpretable object. However, as the bottom of

a movement chain, it is subject to a special rule that renders it interpretable. This rule is understood to apply in the interface between the syntax and a representational level of logical form (LF). The crucial rule is formulated by Fox (2002, 67) within the copy theory of movement as an operation of *Trace Conversion*: the lower copy is converted to a referential expression which contains a bindable variable. For brevity, in my representations here, I adopt a simplification of Fox’s trace conversion rule: the lexical content of the lower copy is ignored, and it is represented at LF merely by its index. In the semantic computation, this index n is interpreted as a variable x_n , the n th variable of type e . To avoid any confusion with the full Trace Conversion proposal defended by Fox, I will call this simplified interpretation rule for lower copies by a new name, *Reduction to a Variable*.¹⁹

Once we reduce the lower copy to a variable, we can build a semantic interpretation for T’ using the event-semantic technology we introduced in section 5.3. Let us make the simplifying assumption that the semantic contribution of T⁰ is to introduce existential closure over event arguments.

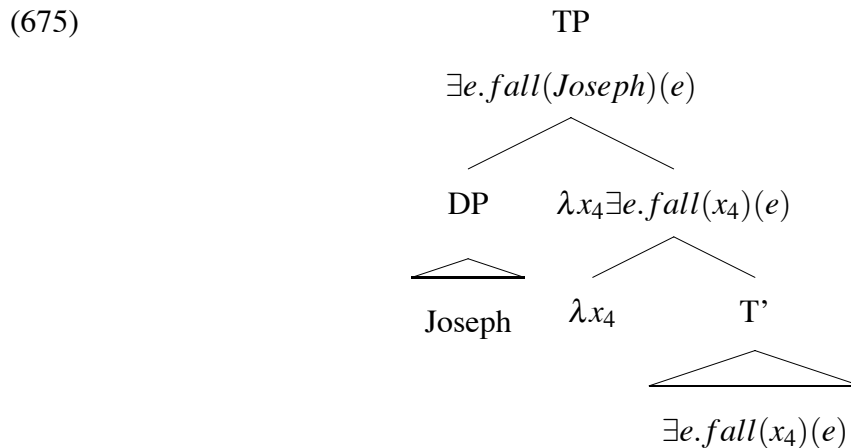
(674)



The meaning we have computed gives T’ a denotation in the domain of truth values. How, then, could the copy of [_{DP} Joseph]₄ in Spec,TP compose semantically with its sister constituent? And how does the higher copy discharge its index in a way that leads to inter-

¹⁹For arguments that lower copies ultimately deserve a richer structure than my simplified Reduction to a Variable rule grants them, see the presentation of full Trace Conversion in Fox (2002), Takahashi (2006).

pretability of the indexed structure? Heim and Kratzer propose a second interpretation rule that takes effect in this case. The index of the higher copy behaves *not as a variable but as a variable binder*. At LF, the higher copy $[_{DP} \text{Joseph}]_4$ is broken into two pieces: the DP proper, and the index. The index attaches to T' first, and is interpreted as a predicate abstractor λx_4 . (This is stated more formally below.) This abstraction creates the predicate with which the referential (unindexed) DP can compose.

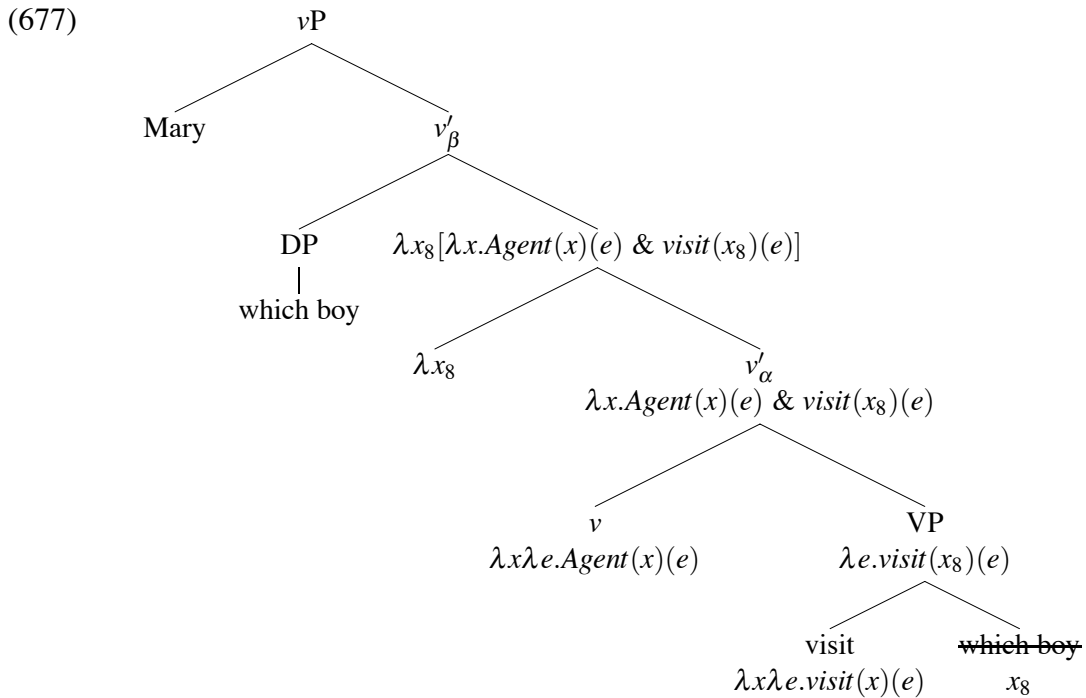


This treatment of chain semantics has two pieces: reduction to a variable for the lower copy and what we might call *index fission* and predicate abstraction for the higher copy.

We can verify that this system does not yet provide us with the means to expect movement between θ -positions – a feature that comes about by design. Suppose every instance of movement triggered both reduction to a variable (for the lower copy) and index fission (for the higher copy). Then it would not matter if a DP had moved to a position where its sister already denoted a predicate of individuals prior to index fission. Movement would still create a new, derived predicate on its own. To be concrete: Suppose in the derivation of (676) we had some reason to posit movement of the object $[\text{which boy}]_8$ to a specifier position in vP below the position occupied by the subject argument *Mary*. (This is not entirely a toy example. Generalized movement to Spec, vP is argued for by Legate (2002); that such movement should target a position below that occupied by the DP serving as the semantic argument of v is suggested by the “tucking in” approach of Richards (2001).)

(676) $[_{CP} [_{DP} \text{Which boy}]_8 [_{C'} \text{did} [_{vP} \text{Mary} [_{v'} v [_{VP} \text{see} [_{DP} \text{which boy}]_8]]]]] ?$

We fission the index as before, and interpret it as a lambda abstractor:



As we see by the step-by-step computation here, movement of the object $[which\ boy]_8$ does not result in saturation of the function expressed by v'_α . Rather, index fission creates a new predicate which composes with the moved DP *which boy*. Since the sister of $[which\ boy]$ denotes a predicate of individuals and this predicate has been produced by index fission, the moving DP does not occupy a second θ -position in this structure.

6.2.4.2 How to rule movement between θ -positions in

How should we amend this picture?

A first temptation would be to tamper with the semantics for heads of chains. In both possessor raising and *aat* applicative constructions, if a DP moves to Spec,Appl and ends its movement there, we would not want that movement to create a new, derived predicate; we would want it to saturate the predicate of individuals expressed by Appl'. (See (622) for what such a predicate might look like.) But I contend that this type of revision in and of itself would not be general enough to account for all chains linking θ -positions to other

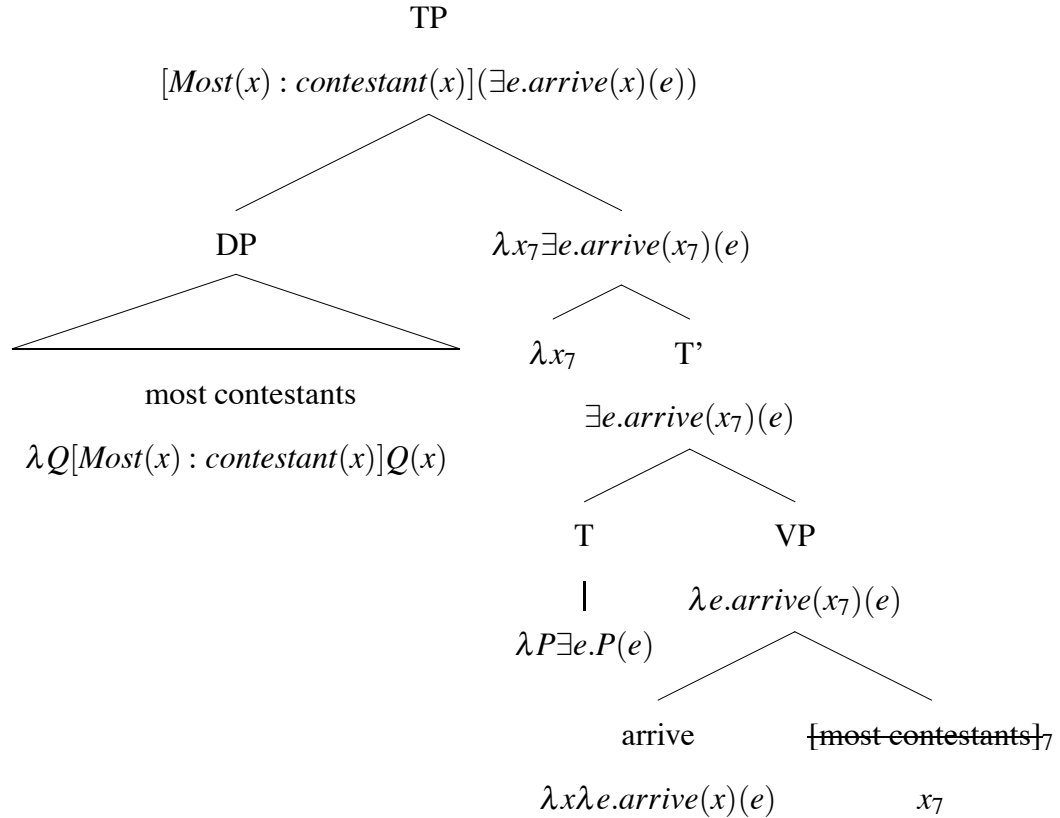
θ -positions. In at least some cases, we will need to posit chains that contain three links – a lowest copy in a θ -position, an intermediate copy also in a θ -position, and a highest copy in a non- θ -position. Our higher θ -position will not contain the head of binary chain, then, but rather an intermediate copy of a ternary chain.

Indeed the need for a semantics for ternary chains comes about quite independently of movement between θ -positions. It is required to deal with cyclic movement of various sorts. Looking closely at the semantics for ternary chains (or n-ary chains more generally) will lead us to a small extension of the reduction + fission semantics for movement dependencies. We must also have the means to delete uninterpretable indexes. It is precisely this step that is absent when we have movement between θ -positions.

The ternary chains that will be most informative from a semantic point of view are those that involve quantificational nominals. Such nominals are standardly treated as expressing functions of type $\langle et, t \rangle$ – functions from predicates of individuals to truth-values. (More elaborate quantificational meanings are certainly possible, especially given the availability of event arguments, but I'll stick wherever possible with this traditional proposal here.) In the system of chain interpretation sketched above, the scope of a moving quantificational nominal is expected to be determined by its derived position. Consider a variant of our unaccusative example with a quantificational subject. In this case, as before, we have a binary chain; the head of the chain undergoes index fission and the foot undergoes reduction to a variable.

(678) Most contestants arrived.

(679)



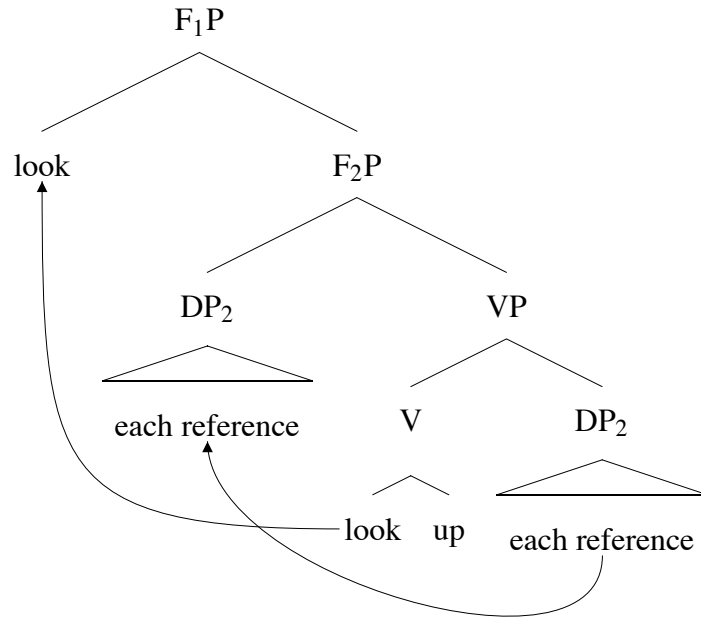
Note that as a result of movement to Spec,TP, the subject quantifier outscopes the existential closure over events introduced by T. Indeed Landman (2000) has proposed that such event quantification quite generally has narrow scope with respect to quantificational DPs.

Let's now consider a case where a quantificational nominal moves more than once, forming a ternary chain. Plausibly we find such a case in a sentence like (680).

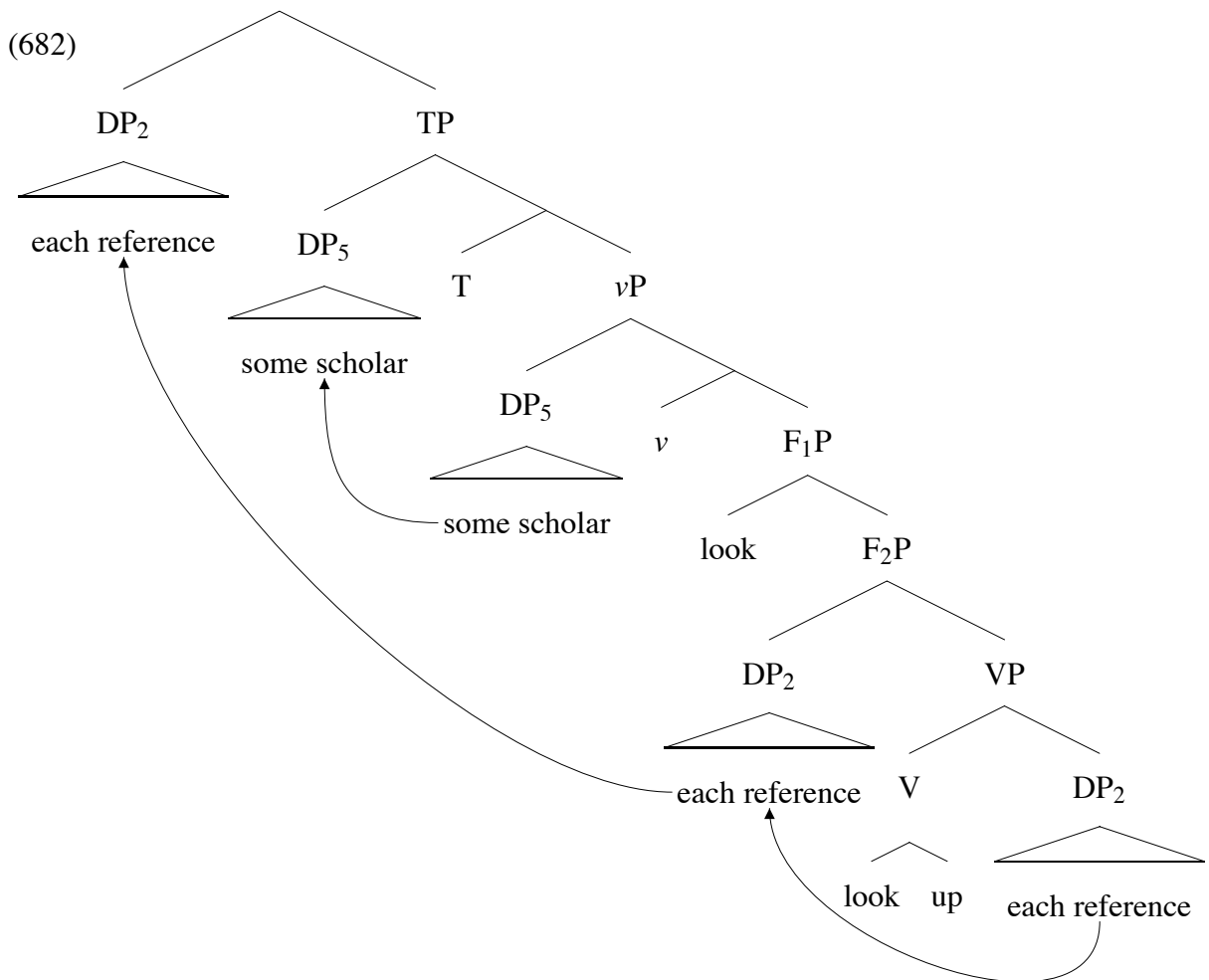
(680) Some scholar looked each reference up.

This sentence makes use of a particle verb, *look up*. According to Johnson (1991), the object in such a structure starts off sister to a complex V^0 head *look up*. Its surface position between the verb and the particle results from short A-movement of the object to a functional projection, plus head movement of the verb away from the particle.

(681)



The “object shift” of this example moves the object away from its base position, but does not yet move it quite as far as we would like. Consider a reading of (680) with inverse scope: for each reference x , there was some scholar y such that y looked x up. If we want the scope of the quantificational nominal *each reference* to be determined by its derived position, this derived position will need to be higher than that of the subject *some scholar*. The final part of the object’s movement is covert – a case of pure quantifier raising (QR). Our overall LF structure might look like (682), then.



In this structure, movement of the object DP [*each reference*]₂ forms a ternary chain. In its lowest position, the DP is sister to the complex V and receives a θ -role; in its intermediate position, it is pronounced; in its highest position, it takes scope. How is the semantics to interpret such a chain?

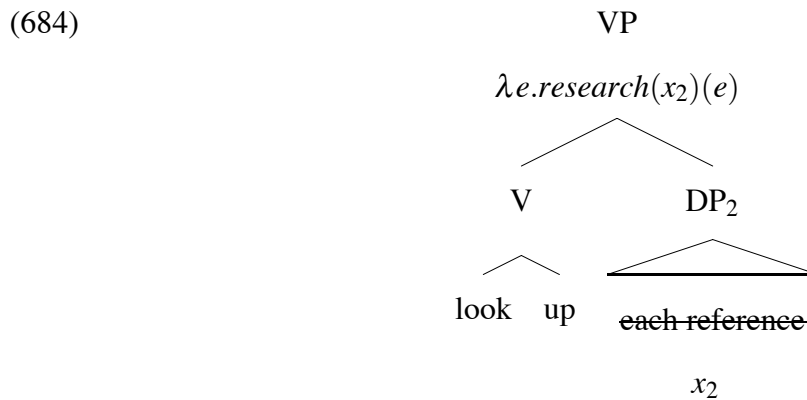
Suppose the complex verb *look up* has, so far as meaning is concerned, an unstructured lexical entry like (683) – it is a species of idiom.

(683) *look up*: $\lambda x \lambda e . research(x)(e)$

On standard assumptions about head movement, the movement of *look* away from the particle *up* will not be visible to the semantic component.²⁰ The lowest copy of the object

²⁰This is plausibly because predicate movement is always subject to reconstruction, as Matushansky (2006) proposes; and of course the effect squares well with Halle and Marantz (1993)'s and Chomsky (2000)'s proposals for treating head movement as a purely PF effect.

DP is sister to a node whose predicative meaning is a matter of lexical semantics. This copy had better undergo reduction to a variable, then, in order that the function expressed by V might be saturated. The copy's contribution is the variable x_2 .



What do we do with the intermediate copy? This copy is sister to the subtree in (684). If we let it undergo reduction to a variable, there would be no way for the variable to compose semantically with its sister constituent. If we let it undergo index fission, we would have problems on several fronts.

First, the unbound event argument of the VP will pose a technical problem, supposing as before that the quantificational DP is of type $\langle et, t \rangle$. If the DP underwent index fission with VP as its sister, the sister would come out as type $\langle e, st \rangle$. Existentially closing the event argument of VP prior to index fission repairs the type mismatch but offers no real solution, as this prevents us from subsequently using our unbound event argument to compose VP and the higher v head together. So on this tiny technical matter we end up stuck.

It would not be too drastic to allow the quantificational term an $\langle \langle e, st \rangle, st \rangle$ type, but this leads to a different set of problems. One new issue we end up faced with concerns vacuous quantification. Supposing we interpret the intermediate copy using index fission, when we come to interpret the highest copy by means of index fission, we will already have bound off the variable x_2 in object position. Since there will be no free variable for

the fissioned λx_2 term to bind, the higher quantification will be vacuous.²¹ The calculation of (682) will go as follows:

- (685) a. $\llbracket F_{2P} \rrbracket$: $[\lambda P \lambda e \forall x : reference(x).P(x)(e)] (\lambda x_2 \lambda e. research(x_2)(e))$
 (from (684) via index fission for intermediate copy)
 $= \lambda e \forall x : reference(x).research(x)(e)$
- b. $\llbracket TP \rrbracket$: $\exists y : scholar(y) \exists e. Agent(y)(e) \& (\forall x : reference(x). research(x)(e))$
 (from step a plus addition of v, T and subject DP)
- c. $\llbracket (682) \rrbracket$: $(\lambda p \forall x : reference(x).p(x)) [\lambda x_2 \exists y : scholar(y) \exists e. Agent(y)(e) \& (\forall x : reference(x). research(x)(e))]$
 (from step b via index fission of highest copy)
 $= \exists y : scholar(y) \exists e. Agent(y)(e) \& (\forall x : reference(x). research(x)(e))$

The reduction of the formula in step c confirms the total irrelevance of the highest copy, given this interpretation of the quantifier and the intermediate copy. In its particulars this looks suspicious, and indeed its suspiciousness resonates in a familiar way. The existence of vacuous quantification in natural languages is in general quite contentious, and several authors have appealed to general bans on such quantification to rule out ungrammatical sentences of various types.²²

The more serious issue is straightforwardly empirical. The meaning we derive in (685) gives us narrow scope for the object with respect to the quantification over events. To paraphrase this reading quasi-logically: There is a scholar y and event e such that for all references x , e is a looking-up of x by y . Whether or not this reading is a possibility for (680), it is certainly not the *only* possibility; and so we will need to find an alternative means of interpreting our copy in intermediate position.

²¹The quantificational nominal also ends up analyzed as type $\langle\langle e, st \rangle, st \rangle$ in its intermediate position and $\langle et, t \rangle$ in its higher position, another point of unsightliness.

²²See Potts (2002) for critical review of these analyses, and a series of counterproposals.

What does this exercise show? The whole issue with sentences like (680) would come to a quick resolution if we could simply *ignore* the intermediate copy. Then we would expect the highest copy to undergo index fission, abstracting over the variable introduced by the lowest copy and establishing the DP's scope, just as if the chain were binary. This would be a welcome result. At the same time, it invites serious questions. We wouldn't want a semantic theory that freely ignores various nominals. There would have to be some means of singling out intermediate copies for semantic deletion while leaving other nominals untouched.

Or perhaps *all but* untouched. Given only the system we have laid out so far, the obligatory indexation of DPs leads to a funny consequence. We have only come up with movement as a means for making the uninterpretable indexed DP structure semantically legible. We would have to require *all* DPs to move, then—even those that otherwise ostensibly remain in their base positions. In many cases, this movement will be both phonologically covert and scopally vacuous. Fox (2000) develops an argument against this type of picture, arguing that covert movement only takes place when it is needed to alter scopal relations. Otherwise it is ruled out by a principle Fox dubs *Scope Economy*. If Fox's proposal is on the right track, we will need to introduce an additional mechanism to turn unmoving, indexed DPs into interpretable pieces of LF structure. The simplest such mechanism would be just to ignore or delete the unwanted indexes at LF.

How do we pick out which indexes to ignore or delete? The choice of principles makes an important difference. Suppose we choose a rule that treats intermediate copies as automatically subject to deletion. We saw the several difficulties that would ensue if intermediate copies underwent index fission. Suppose that intermediate copies are reduced to indexes, therefore. These indexes delete along with those of unmoving DPs.

(686) *Spare index deletion (first pass)*

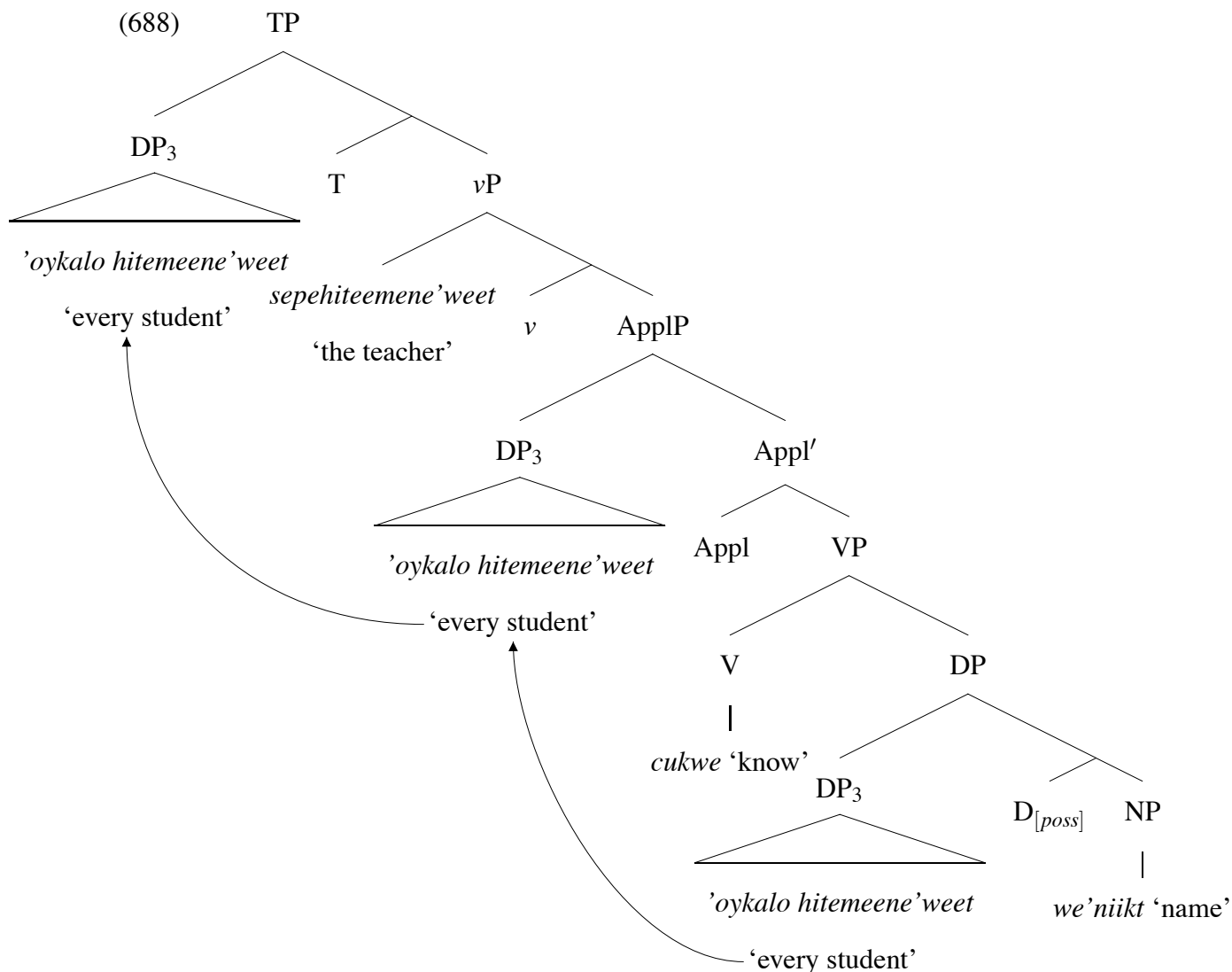
Delete all indexes on unmoving DPs and intermediate copies of moving DPs.

If this rule were adopted, ternary chains would behave just like binary chains in failing to provide for movement between θ -positions. Copies of a moved element would *saturate* at the tail of a chain, *delete* in the middle of a chain, and *bind* at the head of a chain.

This picture cannot be fully accurate for intermediate copies once we take movement to θ -positions into consideration. Consider a possessor raising sentence where a quantificational DP undergoes movement to a θ -position.

- (687) sepehiteemene'wet-uum hi-nees-cukwe-ney'-se- \emptyset 'oykalo-na
 teacher-ERG 3SUBJ-O.PL-know-APPL:AFF-IMPERF-PRES all-OBJ
 hiteemene'wet-uune we'niikt
 student-OBJ name
 The teacher knows *every student's* name.

We saw in section 6.2.3 that the phrase '*oykalo hitemene'weet* 'every student' starts off in Spec,DP. Here it serves as an argument of the special possessive determiner $D_{[poss]}$. We can talk about a nominal that saturates such an argument place as receiving the θ -role of *possessor*. Subsequently, our DP moves to Spec,ApplP, where it serves as argument to the Appl:Aff functor. A nominal serving as the individual argument of this functor can be said to receive the θ -role *affectee*. Our DP has moved from one θ -position to another, but it is not quite done moving yet. In ApplP, the quantifier would take narrow scope with respect to the event quantification introduced by T. Suppose we move it to a scope position above T, then–Spec,TP, for simplicity. (The structure below suppresses indexes on other nominals, and other pieces of clausal functional structure.)



Movement in this example forms a ternary chain different in an important respect from what we had in the English object shift structure (682). In that structure, the intermediate copy had to be deleted; there was no real alternative for its interpretation. In our new structure, the intermediate copy calls out for a different treatment. It sits in an applicative specifier position where it is sister to a basic predicative node – a node with a predicative meaning derived independently of movement. If, like other intermediate copies, it underwent reduction to an index, the index could be translated as a variable that would saturate the Appl' functor. Suppose, then, we replace our Spare Index Deletion rule (686) with a version that is sensitive to the fact that intermediate copies may sometimes occupy

θ -positions. With this change, we could state the entire picture on the interpretation of movement dependencies in the following set of rules for the interpretation of chains at LF.

(689) Rules for the interpretation of indexes and chains

- a. *Reduction to an index.* Where DP_n is part of a non-trivial chain but not its head, delete all parts of DP_n except for the index n .
- b. *Index fission.* Where DP_n is the head of a non-trivial chain and its sister is α , rewrite the LF constituent [${}_{\beta} DP_n \alpha$] as [${}_{\beta} DP [{}_{\gamma} n \alpha]$]. Interpret γ as $\lambda y[[\alpha]]^{g(y \rightarrow x_n)}$, where g is any variable assignment.
- c. *Index interpretation and deletion.* Where index n is sister to a node with which it is not possible for variable x_n or for the DP bearing index n to compose, delete index n . Otherwise, translate index n into the logical representation as x_n .

The first two rules provide directly for the interpretation of chains. The first rule is stated in such a way as to apply not only to bottom copies but to intermediate copies as well. (This corresponds to the treatment in Heim and Kratzer (1998), where a special rule applies to traces.) The second rule states our predicate abstraction mechanism in a slightly more formal way, using variable assignments. The third rule replaces the Spare Index Deletion rule in (686). Instead of deleting reduced intermediate copies blindly, we delete only those indexes that pose problems for composition. The intermediate copy, reduced to an index, doesn't survive in object shift structure (682), but does survive in possessor raising structure (688). The index of a non-moving DP, which also poses a problem for composition, is likewise deleted.

This system accords a special status to DPs which serve as heads of non-trivial chains, in two ways. First, by stipulation, these are the only items which are *not* reduced to indexes at LF. This ensures that movement does not lose information. We would not want to reduce *all* members of a chain to indexes; this would leave us no way of recovering the referential

or quantificational content of the moving DP. Our stipulation could reduce to a general ban on unrecoverable deletions. The second way that heads of non-trivial chains play a special role in our system does not have to be stipulated. It follows from our rule of index fission that heads of non-trivial chains cannot occupy θ -positions. The head of a chain always composes with a predicate that is produced by index fission; it cannot compose with a basic predicative node. In a phrase marker like (688), for instance, if DP_3 had moved from DP-internal position only to Spec,ApplP, the function expressed by $Appl'$ would remain unsaturated. The head of the chain would introduce a new λ -abstract in the interpretation of its sister node, and would therefore not be able to saturate the function that the sister node, independent of movement, already expresses.

Our rules make predictions about the possible locations of intermediate copies that deserve fuller attention in future work. For instance, we can no longer allow successive-cyclic movement through vP with a landing site sister to v' – the scenario depicted in (677), providing we imagine further movement of the moving object. Movement to (an inner) Spec, vP is only possible as movement to a θ -position, in which case a further instance of movement is required, or as the final step of a movement chain. In the latter case, where the head of a non-trivial chain occupies Spec, vP , the function expressed by v' will remain to be saturated by a different DP. This is what is depicted in (677) if we do *not* imagine further movement of the object.

Our rules also lend themselves to an interesting rethinking of the origins of absolute locality effects. In order for the semantics to appropriately handle an indexed DP, it must be possible to ascertain whether the DP is head of a non-trivial chain. This could be calculated all at once, on the basis of the LF for an entire sentence; or it could be computed more locally, once the syntax has constructed phrases of various types. The appropriate type of phrase would be one that attracted moving constituents to its specifier position. If we know that DP_n occupies the specifier of XP as a derived position, we know that any instances of DP_n in the complement of XP are not to be treated as heads of chains. XP is therefore a

natural place for our first and third rules to take effect for lower copies, allowing us to fully compute a semantics for the structure up to X' . Once we do so, of course, any DP_m that has *not* moved to the specifier of XP will have had its index deleted (if it does not move at all) or converted to a variable and abstracted over (if it has moved within XP). Without a remaining index, it will not be possible to move DP_m out of XP at any later point in the derivation.

The projection XP, of course, closely tracks the description of absolute locality domains in Chomsky (2001). Such a projection ends up behaving as what Chomsky calls a *phase*. Its head X, a *phase head*, attracts material to its specifier position. In virtue of this syntactic property, X ends up always occupying a place in a movement dependency between a higher copy and one or more lower copies. When only XP has been constructed, the copy of a moving DP in Spec,XP is not yet classified as a head or a non-head, but any copy in the c-command domain of X can be definitively treated as a non-head. The phase head's dual nature as an instigator of cyclic movement and an intermediate point of semantic computation come together in a pleasing way.

6.2.5 Morals of possessor raising

So it is that the movement analysis of possessor raising brings us on one hand to an improved understanding of the syntax of possessive constructions in Nez Perce—a small piece of the empirical picture, but one that will matter when we come next to the extended reflexive—and on the other hand to a complex vista of intersecting issues in the construction and interpretation of chains. A starring role in the analysis of possessor raising movement is played by considerations of relative locality. To connect these relative locality conditions on movement to our previous relative locality conditions on agreement, we are led to treat movement dependencies as agreement dependencies of a particular, enhanced sort.

When agreement under c-command is put together with copy formation, movement chains result.²³

Possessor raising movement also leads us to significant consequences for the theory of chains as far as case-marking and interface interpretation are concerned. To permit the links of a chain to mark distinct cases, if we start from a theory like Chomsky (1981)'s, we need only remove what amounts to a stipulation in the formulation of the case theory. To permit a chain to connect more than a single θ -position, we are led to a revision more major in scope. And to permit optionality in which piece of a chain is interpreted at PF, we are led to still-obscure questions concerning the determination of overtness versus covertness in movements of particular types and particular languages. That the range of resulting questions is large is, as I see it, a good sign. What we learn from the treatment of possessor raising in Nez Perce stands to constrain the range of theories we can accept for movement dependencies on a much larger scale.

We come now to the question of extended reflexive caselessness with a toolkit of clausal and nominal syntactic structure, certain pieces of an overall syntactic theory and certain pieces of a semantic one. These turn out to serve us well in the treatment of caselessness of this most mysterious type.

6.3 Extended reflexive caselessness as an anaphor agreement effect

Extended reflexive caselessness comes about in a particular corner of what is otherwise the possessor raising paradigm. It comes about where object agreement intersects the tricky morphosemantics of variable binding.

Both possessor raising and extended reflexive caselessness are triggered by possessor phrases in the object nominal closest to v . The investigation of possessor raising led us to treat the structure of object possessives in either of two ways, depending on the mor-

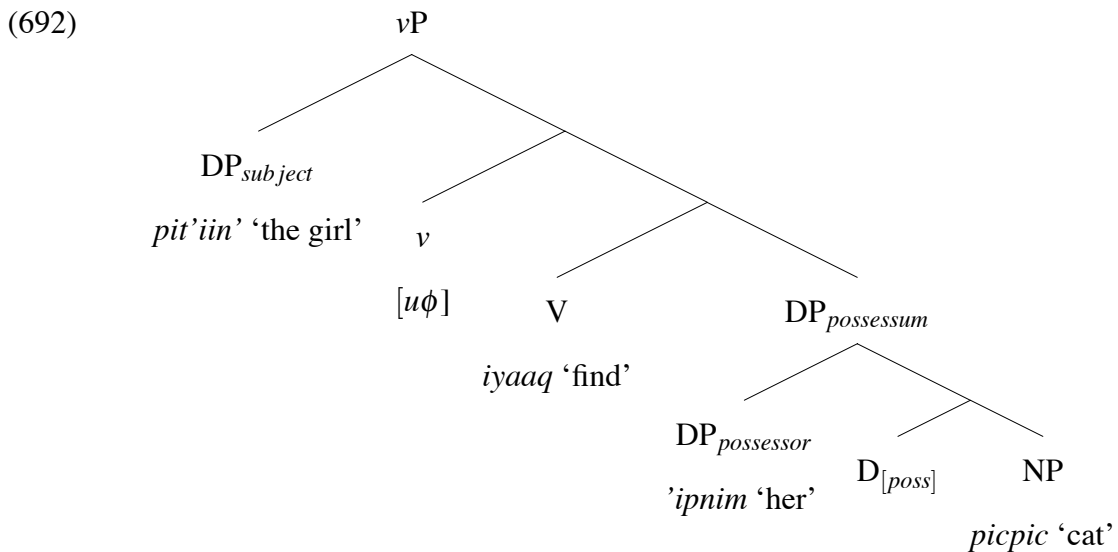
²³This is what Rezac (2004) calls the “compositional theory of movement”: movement is decomposed into an agreement step and a step concerned with copies.

phology. A possessive object with the analytic structure (690) (=654)) will always support agreement with the possessor nominal, rather than the possessum nominal.²⁴



So we expect that in an extended reflexive sentence like (691), agreement on *v* would be controlled by the bound variable possessor pronoun *'ipnim* 'her'. Yet object agreement fails to show up at all—and with it, subject and object case-marking are absent.

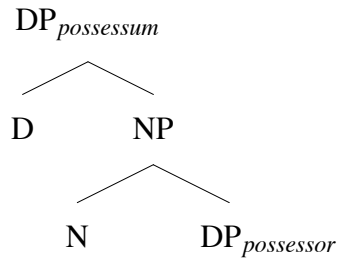
(691) pit'iin' hi-'yaaĥ-n-a ['ip-nim picpic]
 girl 3SUBJ-find-P-REM.PAST [3SG-GEN cat]
 The girl_i found her_i cat



Switching to the other possibility for possessives in object position, synthetic possessive structure (693) (=666)), we observe a morphosyntactic sea change.

²⁴Where questions of movement do not arise, I omit indexes from DP representations; unmoving DP's indexes are after all subject to Index Deletion.

(693)

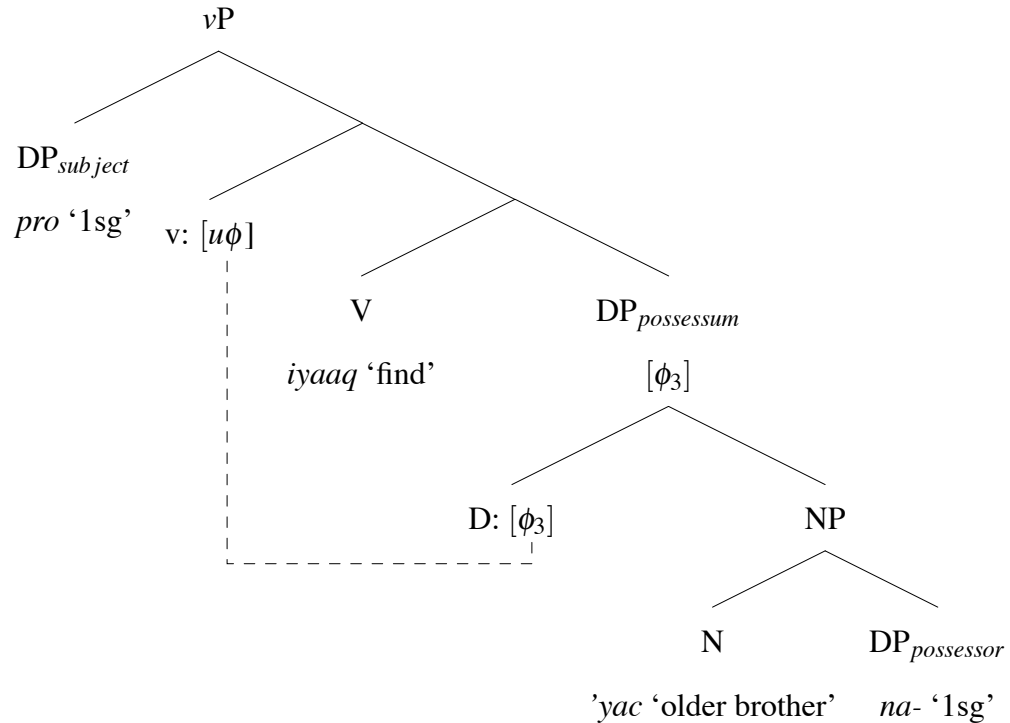


A possessive with this structure always supports agreement with the possessum nominal, never the possessor nominal. And indeed, object agreement with the possessum nominal proceeds unhindered in such cases, despite the binding of the possessor term, and *brings along with it case-marking*.²⁵

- (694) a. qo'c weye na-'toot-**ap** 'e-seepn'i-yu'.
yet soon 1SG-father-OBJ 3OBJ-ask-PROSP
Yet soon I will ask my father. (Aoki, 1979, 50)
- b. na-'yac-**ap** 'eete-ex 'aw-'yaqi-n- \emptyset .
1SG-brother-OBJ INFER-1 3OBJ-find-P-PRES
Surely I found my brother. (Aoki, 1979, 30)

²⁵We see case-marking on objects here; subjects are not overt. Were they overt, they would lack ergative case, but this is due to the general fact that ergative is not marked on 1st and 2nd person subjects.

(695) Structure for (694b)



This contrast between analytic and synthetic possessives provides another example of the central role of object agreement in producing extended reflexive caselessness. The difference by possessive type complements the facts we saw in section 6.1.3, where we varied whether possessor nominals were placed in objects relatively local to v or not relatively local to v . In both cases, the pattern that emerges is the same: bound object possessor phrases trigger extended reflexive caselessness just in case the possessor phrase is relatively local to v . Extended reflexive caselessness is a morphosyntactic response to object agreement with a bound variable nominal.

This generalization invites us to a broader consideration of the interaction of agreement with bound variable terms in Nez Perce. When we put together the facts on reflexives discussed in section 5.3.4 with the picture we have developed for extended reflexive, a conspiracy starts to take shape. *There is no agreement with locally bound terms in Nez Perce.* In the extended reflexive, object agreement goes missing without a trace. In the reflexive, the input configuration for object agreement is never created. Unlike the v head

of a transitive sentence, the v_{REFL} head does not value its $[u\phi]$ features under c-command. Agreement in the reflexive construction is never object agreement; it is always agreement with the subject.

6.3.1 Long-distance binding

It comes as no surprise that long-distance binding should behave quite differently than local binding does. Relative clauses show us that long-distance binding in Nez Perce does not interfere with subject or object agreement. Terms bound at a distance behave just like ordinary referential terms in their agreement behavior. In this they behave *unlike* locally bound possessor nominals in the extended reflexive construction, which do not support normal object agreement.

The following examples demonstrate binding into relative clauses. In each case we see the relative complementizer *ke* marking the edge of the relative clause.

- (696) kii pit'iin-im pa-mawa hi-haman-yo' naaqc haama [_{CP} ke
 this girl-ERG INDEF-when 3SUBJ-marry-PROSP one man [REL
 'ip-nim pee-hetew-yu' *pro*]
 3SG-ERG 3/3-love-FUT (obj)]
 This girl will someday marry a man who loves her.

- (697) pehet-nim paa-toola-sa- \emptyset [_{CP} ke 'isi-nm
 older.sister-ERG 3/3-forget-IMPERF-PRES [REL who-ERG
 paa-'c-oo- \emptyset -ya *pro*]
 3/3-enter-APPL:GOAL-P-REM.PAST (obj)]
 (My) older sister forgets whoever went in (toward her)

In (696) and (697), the relative clause object is bound. We could paraphrase the sentences logically as follows: This girl *x* will someday marry a man who loves *x*. My older sister *x* forgets whoever went in toward *x*.

(698) Context: Martha Stewart's cooking show.

hi-twilixnix-sa-qa timaani-nm siis [CP ke yoŋ pro
3SUBJ-mix-IMPERF-REC.PAST apple-GEN soup [REL DEM (subj)
hani-sa-qa]
make-IMPERF-REC.PAST]
She was mixing applesauce she was making

In (698), the relative clause subject is bound: x was mixing the apple sauce x was making.

While the bound pronouns happen to be null in these examples (a common feature of pronouns in Nez Perce discourse in general), we can see that binding into relative clauses has no obvious consequences for the way the bound pronouns agree. Long-distance binding is fully compatible with both subject and object agreement of the normal type. The problems for agreement we encounter with locally bound terms are a feature of local binding only.

6.3.2 The representation of bound terms

The locally bound possessor term in the extended reflexive construction is the sort of item for which we might want to entertain a special representation. In many languages with a paradigm of nominal reflexive elements, bound possessor pronouns show up in the special reflexive form. Below is an example from Icelandic.

(699) Egill_i tók bókina sína_{i/*j} / hans_{j/*i}
Egil took book REFL / his
Egil took his book. (Thráinsson, 2007, 461-462)

If we use the genitive reflexive form *sína*, rather than the regular 3rd person genitive form *hans*, Egil had to take his own book, rather than someone else's.

The grammatical representation of forms like the Icelandic genitive *sin* isn't just of interest to the binding theorist. Rizzi (1990) was the first to notice that reflexive nominals

show a strange and systematic interaction with agreement—the so-called “anaphor agreement effect”. They are unable to agree as non-bound terms do. Rizzi examined a set of Italian experiencer verbs which take a non-agreeing dative subject and an agreeing nominative object.

(700) A loro piaccio io.
to 3PL.DAT please.1SG I.NOM
They like me.

(701) A me interessano solo loro.
to 1SG.DAT interest.3PL only they.NOM
I am interested only in them. (Rizzi, 1990)

Agreement with the nominative object, Rizzi noticed, is contingent on that object *not* being locally bound. If we switch the nominative object into a reflexive form, agreement becomes impossible.

(702) * A me piaccio me stesso.
to 1SG.DAT please.1SG myself
intended: I like myself.

(703) * A loro interessano solo se stessi
to 3PL.DAT interest.3PL only themselves.NOM
intended: They are interested only in themselves. (Rizzi, 1990)

What does this pattern tell us about the representation of locally bound terms? Rizzi argued that the pattern in Italian is too regular to be accounted for by a mere accidental gap. There is no reason we should expect nominatives to be simply missing from the reflexive paradigm (*pace* what is often argued to be the case for Icelandic; see Maling (1984)). What seems to be the crucial problem in (702)-(703) is that that reflexive nominative objects participate in agreement. For at least some speakers, sentences like these can be rescued if we switch the verbal inflection to a default 3rd singular form.

(704) % A me piace me stesso.

to 1SG.DAT please-3SG myself

I like myself.

When we remove the verbal agreement with the reflexive object, we remove much if not all of what is problematic about the sentence. A similar test can be conducted cross-linguistically. Woolford (1999) observes that reflexive nominals can occupy nominative object positions in languages where there is no agreement with nominative objects. One such language is Japanese.

(705) sensei ni (wa) zibun ga wakar-ani-i

teacher DAT (TOPIC) REFL NOM understand-not-PRES

The teacher does not understand himself. (Shibatani, 1977)

In Italian (particularly for speakers who do not accept (704)), nominative objects have to agree, and so reflexive nominals cannot be nominative objects. In Japanese, nominative objects never agree, and reflexive nominals make perfectly acceptable nominative objects.

Let's reflect on what it would take for reflexive nominals to be incompatible with agreement in our system. We expect agreement to take place in any structure where a head X bears unvalued feature [uF] and stands in an appropriate structural relation to a nominal with feature [F]. Supposing Italian subject agreement involves the T head, we conclude on the basis of sentences like (700) and (701) that the relevant Italian T bears [$u\phi$] features. In these sentences, it agrees with the nominative object under c-command. What is different in the sentences with bound nominative objects, (702) and (703)? It doesn't seem likely that such sentences have to involve a different, non-agreeing T head. The problem must lie with the bound terms, then. The structural relation between the bound terms and T doesn't appear to be the culprit; reflexive nominative objects don't show any sign of occupying a different structural position from their non-reflexive counterparts. The only remaining factor that could derail agreement would be the absence of [ϕ] on the bound terms. What if

these items were represented syntactically without any ϕ -features that could value the $[u\phi]$ of T?

This move is far from obvious from a morphological point of view. Locally bound terms in many languages vary morphologically by person and number just as free pronouns do. They don't necessarily show any signs of being featurally underspecified. At the same time, when we start to consider the way that locally bound terms are *interpreted*, an underspecification view starts to look less far-fetched. In fact, it starts to look necessary.

Semanticists who have investigated the feature content of bound variables have focused on two types of examples that pull us toward underspecification.²⁶ The first involves VP ellipsis. Consider how we might analyze the different readings of a sentence like (706).

(706) Josie [_{VP} walked her poodle], and Martin did Δ_{VP} too.

On one reading of this sentence, the possessive pronoun *her* in the first VP refers to a salient female in the discourse. Say it's Anita. On this parse, the clause containing the elided VP (represented by a Δ) entails that Martin also walked Anita's poodle. The elided VP behaves as if it matches the overt VP, its antecedent, word for word; since *her* in the antecedent refers to Anita, the elided VP is interpreted as if it, too, contains a referential *her* with the same reference. It wouldn't do to substitute a referential *his* in the ellipsis site, to convey that Martin walked Victor's poodle. This way of describing the constraints on the meaning of the second clause suggests that the ellipsis site is represented at LF as a full VP; let's assume that this is so.

Our first reading gives us a baseline for how gender features behave under VP ellipsis, at least when binding is not involved. When binding *is* involved, matters change. According to another reading of (706), Josie walked her poodle, and Martin walked his poodle. On this reading, *her* and *his* are bound terms. If we represent the bound versions of *her* in the

²⁶Key examples are discussed in Partee (1973, fn 3), Kratzer (1998a, 2009), von Stechow (2003), Rullmann (2004), Heim (2008).

antecedent and *his* in the ellipsis site with gender features intact at LF, we get into trouble. The antecedent VP contains a feminine gender feature on the possessor pronoun, whereas the elided VP contains a masculine feature in the corresponding place. The two VPs don't match, and ellipsis should not be possible.

Underspecification changes the landscape. If the bound variable possessor pronouns in antecedent and ellipsis site are equally underspecified for gender at LF, matching should not be an issue. We can correctly predict ellipsis to be possible with apparently mismatched gender features when binding is involved, but to be impossible with mismatched gender features when binding plays no role.

A second way we can glimpse the underspecified semantics of bound terms is by using quantifiers such as *only* and *too*. Standard examples look like those in (707).

- (707) a. Only Victor wrapped his gift.
b. I too voted for myself.

The contribution of *only* in (707a) is the following entailment: no salient individual x other than Victor is such that x wrapped x 's gift. Everyone else came to the party with their gifts unwrapped. Crucial here is that this quantification is not restricted to male individuals, even though the bound possessor pronoun *his* seemingly bears a masculine feature. If the bound term introduced a presupposition restricting the variable x to ranging over male entities only (following the standard, presuppositional treatment of gender features due to Cooper (1983)), sentence (707a) would not entail that salient *women* failed to wrap their gifts. Sentence (707b) makes a similar point for person features. The contribution of *too* in this sentence is the presupposition that some salient individual x other than the speaker is such that x voted for x . Quantification is not restricted to ranging over the speaker only; then the presupposition would be incoherent or vacuous. Underspecification once again provides the piece necessary to get the meaning right. If both *myself* and bound *his* are treated as featureless bound variables at LF, correct entailments and presuppositions result.

This puts us in a situation where we have to deal with a serious mismatch between semantics and morphology. The morphology encodes more features than the semantics is sensitive to. There are different ways this type of situation could come about. von Stechow (2003) develops a system where the crucial ingredient is an impoverishment rule. Locally bound terms are represented morphosyntactically with all their features, but before the semantics has access to them, certain of the features are deleted. If we wanted to incorporate the facts about agreement into this type of picture, we would need to situate agreement processes in a funny place in the grammatical architecture. Agreement would have to be situated on the “LF branch” of a derivation, only able to access a bound term after the impoverishment rule had applied.

An alternative approach, pioneered by Kratzer (1998a) and further developed by Heim (2008) and Kratzer (2009), lets us situate agreement in a more natural place within the theory. Kratzer and Heim posit that locally bound terms start off featurally impoverished, and are subject to morphological enrichment rules that provide them with features. Instead of deleting features of locally bound terms on the way to LF, as on von Stechow’s approach, we add features on the way to PF. On this type of view, agreement processes could be situated anywhere in the grammatical architecture except on the PF branch downstream from the enrichment rule. We are free to maintain the standard assumption that Agree and SH-Agree are processes of “narrow syntax” that apply before any sort of PF representation is computed.

Adopting this type of approach brings with it a number of as yet unresolved issues. For one thing, we are now on the hook for a theory of morphological enrichment that lets us explain the surface form of locally bound terms. We have to ensure that they receive ϕ -features in time for pronunciation. We set aside this topic until chapter 8, when our morphological tools come into better view.

An additional, not entirely distinct issue we have yet to explain is why terms bound long-distance give different results so far as our anaphor agreement effect goes. Under-

specification looks to be a feature of local binding only.²⁷ In the system developed by Kratzer (2009), this kind of effect can be reduced to a locality condition on morphological enrichment. To a first approximation, an underspecified bound term is only subject to morphological enrichment if it occupies the same clause as its binder. Anything bound long-distance that is subject to pronunciation with ϕ -features will have to start off with ϕ -features; it can't start off underspecified and obtain features at PF.

Terms bound long-distance will have to be some other type of beast, then. One obvious possibility is that they are semantically identical to free pronouns—no wonder they agree as full pronouns do! These full representations would have to be in some way ruled out in local binding, where underspecified pronouns are preferred.²⁸ Alternatively, it might be possible to analyze certain cases of apparent long-distance binding as involving e-type anaphora. An e-type pronoun or “pronoun of laziness” isn't really a pronoun at all, at least not in the traditional sense of the term; it conceals a definite description whose anaphoric nature can give the illusion of binding.²⁹ Doing justice to these alternatives and the choice between them will take us far away from questions of case and caselessness. It will have to be deferred to another occasion.

6.3.3 Consequences for the treatment of caselessness

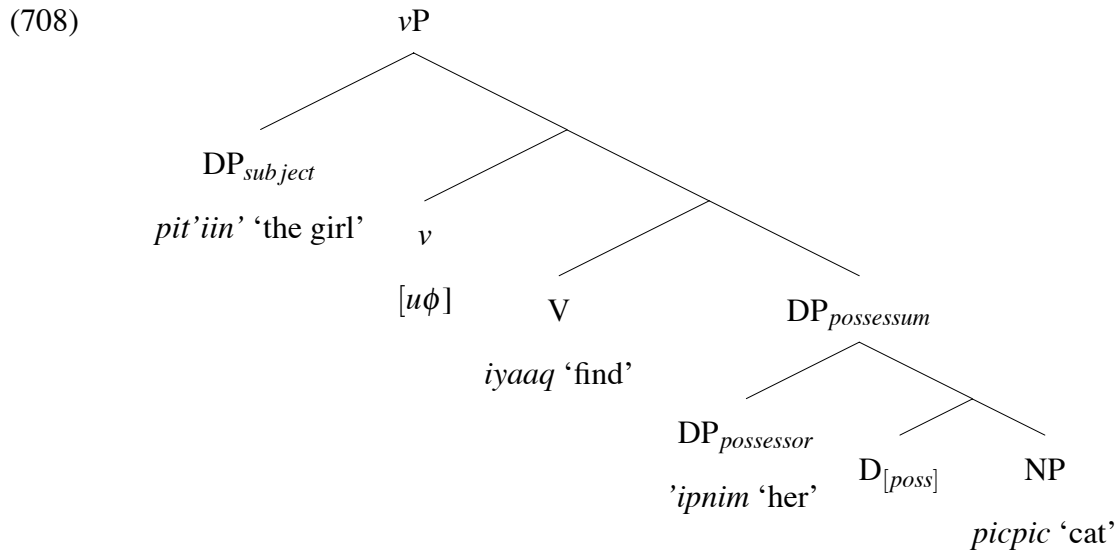
We've now come up with two crucial pieces of the story about extended reflexives. The first piece lay in the structure of object possessives, a matter we uncovered while investigating possessor raising. In order for possessor raising to meet locality constraints on

²⁷This is actually not quite right. Kratzer (2009) discusses some evidence from German which suggests that underspecified pronouns – minimal pronouns, in her terms – sometimes play a role in long-distance anaphora, too, but in a way that is easily morphologically concealed.

²⁸Some fancy footwork might also be in order for 1st and 2nd person bound pronouns, depending on the way we treat the semantics of person features. Two different possibilities for this domain are explored by Heim (2008) and Kratzer (2009).

²⁹Perhaps the fullest implementation of an e-type analysis for what seem to be simple pronominals can be found in Elbourne (2005). In Elbourne's system, pronouns conceal definite descriptions as a matter of course.

movement, possessor phrases within analytic object possessives must occupy high specifier positions – positions from which they asymmetrically c-command the overall object DP. This means that the overall object DP in an analytic possessive construction is *never* the second-highest nominal in the *vP* in terms of asymmetric c-command. The relevant tree structure is repeated in (708).



In this structure, in terms of asymmetric c-command, the subject DP *pit'iin* 'the girl' is highest, the possessor DP *'ipnim* 'her' is second highest, and the possessum DP *'ipnim picpic* 'her cat' is third highest. It falls out from this last fact that the (possessum) object DP in an extended reflexive will not participate in object agreement or mark objective case. Both of these, as we saw in section 5.3.3, are behaviors of second-highest nominals only.

Should we expect the possessor term to mark objective case and participate in object agreement, then? As far as agreement goes, the structural configuration is the correct one, but an important caveat must be observed. The possessor term is locally bound by the subject, and locally bound terms, we concluded, should be represented syntactically in a featurally underspecified way. Where agreement targets a phrase that is locally bound, it finds no features to share. We should not expect object agreement in the extended reflexive,

therefore. The closest nominal to *v* does not have the features required to get an agreement dependency off the ground.³⁰

The failure of agreement with the bound possessor term might also provide an explanation for its lack of objective case, depending on the way we understand our generalization about objective case and object agreement ((562) above).

(709) *Object Case Generalization*

A nominal controls object agreement iff it is marked with objective case.

Alternatively, the possessor phrase's inability to mark objective could be due to a conflict with some grammatical requirement that forces an in-situ possessor phrase to mark genitive—a sort of case competition effect, independent of whatever factors are responsible for generalization (709). Now, only the former of these options will allow us to deal with indefiniteness-conditioned caseless clauses, the topic of our next chapter.

(710) pit'iin' hi-'yaaŋ-n-a picpic
girl 3SUBJ-find-P-REM.PAST cat
The girl found a cat

The caselessness of the object in a sentence like (710) has no ready explanation in terms of case competition; at the same time, the Object Case Generalization is observed fully. This part of the picture suggests that the proper way to understand the absence of objective case in clauses without object agreement will have to go by way of generalization (709). We will need a way of linking the impossibility of object agreement in the extended reflexive to the impossibility of objective case.

Our path to the extended reflexive construction, of course, began with a search for the factors that condition *ergative* case. The extended reflexive construction placed a serious constraint on our ability to account for those factors purely in terms of the meaning or

³⁰Note that agreement is not permitted to move on to the third-highest nominal in this situation. In the terms of Chomsky (2000), such agreement is blocked by the *defective intervention* of the featureless possessor.

structure of the object. The structural picture of extended reflexive we have since developed places another important constraint on the type of explanation we can seek. We will need an analysis of the ergative whereby we can capture an intricate chain of cause and effect along the following lines:

- (711) i. The second-highest nominal in vP is featurally underspecified, so
- ii. The second-highest nominal in vP does not value the $[u\phi]$ features of v (= does not agree), so
- iii. The second-highest nominal in vP does not mark objective case, and
- iv. The subject does not mark ergative case.

In an extended reflexive sentence, factor (i) comes down to a curious and potentially universal fact about the way that ϕ -features interact with binding. Factor (ii) reduces to another potential universal, a consequence of factor (i). By the time we arrive at (iii), we are starting to encounter part of what is special about the case and agreement system of Nez Perce. Factor (iii) derives from (ii) via whatever grammatical systems are responsible for the Object Case Generalization (709). Where agreement is interfered with, objective case is blocked. Finally, factor (iv) falls out of factor (iii) due to whatever factors derive Rude's Generalization (476): a third person subject marks ergative iff the object marks objective. In this way, the effects of an underspecified anaphoric possessor cascade from inside the object nominal all the way up to the subject nominal. Underspecification blocks agreement; blocked agreement blocks objective case; blocked objective case blocks ergative case.

Two major mysteries remain in this picture. We turn next to the structure of indefiniteness-conditioned caseless clauses, which will help us confirm our tentative take on the first mystery: the Object Case Generalization. We then tackle the second mystery – Rude's Generalization, linking the marking of the subject to the marking of the object – in chapter 8.

CHAPTER 7

CASELESSNESS AND THE INDEFINITE OBJECT

In chapter 5, we grouped a subset of caseless clauses together in virtue of the indefiniteness of their objects. This leaves a twofold task to be taken up in this chapter. Our immediate goal is to discover how it is that indefiniteness and caselessness of objects are related. Our broader goal is to connect the caselessness of the indefinite-object construction to the caselessness of the extended reflexive. What are the case-markers conditioned by, such that both indefinite object constructions and extended reflexive clauses should lack them?

The answer to be given here ties together the suspicions with which we concluded chapter 6. Object agreement plays a starring role in conditioning case and caselessness in the Nez Perce clause. What caseless clauses have in common is the failure of syntactic object agreement – a piece without which the morphological case system cannot move forward.

7.1 The weak indefinite object in its clause

Let's begin by reminding ourselves of what we have already learned about the meaning of indefiniteness-conditioned caseless clauses. In section 5.1.3, we characterized the objects of these clauses as *weak indefinites*. Caseless objects of this class are not referential terms that pick out particular entities in the world. Rather, they are associated with existential quantification, which in their case takes narrow scope with respect to other operators. Narrow scope with respect to negation can be seen in the dialogue in (712).

(712) A: 'ee we'np-u' puute'ptit we'nipt

you sing-PROSP 100 song

You will sing 100 songs.

B: weet'u cuukwe-ce-∅ puute'ptit we'nipt

NEG know-IMPERF-PRES 100 song

I don't know 100 songs!

✓ $\neg > \exists_{100}$: It is not the case that there are 100 songs that I know

As an indefiniteness-conditioned caseless clause, the second sentence in this dialogue can only be used in a context favorable to the narrow scope interpretation of the existential quantifier. Consultants report that the sentence is not appropriate in a context where a person who has been charged with memorizing a large number of songs wants to report that 100 songs are still unknown to her (scopal pattern $\exists_{100} > \neg$).

Where does the existential interpretation of these caseless objects come from? In examples like (712), the existential interpretation of the object could potentially be traced to the numeral *puute'ptit* '100'. In other examples, however, we find no lexical item plausibly responsible for the existential interpretation.

(713) pit'iin' hi-'yaaŋ-n-a picpic

girl 3SUBJ-find-P-REM.PAST cat

The girl found a cat

(714) weet hani-∅-ya sooŋ

Y.N make-P-REM.PAST spoon

Did you make a spoon?

Does existential quantification come from the object itself, via a hidden quantificational determiner? Or does it come, in a way to be made precise, from the way in which the object composes with the rest of the clause?

The answer we give ideally would determine or at least constrain our account of the restricted scopal interpretations of sentences like (712.B). Let me outline, with this goal in mind, two arguments against the first of our options above.

7.1.1 Caseless weak indefinites are not quantificational indefinites

The first argument comes from a behavior familiar from Carlson (1977)’s investigation of the English existential bare plural. Weak indefinite objects do not enjoy the freedom of scope-taking we expect of quantificational nominals. In the absence of restrictions on the movement of quantificational nominals (assuming, in line with the proposal of section 6.2.4, that it is a quantificational argument’s LF position, obtained by movement, which determines its scope), a nominal with its own quantificational force might well scope below negation, but also ought to be able to scope above it. As it turns out, this description matches quite well the semantic profile of a *different* class of indefinite objects in Nez Perce – those that mark objective case.

A few words on the general range of interpretations available for objective-marked objects. Nez Perce is a language without any explicit marking of definiteness. Objective case-marked objects, like ergative-marked and unmarked subjects, may receive either definite or indefinite interpretations. An indefinite, existential interpretation of the object is underlined by the translation and commentary on sentence (715); a definite, referential interpretation of the object is more natural in the context of sentence (716).

(715) hi-lluy-nu’ pit’iin’ ke kaa paa-’ya&no’qa picpic-ne ’eemtii

3SUBJ-rejoice-PROSP girl REL then 3/3-find-QA.PROSP cat-OBJ outside

The girl will be happy if we find a cat outside

Consultant: “Any kind of cat. Her cat, or a stray cat.”

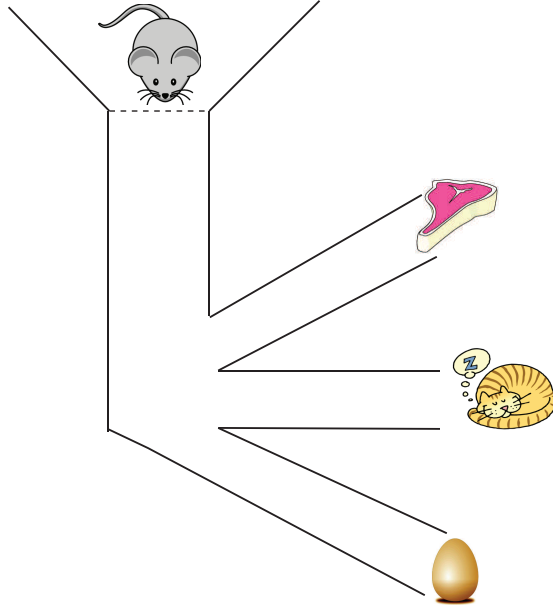


Figure 7.1. Mouse maze

(716) Context: consultant's comment on figure 7.1

laqaas-nim weet'u pee-kiy-uu-yu' picpic-ne
 mouse-ERG not 3/3-go-APPL:GOAL-PROSP cat-OBJ
 The mouse isn't going to go toward the cat.

When objective case-marked objects are interpreted existentially in a negative sentence, both narrow and wide scope interpretations are possible. Sentence (717) shares its ambiguity with its English translation.

(717) weet'u puute'ptit we'nipi-ne 'e-cuukwe-ce- \emptyset
 not 100 song-OBJ 3OBJ-know-IMPERF-PRES
 I don't know 100 songs.

- a. It's not true that I know 100 songs.
- b. There are 100 songs that I do not know.

This ambiguity is elegantly handled by a quantificational treatment of case-marked indefinite objects that allows for free scoping. Case-marked objects may move to a position

below negation, or above it (and might well do so covertly); no additional machinery need be called in to restrict their scope. In this their analysis clearly contrasts with the analysis that would be required for a treatment of caseless clauses' indefinite objects as inherently quantificational. The most attractive and simple quantificational analysis would not work for our original indefinite class.

The first argument, in summary, is this: (i) without additional constraints, an inherently quantificational analysis fails to predict obligatory narrow scope for caseless weak indefinite objects, and (ii) any additional constraints we might introduce to narrow down the scopal possibilities would interfere with the otherwise very simple analysis we would accord to other indefinites in the language.

The second argument against an inherently quantificational treatment of weak indefinite caseless objects comes again from a comparison with the behavior of case-marked indefinite objects. It turns out that case-marked indefinite objects—and again, *not* their caseless-clause counterparts—show a particular restriction on their scope-taking behavior which is characteristic of inherently quantificational terms. The crucial context that brings out this behavior involves very low scopal operators – intensional transitive verbs.

The range of interpretations available to cased and caseless indefinite objects of intensional transitives is different from what we find in negative sentences in a subtle and intriguing way. Part of the picture is familiar: the existential quantification associated with a caseless object must take narrow scope with respect to the modal quantification introduced by the verb. The caseless object is obligatorily interpreted *de dicto*.

- (718) 'ipeew'i-se- \emptyset ciiciyele picpic
 look.for-IMPERF-PRES purple cat
 I'm looking for a purple cat
 look for > \exists

What is striking is that this narrow-scope possibility is *not* available to objective-marked objects of intensional verbs. When we introduce case and object agreement into sentence

(718), we find only the scopal interpretation which, in light of its certain falsity, we expect to be disfavored:

(719) 'e-'peew'i-se- \emptyset ciiciyele picpic-ne

3OBJ-look.for-IMPERF-PRES purple cat-OBJ

I'm looking for a purple cat

$\exists > \textit{look for}$

Consultant: (surprised) "There's a cat out there that is purple and you're looking for it!"

Unlike in sentences with negation, where objective-marked objects may take wide or narrow scope, narrow scope with respect to an intensional predicate is the prerogative of case-less indefinite objects only.

This pattern is not an unusual quirk of the grammar of Nez Perce. In fact it reenacts quite strikingly the behavior of well-studied English strong quantifiers such as *most* and *each*. Nominals built with these quantifiers can scope above or below negation. To show this for *each* in object position, it is helpful to use a sentence with a quantificational subject, as observed by Beghelli and Stowell (1997). Two of the readings of (720) are schematized below.

(720) One dean didn't read each of the files / each file.

a. $\forall > \exists > \neg$: Each file x is such that there is a dean who didn't read x .

b. $\exists > \neg > \forall$: There is a dean who did not read each file; he only read some of the files.

Zimmermann (1992) observed that when *each* nominals serve as objects of intensional transitives, their scope is not similarly variable: only wide scope (*de re* interpretation) is available in (721).¹

¹To bring this judgment out, it is important to use a verb which disallows clausal complementation, such as *look for* but not *want* or *need*. See Partee (1974), Schwarz (2007).

(721) The dean is looking for each file.

$\exists > \textit{look for}$

The scope pattern of *each* nominals matches quite nicely the scope pattern of Nez Perce case-marked indefinite objects: wide or narrow with respect to negation, but only wide with respect to intensional verbs.

What accounts for this pattern? Part of the story surely comes from the interpretation of the nominals. By contrast, it seems, with phrases headed by many other determiners of English, *each* phrases are unambiguously quantificational in nature. This means in particular that they cannot be *predicative* in meaning. Let us suppose that Nez Perce case-marked indefinite objects are subject to a parallel restriction: quantificational interpretations are available, predicative interpretations are not.²

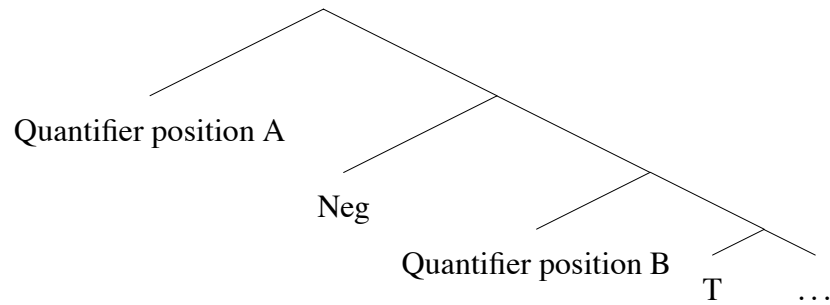
With this in place, the other part of the story comes in a standard way from the consequences of nominal quantification for clausal syntax. Like many proposals for the treatment of quantificational terms, the semantic system outlined in section 6.2.4 requires that arguments move if they denote quantifiers over individuals. Quantificational terms must be displaced to a position above the locus of existential closure over events. *Ex hypothesi*, this locus is T.

The relatively high landing sites of moving quantifiers afford us a natural explanation of why negation should, but intensional verbs should not, permit narrow scope for quantificational nominals. Clausal negation is situated quite high in the clausal spine; certain of the positions to which quantificational terms may raise sit below it.³

²It might furthermore be possible to maintain that Nez Perce indefinite case-marked objects are *always* quantificational, though the necessary pieces of that stronger argument are not yet in place. The crucial test cases will come from environments where certain indefinites cross-linguistically show what appears to be exceptional wide scope, as investigated and variously treated by Fodor and Sag (1982), Abusch (1994), Reinhart (1997), Winter (1997), Kratzer (1998b), Matthewson (1999), Schwarzschild (2002), and Wharram (2003). Nez Perce data on this point has not yet been systematically collected.

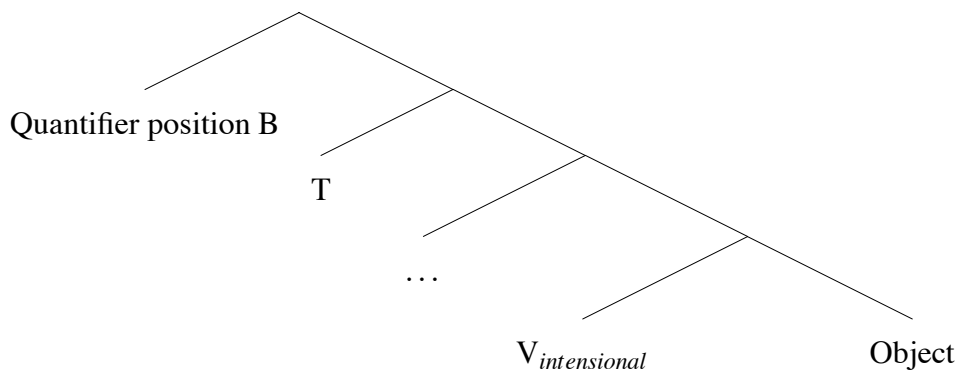
³On the need for multiple landing sites for moving quantifiers, see Beghelli and Stowell (1997).

(722)



Intensional verbs, on the other hand, are not found quite so high in the spine of the clause. Unlike with clausal negation, none of the positions to which quantificational terms may raise fall within the scopal domain of V. In virtue of the requirement that they move to Spec,TP or higher, quantificational terms will always outscope the modal quantification of intensional verbs.

(723)



Given structural analyses along these lines, the behavior of case-marked indefinite Nez Perce objects and English objects quantified by *each* can receive a fairly natural explanation. In the former case, the crucial piece is the analysis of case-marked indefinite objects as inherently quantificational phrases, which must raise at LF to at least TP. *Caseless* indefinite objects, which show a distinct pattern of scopal interpretation, must be analyzed in some other way.

7.1.2 Existential closure in V

The facts from intensional verbs offer some promising leads in figuring out what an alternative to nominal quantification would have to look like. Two natural suppositions about intensional verb constructions suggest themselves.

First is an uncontroversial supposition about the locus of modal quantification: it comes from the verb itself. (In fact we already relied on this assumption, implicitly, in considering how intensional verbs should differ from negation.) This places an upward bound on the structural locus of the existential quantifier associated with the weak indefinite object. The existential quantifier has to fall within the scope of the modal quantifier, and so cannot outscope V.

Second is an assumption about the way in which an intensional verb composes with its object. Let us suppose, as a starting place, that the structure in which an intensional verb like *'ipeew'i* 'look for' and its object combine is a simple one, akin to the VP structure of extensional verbs. While not as uncontroversial as our first supposition, this position is certainly the simplest possible take on the syntax of intensional transitives in a language, and in the absence of evidence to the contrary, I think we should maintain it.⁴ This second piece places a lower bound on the structural locus of existential quantification. In the absence of any hidden material between the verb and the object, *the existential quantifier associated with the object has to be introduced by the verb itself*. Granting that the object is not itself a quantificational term, there is nothing lower, and of course anything higher would grant the object undesirably wide scope.

How should verbs introduce existential quantification over objects? Perhaps the most extensive investigation of this type of behavior in the realm of verb meaning is that undertaken by van Geenhoven (1998). According to van Geenhoven, verbs that take individual arguments are subject to a type-shifting operation dubbed *Semantic Incorporation*.⁵ A verb that has undergone this typeshift looks for an indefinite object which will ultimately be interpreted existentially, but which does not contribute its own quantificational force. On this

⁴This entails rejecting the “sententialist” position espoused by den Dikken et al. (1996) and Larson (2002) at the suggestion of Quine (1960). Evidence against a strong sententialist stance is discussed by Partee (1974) and Schwarz (2007).

⁵The choice of this term is connected to van Geenhoven’s interest in the semantics of incorporation constructions in West Greenlandic. We must be careful not to let this name for an essentially semantic process suggest any sort of morphological incorporation in our Nez Perce sentences.

count, van Geenhoven’s theory recalls the influentially non-quantificational treatment of indefinites elaborated in Discourse Representation Theory (DRT: Kamp 1981, Heim 1982, Kamp and Reyle 1993). The novelty of van Geenhoven’s approach lies in the particular way the non-quantificational analysis is cashed out. Instead of treating the relevant class of indefinites as contributing restricted individual variables, as the classic DRT analysis would have it, she treats them as contributing simply *restrictions for variables*–predicates.⁶ In an event semantics of the sort we have been working with (which necessitates a departure from the letter of van Geenhoven’s work), the typeshift that prepares verbs for predicative objects can be stated as in (724).

(724) “*Semantic Incorporation*” Typeshift (after van Geenhoven 1998)

$$\lambda x \lambda e. \mathbf{V}(x)(e) \rightarrow \lambda Q \lambda e \exists x. \mathbf{V}(x)(e) \ \& \ Q(x)$$

$$\langle e, st \rangle \qquad \langle \langle e, t \rangle, \langle s, t \rangle \rangle$$

The output verb meaning introduces existential quantification over a variable associated with the object, and calls for the object to contribute a restriction on that variable. It’s worth emphasizing the particular way this latter point is enforced: the derived verb meaning calls for an object that has a predicative or property meaning, a denotation in $D_{\langle e, t \rangle}$.

Let us suppose that all indefiniteness-conditioned caseless clauses are “semantic incorporation” constructions; their weak indefinite objects are predicative expressions, and their verbs denote property-taking functors. What I want to do now is explore what this type of proposal can do for us in capturing the morphological form and syntactic distribution of indefiniteness-conditioned caseless clauses. We will first try to tease apart the contribution to caselessness of rules like (724) on one hand, and predicative nominal meanings

⁶The possibility of predicative nominal meanings that this implementation presupposes echoes the work of Partee (1987) on families of NP meanings.

Predicative meanings for nominals also play an important role in the Restrict theory of Chung and Ladusaw (2004). Chung and Ladusaw’s treatment of weak indefinites differs from van Geenhoven’s in the locus of existential closure; for the former authors, this is to be found “at the event level”, a syntactic locus perhaps to be identified with νP . (See Chung and Ladusaw 2004, 11-13.) This, for our intensional verbs at least, is too high.

on the other, concluding that the latter provide a more natural means of explanation for caseless form. We will then see how the proposal might be deployed to capture the distribution of caseless clauses, in particular the connection between indefiniteness-conditioned caselessness and the *theme* objects.

7.1.3 The verb is not to blame

With a hypothesis about the origin of weak indefinite existential meaning in hand, let's now look a little closer at a minimal pair of cased and (indefiniteness-conditioned) caseless sentences. According to the proposal we are entertaining, a verb like *'iyaaq* 'find' may denote a property-taking functor, and does so in caseless clause (725).

(725) pit'iin' hi-'yaaŋ-n-a picpic
 girl 3SUBJ-find-P-REM.PAST cat
 The girl found a cat

If we suppose that the meaning of property-taking *'iyaaq* 'find' is along the lines of the right-hand side of (724), we have a ready treatment of the existential interpretation and obligatory narrow scope of the object in the caseless sentence. What looks like our same lexical verb may alternatively denote an $\langle e, st \rangle$ functor, of course, as when it combines with a case-marked object in (726).

(726) pit'iin-im paa-'yaŋ-n-a picpic-ne
 girl-ERG 3/3-find-P-REM.PAST cat-OBJ
 The girl found a cat / the cat.

Importantly, on the analysis we are entertaining, caseless (725) is not merely a version of (726) with a weak indefinite meaning for the object. To accommodate a difference in the meaning of the object, the cased and caseless sentences require different meanings for the verb. This leads us again to a situation where we must tease apart multiple potential triggers for the absence of morphological case. Why should the sentence built with predicative

object and property-taking verb lack case? Is the typeshifting rule in (724), which semantically produces the property-taking verb in (725) from the entity-taking verb in (726), also responsible for some aspect of the verb's morphosyntax? Or is it the predicative meaning for the object that makes the difference?

Intensional verbs prove helpful once again. It turns out that the typeshifting rule in (724), while simple and potentially adequate for extensional verbs, will not provide a straightforward analysis of the way intensional verbs combine with weak indefinite objects. Recall the essential fact this combination must ensure: the modal quantification introduced by the verb must outscope the existential quantification associated with the weak indefinite object.

(727) 'ipeew'i-se- \emptyset ciiciyele picpic
 look.for-IMPERF-PRES purple cat
 I'm looking for a purple cat
 look for > \exists

If a verb meaning providing for modal quantification were simply plugged in in the place of the variable *V* on the right-hand side of (724), however, what we derive is the scopal inverse of this: existential quantification over the object outscoops any quantification introduced by the verb.

How shall we remedy the situation? The general picture we are entertaining for caseless weak indefinite objects—nominals interpreted existentially, but in a way that crucially depends on the verb—provides for two general options.

One way forward would be to treat intensional verbs as basically property-taking, independent of any type-shift. This was the seminal proposal of Zimmermann (1992), who uses intensional property denotations to capture the meanings of opaque complements of intensional verbs quite generally. On Zimmermann's proposal, a verb like 'ipeew'i 'look for' would fundamentally denote a relation to a property; this basic meaning is in play in

(727). In (728), on the other hand, where the complement is read *de re*, a typeshift of some sort will be required to ensure that the verb and complement compose appropriately.⁷

(728) 'e-'peew'i-se- \emptyset ciiciyele picpic-ne
3OBJ-look.for-IMPERF-PRES purple cat-OBJ
I'm looking for a purple cat
 $\exists > look\ for$

Zimmermann's proposal treats intensional verbs as "semantically incorporating *par excellence*" (van Geenhoven, 1998, 179); no type-shift is required to make them so. Intensional verbs and extensional verbs both have property-taking denotations, but they differ in whether the property-taking meaning is a basic one.

Another potential way forward shares essentials with this first view. We might treat the property-taking meaning for intensional verbs as deriving from a more basic, $\langle e, st \rangle$ meaning (as in (728)) via a typeshift. (This line is suggested by the discussion of intensional verbs and "decomposition" in van Geenhoven and McNally 2005.) In this case, a typeshift distinct from that in (724) will be required, as we will need an output verb meaning that gives the existential quantifier over individuals narrow scope with respect to modal quantification.

What neither of our options allows us to do is state a *unified* grammatical rule linking changes in verb meaning to case or caselessness in the clause. If intensional verbs start off property-taking, their connection to caselessness would have to be stipulated as part of their lexical entry, whereas extensional verbs acquire whatever morphosyntactic property conditions caseless in virtue of a typeshift as in (724). If verbs of both classes start off denoting individual-taking functors and are shifted to property-taking meanings via typeshifting rules connected with syntactic changes, at least two semantically distinct rules stipulating all the same morphosyntactic changes will be required. The same goes, of course,

⁷The typeshift or coercion operation in question might apply to the verb itself, or to the trace of the object subsequent to quantifier raising. See Zimmermann (2005, 2006) for discussion.

if verbs of both classes could start off with property-taking denotations and be shifted to denotations in $D_{\langle e, st \rangle}$ via syntactico-semantic rules. In every case, whatever property of verbs caselessness might be traced to is, in the end, heterogeneous in origin.⁸

The alternative to the verb-based story, of course, is to pursue a link between caselessness and our predicative, weak indefinite object nominals. Both intensional verbs, given a proposal in the family of Zimmermann's, and extensional verbs, given a proposal in the family of van Geenhoven's, take objects denoting predicates of individuals. It is this fact about nominal denotations to which we will want to link our apparatus for caselessness. We come to that project in full in section 7.2. There is first one major unresolved issue in the clausal syntax of the weak indefinite object. This is the funny distribution of the indefiniteness-conditioned caseless clause.

7.1.4 The distribution of caseless clauses

Not all indefinite objects trigger caselessness. From our discussion in section 7.1.1, we have the outlines of a story about how the cut among indefinites should be made. Indefinites, we are supposing, are a semantically heterogeneous class. Some indefinites behave like quantificational terms subject to free scoping above T. These, when monotransitive objects, mark objective case. Other indefinites behave like predicative terms that must remain in the scope of V. These, when monotransitive objects, remain without case.

Verbs like *'ipeew'i* 'look for' and *'iyaaq* 'find' combine with indefinite objects of either of these varieties, with visible consequences for case and agreement. Other verbs are not so permissive. Recall from section 5.2.1 the unusual behavior of the verb *heki* 'see', which systematically disallows indefiniteness-conditioned caselessness. The object of this verb may be indefinite, but its indefiniteness never triggers the absence of case.

⁸The only attempt of which I am aware at formulating a generalized rule converting individual-taking verbs to property-taking ones was carried out in my paper Deal (2008). The analysis there makes certain predictions which I have unfortunately not yet been able to confirm.

(729) Context: a tour guide's guidance to his group before heading into the wilderness

'inehne-tx cepeeletp'et'es! kiye 'e-pe-x-nu'
bring-IMPER.PL camera 1PL.INCL 3OBJ-S.PL-see-PROSP
saaslaqs-na.
moose-OBJ
Bring a camera! We might see a moose.

Either of two things could be said about the verb *heki* 'see'. On one hand, it might be that this verb forbids weak indefinite objects, but allows quantificational indefinite objects. Quantificational objects to this verb mark objective case, just as we generally find. On the other hand, the verb might allow weak indefinite objects but somehow require them to behave exceptionally for case and agreement. If this is so, we will need a non-trivial adjustment to our generalizations linking weak indefiniteness to caselessness of objects.

Given that, at least to a first approximation, *heki* 'see' is an extensional verb, the matter will be very difficult to adjudicate on the basis of scopal patterns.⁹ For extensional verbs, the scopal range of quantificational indefinites properly includes the scopal range of predicative weak indefinites: quantificational indefinites scope either wide or narrow with respect to operators like negation, whereas predicative indefinites only scope narrow. Therefore, granting that the verb allows quantificational indefinite objects, scopal tests will not help us distinguish such objects from any potential weak indefinite objects that have been exceptionally marked with objective case.

The way forward here will rest on non-scopal tests that distinguish weak indefinites from quantificational indefinites. A range of phenomena which could play a diagnostic role in Nez Perce and do so cross-linguistically are identified and discussed by Dayal (2003) and Farkas and de Swart (2003). Pending further field investigation in these areas,

⁹A finer-grained semantic analysis of this verb makes an interesting project for future work. Perception verbs like English *see* display certain diagnostic behaviors of intensional verbs, as Moltmann (1997) discusses. I am not yet aware of how the relevant examples are rendered in Nez Perce.

we will have to move forward provisionally. What looks to be our better provisional move and the less radical choice is to treat the verb *heki* ‘see’ as simply not allowing weak indefinite objects. It would not be exceptionally surprising either theoretically or typologically for weak indefinites to make impossible arguments for certain predicates. A restriction along these lines can be seen in Inuktitut, for example, where external arguments systematically disallow narrow scope with respect to negation, suggesting that they cannot be weak indefinites (Wharram, 2003, §3.7.3).

On the theoretical end of things, either of two means of explanation sketched in section 5.2.1 could be applied to rule out weak indefinite objects of *heki* ‘see’. One is narrowly limited to this particular verb. Suppose the typeshift in (724) has the status of a lexical rule altering verb meanings; or, alternatively, suppose this typeshift is accomplished with the help of a (in this case silent) morpheme, as van Geenhoven (1998, 240) and Wharram (2003) propose.¹⁰ If the typeshift is accomplished via a lexical rule, *heki* ‘see’ might simply be an exception, lexically listed. If the typeshift is accomplished via silent affixation, subcategorizational restrictions on the part of the affix might be called upon to rule out combination with this particular verb.¹¹

The other class of analysis we entertained in section 5.2.1 drew a connection between the object position of *heki* ‘see’ and a pair of other syntactic contexts where indefinite objects systematically fail to condition caselessness. Indefinite applicative objects do not condition caselessness; nor do indefinite goal or source arguments of ditransitive verbs. When applicative and ditransitive sentences are caseless, only extended reflexive interpretations are available.

¹⁰These authors make this type of proposal for the West Greenlandic and Inuktitut antipassive constructions, respectively. I proposed to treat Nez Perce indefiniteness-conditioned caselessness along these lines in Deal (2007). This type of proposal potentially necessitates a departure from our second supposition about the syntax of intensional verb constructions, viz. that VP structure does not differ between intensional and extensional verbs. If we follow Zimmermann in treating property-taking meanings as basic for intensional verbs, property-taking extensional VPs will require an affix that their intensional counterparts lack.

¹¹On the need for silent affixation in natural languages, see Pesetsky (1995).

- (730) a. Ditransitive with indefinite object, cased
 'aayat-om pee-kiwyek-se- \emptyset cuu'yem picpic-ne.
 woman-ERG 3/3-feed-IMPERF-PRES fish cat-OBJ
 The woman is feeding fish to a cat.
- b. Caseless ditransitive: no indefinite reading of the goal object
 'aayat hi-kiwyek-se- \emptyset picpic cuu'yem.
 woman 3SUBJ-feed-IMPERF-PRES cat fish
 The woman_i is feeding fish to her_i cat.
 *The woman_i is feeding fish to her_j / the / a cat
- (731) a. Applicative sentence with indefinite object, cased
 sik'em-ne pee-k-yuu- \emptyset -ye.
 horse-OBJ 3/3-go-APPL:GOAL-P-REM.PAST
 He went over to a horse.
- b. Caseless applicative sentence: no indefinite reading of the applicative object
 sik'em hi-k-yuu- \emptyset -ye.
 horse 3SUBJ-go-APPL:GOAL-P-REM.PAST
 He_i went over to his_i horse.
 *He_i went over to his_j / the / a horse.

Let us suppose our same vein of analysis applies here as in the case of *heki* 'see'. Just like objects to that verb, applicative objects and ditransitive goal/source objects may be indefinites, but may not be *weak* indefinites. This determines their inability to take the indefiniteness-conditioned caseless route.

An idea that occupied a prominent place in our previous discussion of these matters was that indefiniteness-conditioned caselessness might be triggered only by those objects which semantically hold the role of *theme* and syntactically are objects of the verb itself. We only stand a chance of seeing special weak indefinite morphosyntax – viz, a contrast between case and caselessness – for those objects which are second-highest in *vP*, given that

only these objects are eligible for objective case marking in the first place. In applicative constructions and ditransitives, the second-highest nominal in *v*P is not a theme, and is not an object of the verb, but of some other functor; and indeed, it seems that this makes all the difference in ruling out the possibility of weak indefiniteness for this higher object.

If this line of reasoning is correct, the restrictions on indefiniteness-conditioned caselessness are intimately tied up with the syntactic construction of complexity in argument structure. The point stands independently of the particulars of the way we grammatically encode typeshifts like (724). If (724) has the status of a lexical rule, the rule must apply only to lexical verb roots. It must be barred from applying to complex verbs created by applicative suffixation. This could be because applicative verbs are put together in the syntax, after all lexical rules have applied. On this line of thinking, that the rule should class ditransitive verbs and the verb *heki* ‘see’ together with applicative verbs suggests that the argument structure of these verbs is constructed syntactically, as well. Some sort of hidden structure is responsible for introducing the arguments. If, on the other hand, the typeshift in (724) is accomplished via a covert affixal morpheme, applicative and ditransitive constructions offer insight into the selectional restrictions to which this morpheme is subject. The morpheme must select for verb roots (which must be, therefore, a syntactically distinguishable class); it is not possible to add the morpheme willy-nilly wherever we have a functor of the appropriate semantic type. It cannot be added to Appl’ in a structure like (625), for instance.

Making either of these moves, we succeed in producing the distribution of indefiniteness-conditioned caseless clauses by means of a small number of lexical or combinatorial stipulations. Ultimately, of course, we would like to understand why it should be that just these stipulations, and not others, crop up in this construction. The problem here is not unique to Nez Perce; it seems to be linked to the overall generalization explored by Baker (1988) that only theme arguments can incorporate and antipassivize. It seems reasonable, therefore, to suspect that the ultimate, “deep” cause of the restrictions on indefiniteness-conditioned

caselessness in Nez Perce will come from whatever brings out this pattern in the languages Baker and others have explored.

7.2 The weak indefinite object in itself

Now we have an impression of the semantics of a Nez Perce weak indefinite object – it is predicative – and an impression of its morphology – it is caseless. Connections like these, we expect to be mediated by structure. This brings us to the matter of the internal syntax of the indefinite caseless object.

The internal syntax of weak indefinites happens to be a question which has been subject to a great deal of previous investigation, and in which we can draw upon a theoretical basis informed by a broad range of languages. It turns out that the structural profile of weak indefinites vis-à-vis quantificational and definite nominals is remarkably consistent across languages. A theme we find emphasized again and again in discussions of various languages is that weak indefinites are *structurally small* – they lack certain pieces of the functional structure found in referential DPs.¹² This matter of relative structural impoverishment is a strong candidate for a language universal. If this universal is sound, it can play a guiding role when it comes to questions of structure and category in nominals in Nez Perce. Since Nez Perce is a language without articles, it is hard to ascertain directly whether any nominal, weak indefinite or otherwise, should be analyzed as a DP. Typological results provide a leading source of indirect evidence that weak indefinite objects should be treated as structurally impoverished with respect to referential DPs.

These considerations bring into view the plot line that will guide us through the rest of this chapter. The first piece of the story from here will rest on typology, universals, and a theoretical framework within which they might be captured. When we come to the second

¹²Throughout this discussion we will confine our attention to referential terms that refer to individuals, not kinds, as this has received the lion's share of previous exploration. Kind reference may have a structural signature quite distinct from individual reference, as Zamparelli (1995) and Chierchia (1998) explore.

piece – the particulars of weak indefinite and referential nominal structure in Nez Perce – the theoretical pieces to which the typology points us will provide us with the means to make crucial structural distinctions. These distinctions ultimately have to be linked to case and agreement, of course. That third piece of the story concludes our chapter.

7.2.1 Weak indefinites and structural smallness: typology and theory

A range of linguistic studies have established that weak indefinite constructions cross-linguistically involve objects that are missing certain pieces of the functional structure of referential DPs. Precisely which pieces are missing seems to be subject to cross-linguistic variation. The range of variation is not random; to the contrary, the data appear to form a well-behaved continuum.

On one extreme of the continuum we find languages and constructions within languages which employ what are at most N^0 weak indefinite objects. Objects this small are frequently (perhaps always) subject to incorporation into the verb. West Greenlandic is well-known case in point. The West Greenlandic incorporated, N^0 object may be “doubled” by an external modifier, as in (732b), but the doubling modifier and the incorporated nominal do not form a (surface) phrasal constituent. (For a range of perspectives on incorporation and doubling in West Greenlandic, see Sadock 1980, Bittner 1994, van Geenhoven 1998.)¹³

(732) West Greenlandic: N^0 incorporated weak indefinite

a. Juuna Kaali-mit allagar-si-nngi-l-a-q

Juuna.ABS Kaali-ABL letter-get-NEG-IND-[-TR]-3SG

It is not the case that Juuna got a letter / letters from Kaali (van Geenhoven 1998, 3)

¹³The glossing of the examples follows van Geenhoven (1998): ABS absolutive case, ABL ablative case, INST instrumental case, IND indicative, [-TR] intransitive. Sentence (732a) is a simplification by van Geenhoven of a sentence discussed by Bittner (1994, 118).

- b. Jensi marlun-nik mann-tu-ssa-a-q
 Jensi.ABS two-INST.PL egg-eat-FUT-IND.[-TR]-3SG
 Jensi will eat two eggs. (van Geenhoven, 1998, 7)

Less extreme cases of weak indefinite smallness are found in languages such as Niuean and Chamorro, which are sometimes described as showing “pseudo-incorporation” (a term from Massam 2001). Massam (2001) reports that Niuean weak indefinite objects may contain noun complements and adjectival modifiers, but systematically lack (further) functional structure: case markers, articles, number markers and possessor phrases are all forbidden. (See the discussion and examples in section 5.1.3.) The weak indefinites that appear in incorporation constructions in Chamorro are subject to largely parallel restrictions, as Chung and Ladusaw (2004) document.¹⁴

(733) Chamorro: small phrasal weak indefinite

- a. Malägu’ yu’ gumäi-[amigu siha taiguennaog giya hagu]
 AGR.want I INFIN.have-[friend PL like.that LOC you]
 I want to have friends like you (Chung and Ladusaw, 2004, 86)
- b. Ni unu gäi-[aturidat mam-a’tinas areklu]
 not one WH[NOM].AGR.have-[authority INFIN.AP-make rule]
 No one has authority to make rules. (Chung and Ladusaw, 2004, 87)

Coming closer to the other extreme of the smallness continuum, we find languages like Hungarian, which permits weak indefinite objects to contain modifiers and noun complements as well as marking for case and plurality (Farkas and de Swart, 2003). This suggests that Hungarian weak indefinite nominals include some pieces of functional structure; at the same time, though, they may *not* contain determiners.

¹⁴Abbreviations follow Chung and Ladusaw (2004): AGR subject-verb agreement, AP antipassive, INFIN infinitive, WH[NOM] nominative *wh*-agreement, LOC local morphological case.

(734) Hungarian: small phrasal weak indefinite

a. Mari [kínai lampion(ok)at] szerelt fel a plafonra

Mari [Chinese lantern.(PL).ACC] set up the ceiling.on

Mari set up a Chinese lantern / Chinese lanterns on the ceiling (Farkas and de Swart, 2003, 94)

Finally, at the opposite end of the spectrum from incorporating languages, there are languages like Maori, Italian and English, which appear, *prima facie*, to grant weak indefinites a full DP structure (on Maori, see Chung and Ladusaw 2004). For English, however, there is a long tradition of viewing this appearance as deceiving. Some of the original arguments come from Perlmutter (1970), who argued that indefinite *a* is a reduced form of the numeral *one*. Since *the* is not (and does not derive from) a numeral, Perlmutter reasoned, there must not be a grammatical category ‘Article’ encompassing both *the* and *a*. Perlmutter’s analysis finds a direct descendent in the articulated structural proposals of Zamparelli (1995) and Lyons (1999), both of whom assign *the* and *a* to separate positions and grammatical categories. In Zamparelli’s system (motivated by a range of data from both English and Italian), determiners like *the* occupy a higher head position in the nominal, whereas “predicative determiners” like *a* occupy a lower position, in a projection he terms P(predicative)DP.¹⁵ In a sentence like *The queen is a person*, referential *the queen* is structurally larger than predicative *a person*.

(735) English nominal structure à la Zamparelli

[*DP* The [*PDP* [*NP* queen]]] is [*PDP* a [*NP* person]]

This line of research suggests it may be *universally* the case that predicative, weak indefinite nominals are structurally smaller than their referential or quantificational DP brethren.¹⁶

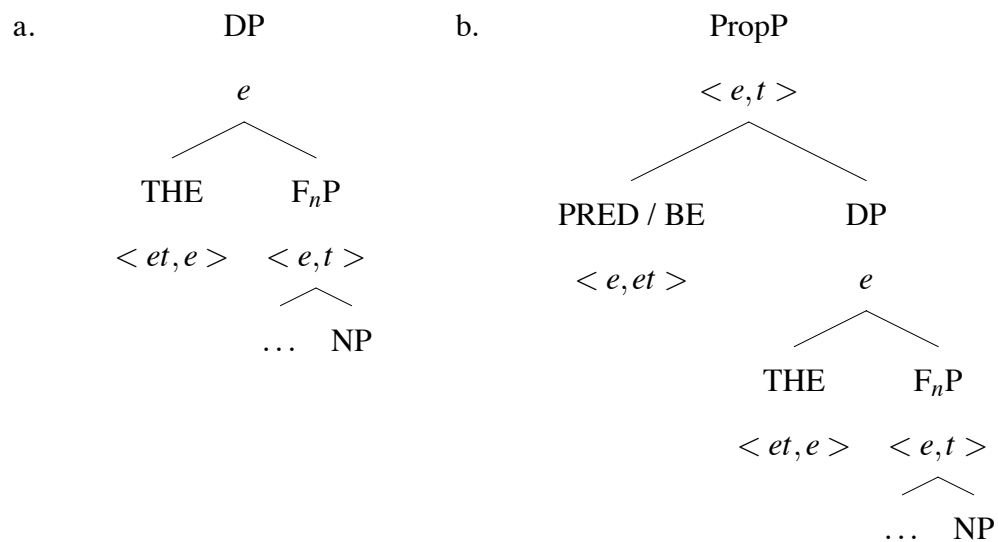
¹⁵The higher head position is dubbed SDP (for *strong DP*) by Zamparelli; I write this simply as DP here.

¹⁶Further pieces of the typological and theoretical picture come from Gillon (2006), which likewise argues in favor of structural smallness for certain indefinite terms.

This universal, if correct, has bearing on the structure of Nez Perce weak indefinite nominals. Its explanation bears directly on broader theoretical concerns which will guide us in making our treatment of the Nez Perce facts explicit. Of particular relevance is the matter of cross-linguistically stable hierarchies of functional projections – what Starke (2001) called *functional sequences* (“fseq”). There are two aspects of the typological facts we have seen that should plausibly be explained in terms of such hierarchies.

The first fact is the core issue of *predicative smallness*. If we stick to our treatment of weak indefinites as predicative terms, our smallness universal bears on the particulars of the heads that do and do not belong to the nominal functional sequence. The state of affairs we have observed – that referential terms should be consistently larger than predicative terms - can only be assured if natural languages do *not* employ, as part of the extended projection of N, type-shifting heads that convert referential terms to predicative ones. We might imagine what such a case would look like by considering a logically possible language where a nominal functional head has the function of Partee (1987)’s typeshifter PRED or of the identity verb *be* – converting a referential term to a property.

(736) Nominal structures of a logically possible language *Nsmall*:

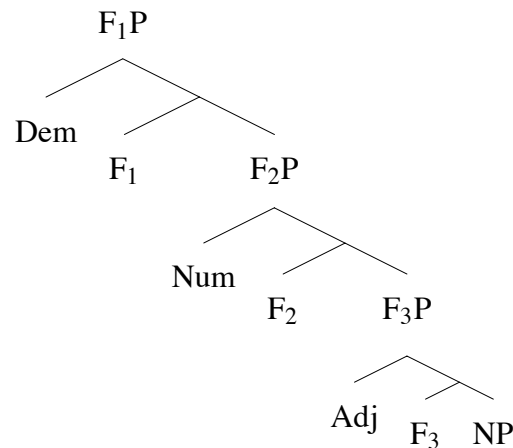


Natural languages differ from *Nsmall* in that they fail to treat PRED and *be* as part of the extended projection of N. This is a fact that the nominal functional hierarchy must record.

The second important piece of the crosslinguistic picture is what we could call the *monotonicity fact*. It could hardly be a coincidence that languages which permit plural markers in their weak indefinites always apparently also allow adjectives and noun complements, for instance. Hungarian weak indefinites permit a proper superset of the nominal-internal pieces permissible in Niuean weak indefinites; Niuean weak indefinites permit a proper superset of the nominal-internal pieces permissible in incorporated weak indefinites in West Greenlandic. We do not find a language which rules out adjectives in its weak indefinites, but not plural marking, for instance, nor a language which rules out noun complements, but not determiners.

A universal functional hierarchy offers us the possibility of a structural explanation for these patterns.¹⁷ Suppose we adopt a rich conception of the functional structure internal to DPs, such as that proposed by Cinque (2005). Cinque proposes that adjectives, demonstratives and numerals each occupy a dedicated functional projection, universal to all languages and universally structurally located relative to other pieces of nominal functional structure. The structure of DP is quite articulated, then. (737) presents a proper part of the picture.¹⁸

(737) Cinque's nominal structure



¹⁷Many authors have explored this route; see e.g. Zamparelli 1995, Massam 2001, Chung and Ladusaw 2004.

¹⁸In addition to questions about determiners and quantifiers, of particular concern is the AP category, which is likely to require further structure. See Cinque (1994), Scott (2002).

Such a structure, like Zamparelli's, gives us the means to precisely describe a number of discrete cut-off points at which nominal projection might end in a particular language or construction. A weak indefinite projected only to F₃P would allow adjectives, but not numerals (and perhaps not number marking)—a description that matches the profile of Niuean. A nominal projected to F₂P would allow adjectives and numerals, but not demonstratives; if its demonstratives behave like its determiners, Hungarian might be a candidate for a language of this type. That higher projections should only be possible in the presence of lower ones, but not vice versa, comes down to a fundamental asymmetry in properties of selection. In a structure like (737), the functional head F₃ can select NP; but NP does not select the functional material that appears above it.

With these pieces of the typology and theory on the table, we turn now to the empirical picture from Nez Perce. We will first see some evidence that caseless-clause indefinite objects in Nez Perce are not full DPs. We will then see some reason to think that they come quite close. Plausibly, all that is missing from a caseless-clause indefinite Nez Perce object is D(P).

7.2.2 Nez Perce weak indefinite objects are not as big as DP

Nez Perce offers us two types of direct evidence for the structural impoverishment of caseless-clause indefinite objects. This evidence suggests that these objects do not include DP.

First, caseless-clause indefinite objects cannot include possessor phrases. It is not possible, therefore, to interpret caseless clauses like (738) as involving indefiniteness-conditioned caselessness; the only acceptable parse of this sentence is as an extended reflexive with full DP object.

- (738) pit'iin' weet'u hi-'yaaŋ-n-a ['ip-nim picpic]
 girl NEG 3SUBJ-find-P-REM.PAST [3SG-GEN cat]
 The girl_i didn't find her_{i/*j} cat
 NOT: The girl_i didn't find a cat of hers_{i/j}

In section 6.2.3, we assigned a structure to genitive possessor phrases inside objects according to which they occupy Spec,DP. This obligatory high position for the possessor phrase within the object nominal was linked to the obligatory caselessness of the extended reflexive. Suppose genitive possessor phrases within objects are only syntactically licensed in the Spec,DP position. If caseless-clause indefinite objects systematically *lack* DP, facts like (738) fall squarely into place.

Second, caseless-clause indefinite objects cannot include the quantifier *'oykala* 'all'. This quantifier appears to be bimorphemic, consisting of prefix *'uy* 'all' plus demonstrative *kala* 'that many'. When it appears within a monotransitive object, the object marks objective case:

(739) Context: You are entering a store and asking for fish.

'oykala-na cu'yeem-ne 'e-wewluq-se- \emptyset
 all-OBJ fish-OBJ 3OBJ-want-IMPERF-PRES
 I want all the fish you have

Consultants permit a version of this sentence with a caseless object only when the quantifier is heavily stressed and separated from the rest of the clause by a pause. This latter sentence plausibly involves an adverbial *'oykala* which does not form a constituent with the weak indefinite object *cuu'yem* 'fish'.

(740) 'OYKALA, cuu'yem wewluq-se- \emptyset
 all fish want-IMPERF-PRES
 ALL OF IT, I want fish

Let us suppose that strong quantifiers, like demonstratives, adjectives and numerals (analyzed by Cinque) as well as the various types of articles (analyzed by Zamparelli), occupy a dedicated functional projection. Matthewson (2001) argues on the basis of evidence from St'át'imcets and English that this projection is structurally higher than D. If this is so, the absence of DP in weak indefinites is sufficient to rule strong quantifiers out.

7.2.3 Nez Perce weak indefinite objects are *almost* as big as DP

We have now looked at two types of nominal subconstituent; we need to look at several more. In doing so, it happens that we come upon an interesting discovery. It appears that Nez Perce caseless-clause indefinite object nominals, which are smaller than DP, are not likely to be *very much* smaller than DP. Apart from possessor phrases and strong quantifiers (each of which plausibly requires D), any nominal subconstituent which can occupy a Nez Perce DP can occupy a Nez Perce caseless-clause indefinite object. This behavior makes for a striking contrast with the facts from Niuean, Chamorro and Hungarian, in each of which predicative nominal structure is significantly functionally impoverished.

Let us start by examining types of nominal subconstituents whose distribution in other languages has been investigated in depth. The following examples show that **adjectival modification** is possible in the weak indefinite object, as in Hungarian, Chamorro and Niuean.

(741) 'ipeew'i-se- \emptyset [ciiciyele picpic]
look.for-IMPERF-PRES [purple cat]
I'm looking for a purple cat

(742) Steve ha-anii- \emptyset -ya [himeeq'is-niix coqoycoqoy]
Steve 3SUBJ-make-P-REM.PAST [big-EMPH teepee]
Steve made a really big teepee

Like in Hungarian, but unlike in Niuean, Nez Perce weak indefinite objects may include marking for **plurality**. Most common nouns do not have a plural form, but plural marking may be seen on adjectives within weak indefinite nominals.

(743) [lepit ki-kuckuc picpic] haacwal hi-wewluq-se- \emptyset
[two PL-small cat] boy 3SUBJ-want-IMPERF-PRES
The boy wants two little cats

Along with plural marking, example (743) shows that **numerals** are possible in the Nez Perce weak indefinite object; so too are **weak quantifiers** such as 'ile \hat{x} ni 'a lot, many'.

(This behavior, if I correctly understand Farkas and de Swart (2003, 154), is *not* attested in Hungarian.)

(744) Caan [’uynept sooχ] hi-wiqi-n-∅

John [seven spoon] 3SUBJ-lose-P-PRES

John lost seven spoons.

(745) [’ileχni heecu] hi-pa-ani-∅-ya waaqo’ ’etke

[a.lot wood] 3SUBJ-S.PL-make-P-REM.PAST already because

seχnim’ipkin’ikeeyx

late.in.fall

They had already made a lot of wood, for it was late in the fall. (Aoki and Walker, 1989, 434)

While the adjective facts call for a relatively small nominal functional structure (witness the situation in Niuean and Chamorro), the presence of plural marking, numerals and weak quantifiers in Nez Perce weak indefinite objects establishes that they are at least as large as the relatively sizable weak indefinite objects of Hungarian, if not in fact bigger.

Certain other types of modification which have engendered less crosslinguistic research are also possible internal to the Nez Perce caseless-clause indefinite object. Suppose we analyze at least some relative clauses as nominal subconstituents in Nez Perce. This makes it plausible that weak indefinite objects include **relative clauses** in examples like (746). This sentence includes one headless relative clause and one relative clause that appears externally headed.

(746) kaa ’iniki-se-∅ [ke yoχ hi-saca-sa-qa] konma
 and put-IMPERF-PRES [REL DEM 3SUBJ-porcupine-IMPERF-REC.PAST] like.that
 kaa taklay hi-’nekeht-se-∅ [hipt ke yoχ hii-we-s-∅
 and instead 3SUBJ-take.out-IMPERF-PRES [food REL DEM 3SUBJ-be-P-PRES
 nukt qiy’aaw’is kaa wee’ikt]
 meat dried and grease]

And she put down what she had been working with porcupine quills and instead she took out food that was dried meat and grease. (Aoki and Walker, 1989, 51)

The typological significance of this possibility is not immediately clear. Massam (2001) reports that Niuean weak indefinite objects allow only subjunctive relative clauses, not indicative ones; Chung and Ladusaw (2004) report that Chamorro weak indefinites allow relative clauses (without discussion of mood); and Farkas and de Swart (2003, 94) report that Hungarian singular weak indefinite objects allow no relative clauses. The pattern in Niuean in particular hints at the need for a finer-grained typology of relative clause types in order to properly contextualize the possibility of relative clause modification in a given language's weak indefinite construction. Not all relative clauses can plausibly be treated the same way.

Another example of a caseless-clause indefinite object including a relative clause also includes an additional underdescribed category of nominal modifier – what we might call a “**genitive of material**”, as in *timaanim siis* ‘soup of apples, applesauce’. Crucially, the genitive modifier here introduces not a possessor, but a material or physical source.

(747) Context: Martha Stewart’s cooking show. (example repeated from (698))

hi-twilixnix-sa-qa [timaani-nm siis ke yoʔ
3SUBJ-mix-IMPERF-REC.PAST [apple-GEN soup REL DEM
hani-sa-qa]
make-IMPERF-REC.PAST]
She was mixing applesauce she was making

A genitive of material features in the following corpus example noted by Rude (1986a).

(748) hi-’nehne-n-e [ʔaʔaas-nim me’eqs]
3SUBJ-carry-P-REM.PAST [grizzly-GEN skin]
She carried along a grizzly skin. (Phinney, 1934, 263)

Unlike the genitive constructions discussed in chapter 6, genitives of material do not give rise to possessor raising. Their structural position within the nominal must be relatively low, therefore; they do not require DP.

A final nominal subconstituent type that features in caseless-clause indefinite objects is the **demonstrative**. These objects may include either proximal *kii* or distal *yôx̂*, generally translated as ‘this’ and ‘that’. These demonstratives do not require actual pointing for felicitous use; nor do they require anaphoricity or definiteness of the nominal to which they belong. They seem most generally to qualify the meaning of a nominal by means of spatial deixis. The translations below hint at this effect.

(749) weet kii haama ha-anii- \emptyset -ya [yôx̂ coqoycoqoy]
 Y.N this man 3SUBJ-make-P-REM.PAST [DEM teepee]
 lit. Did this man make an over-there teepee?

(750) From *Furred and Feathered Animals Have a Council*, Aoki and Walker 1989, 310.
 Chinook Salmon, wounded, has floated down into the ocean.

a. 'uuyit pa-payn-oo- \emptyset -ya qiiw-ne.
 first 3/3-arrive-APPL:GOAL-P-REM.PAST old.man-P-REM.PAST
 First he came to an old man.

b. 'isiimet teqe's ha-anii-sa- \emptyset .
 behold fishnet 3SUBJ-make-IMPERF-PRES
 Behold, he is busy in fishnet-making.

c. "'ito-'ayn hanii-sa- \emptyset qiiwn [kii teqe's]?"
 what-BEN make-IMPERF-PRES old.man [DEM fishnet]
 “What for are you making, old man, an over-here fishnet?”

That demonstratives should so freely be possible in indefinite nominals accords well with the decompositional approach of Leu (2008), according to which the deictic meaning of a demonstrative is to be syntactically separated from the component which, in a language

like English, introduces definiteness. It may be that what I am calling ‘demonstratives’ in Nez Perce correspond *only to the deictic piece* of demonstratives in English.

In summary, we see that quite a broad range of extended nominal structure is possible internal to the Nez Perce caseless-clause indefinite object.

(751) Possible pieces of the Nez Perce caseless-clause indefinite object

- | | |
|---------------------|--------------------------|
| a. adjectives | e. relative clauses |
| b. plural marking | f. genitives of material |
| c. numerals | g. demonstratives |
| d. weak quantifiers | |

In view of this range of facts, the simplest hypothesis we could venture is that Nez Perce predicative nominals differ from referential nominals *only* in lacking D. We could call this hypothesis *Minimal Functional Impoverishment*.

Minimal Functional Impoverishment is in part a hypothesis about the way Nez Perce differs from other languages. We will want to situate this hypothesis within a system of parameters guiding linguistic variation. We will do so just below; let us first make our hypothesis a touch more explicit. We can adopt the neutral label EP for whatever head is the immediate sister of D in a full DP structure in virtue of a universal functional sequence.¹⁹ We hypothesize that referential (cased) and predicative (indefinite in a caseless clause) Nez Perce objects differ in the following way:

(752) *Minimal functional impoverishment hypothesis*

- a. Referential DP (universally):

$$[DP D^0 [EP E^0 [\dots functional projections \dots NP]]]$$

¹⁹This might be a P(predicative)DP projection, as in Zamparelli (1995), or a NumberP, as in Ritter (1991), to mention just two of the many possibilities.

b. Nez Perce caseless weak indefinite object:

[_{EP} E⁰ [...*functional projections* ...NP]]

With the exception of those nominal constituents that require DP or higher material for structural or syntactic licensing reasons, all functional material possible within DP is possible within the caseless weak indefinite object.

7.3 The Object Case Generalization revisited

At the end of section 7.1.3, we resolved to seek out a morphological trigger for caselessness in the grammar of the weak indefinite object. We have now come up with a hypothesis about how exactly such morphologically and semantically distinguished objects are *syntactically* special. They do not include DP. They are EPs, nominal structures that end just shy of D. We ask now how the functional impoverishment of weak indefinites should bear on the weak indefinite object's ability to mark case and agree.

7.3.1 Parameters of impoverishment and ϕ -feature localization

This turns out to be an area where linguistic universals are in short supply. On a cross-linguistic basis, the agreement and case behavior of weak indefinite objects dissociates quite strikingly from other metrics of nominal functional structure. In Nez Perce, weak indefinite objects lack only D, *ex hypothesi*, and cannot mark case or agree. This leads us to suspect that D plays a crucial role in determining case and/or agreement. But in Hungarian, weak indefinite objects mark accusative case just as non-weak indefinites do (Farkas and de Swart, 2003), despite their functional impoverishment. This argues that object case marking cannot be linked to D on a universal basis. In Hindi, which according to Dayal (2003) makes use of weak indefinite objects that are structurally NPs, weak indefinite objects are in fact *more* able to participate in agreement than referential objects are. This suggests that agreement cannot be universally linked to D any more than object case can.

What we are up against here seems to be a point of substantial linguistic variation – different languages have set one or more parameters in different ways.

What are the parameters in question? Two related points of difference seem to be playing a role. One point that we have already observed concerns the precise size of weak indefinite objects. Our hypothesis that Nez Perce weak indefinites are minimally functionally impoverished corresponds to one setting of a parameter we could describe as follows.

(753) *Nominal functional impoverishment parameter*

Predicative nominals are structurally projected up to { N, NP, . . . , EP }

The other matter concerns which part(s) of the nominal functional sequence are necessary for a nominal to mark case and/or agree. In Nez Perce, D seems to be necessary for both behaviors; in Hindi and Hungarian, not so. How should the parameters involved here be described?

Case and agreement are likely to require slightly different parametric solutions. For agreement, it is tempting to connect the variation we see in this domain with what Cinque (1999) observes on the typology of agreement in clauses. In contrast to the positions of a wide variety of functional heads, the position of agreement along the functional spine of the clause is not fixed on a universal basis, Cinque shows. Some languages spell out agreement in a position quite high in the clause; others pronounce agreement material in a position suggesting origin much lower, closer to V. In terms of the theoretical model of agreement elaborated in section 5.3, this picture suggests that both $[\phi]$ in the nominal domain and $[u\phi]$ in the clausal domain may occur in a range of structural positions. Where precisely they occur in a given language must be a matter of parametric variation. This might lead us to an approach to the localization of agreement in nominal and verbal projections along the following lines.²⁰

²⁰We would ultimately like to know if featural localization in the nominal domain connects with featural localization in the clausal domain in a constrained way. I am not aware of any extant research on this point.

(754) *Featural localization parameter*

- a. In the nominal extended projection, ϕ features are structurally associated to { D, E, ..., N(?) }
- b. In the verbal extended projection, $u\phi$ features are structurally associated to { F₁, F₂, ..., V(?) }

In terms of featural localization in the nominal extended projection, Nez Perce is plausibly a language where the parameter is set to D. Projections smaller than DP – EPs or below – do not have the ϕ -features required to participate in agreement relationships. This contrasts with the situation in a language like Hindi, where E⁰ or some lower head is structurally associated to ϕ .

Languages like Nez Perce where ϕ -features are linked to D are a very well-attested type. Germanic and Romance languages encode both ϕ and definiteness in single morphemes, suggesting just such a connection; and we find similar correlations in typologically and genetically far-flung languages. A particularly interesting example comes from Northern Pomo, a Hokan language of Northern California. In this language, nominal phrases headed by common nouns can overtly mark ϕ -features on their right edge only in case an overt D-element is present (O'Connor 1992: 172-179).²¹ This marking, which O'Connor analyzes as a pronoun, is absolutely inseparable from the rest of the nominal and cannot be stressed, distinguishing itself in these regards from resumptive pronouns.

- (755) a. masan maata (nam) *D optional*
white woman DEF
(The) white women
- b. masan maata *(nam) p^how *ϕ requires D*
white woman DEF 3PL
Those white women (O'Connor, 1992, 174)

²¹Northern Pomo is a head-final language.

Just as in better-known Indo-European cases, the presence of a D head in the Northern Pomo nominal is tightly linked to the expression of the nominal's ϕ -features. Northern Pomo permits the presence of D without ϕ ; it does not, however, allow ϕ without D. The presence of ϕ -features depends on the presence of the D head.

7.3.2 The two caselessness clause types connected

From the foregoing falls out a favorable finding. If we suppose that ϕ features must be associated with D in Nez Perce, rather than with lower pieces of nominal structure, and that D is missing from the objects of indefiniteness-conditioned caseless clauses, we are able for the first time to state a single factor that all caseless clauses in the language have in common.

The generalization is rather simple: *the object of a caseless clause is an object that cannot agree*. This could be because it is structurally small, lacking D and the ϕ -features associated thereto; or because it is a locally bound DP, lacking ϕ features as a matter of lexical specification. The morphosyntax is not sensitive to the *means* by which agreement failures come about. All that matters is that the object is not able to agree.

This hands us a natural way of understanding the Object Case Generalization of chapter 5.

(756) *Object Case Generalization*

A nominal controls object agreement iff it is marked with objective case.

In both types of caseless clauses, the failure of syntactic agreement translates into the absence of morphological objective case. Head marking and dependent marking in this language are two sides of the same coin. The syntactically crucial factor looks to be agreement – the establishment of a dependency between ϕ -features. If we know whether object agreement has been successful, we can predict whether or not the object will mark case.

CHAPTER 8

THE CALCULUS OF CASE

Many of the pieces are now in place to attempt an explanation of our two fundamental generalizations about the case system of Nez Perce. Ideally, this explanation would fall out from a theory of case, coupled with our theory of agreement.

(757) *Object Case Generalization*

A nominal controls object agreement iff it is marked with objective case.

(758) *Rude's Generalization*

A third person subject is marked ergative iff the object is marked objective.

The nature of (757) and (758) points us to a starting place for the theory we will need. Given that our primary explicandum is a system of marking on nominals, the case theory that concerns us will be a theory of *morphological case*. It should allow us to explain why particular nominals are marked in the way they are, in virtue of the syntax of the clause.

What, precisely, must a clause be like in order that case might appear on its arguments? Given what the previous two chapters have uncovered regarding the Object Case Generalization, we expect that a major part of the syntactic conditioning of case-marking will be tied up with the agreement system. Objects mark case only in structures where they are able to participate in object agreement; they participate in agreement, we have discovered, only when they are second highest in vP, full DPs, and not locally bound. Ideally, given that our theory of agreement is sensitive to details of this type, we would not have to recapitulate these details in a theory of case-marking. The theory of case would be able to simply refer to whether or not an object is able to syntactically agree.

We might imagine that a similar picture holds for subjects. The subject of a simple Nez Perce clause originates structurally highest in *v*P, and participates in agreement with Asp. Where a statement like Rude’s Generalization calls for a certain case to be marked only on nominals that serve as *subject*, it abbreviates a more precise statement that should be given in terms of agreement behavior. Ergative case is marked only on nominals that participate in agreement under c-command with Asp. The ergative-marked nominal – the *transitive subject*, in the traditional terms with which we began – could be characterized syntactically, then, as the nominal agreeing under c-command with Asp in a clause where the second-highest nominal in *v*P agrees under c-command with *v*.

If this way of picking out the class of ergative-marked nominals is correct, we expect a condition along the following lines to hold.

(759) *Agreement Condition on Ergative Case*

If a nominal does not agree with Asp (i.e. “participate in subject agreement”), it cannot be marked for ergative case.

This condition does not impose as strong a requirement on subjects as the Object Case Generalization does on objects. Objects mark objective case if *and only if* they participate in agreement with *v*. Subjects participate in agreement with Asp whether or not they mark ergative case, however. The implication from agreement behavior to case-marking behavior for subjects is one-way only: if a nominal marks ergative, it must agree with Asp.

(760) *Agreement with non-ergative-marked subject*

'aayat hi-kiwyek-se- \emptyset [*pro* picpic] cuu'yem.

woman 3SUBJ-feed-IMPERF-PRES [(possessor) cat] fish

The woman_i is feeding fish to her_i cat.

(761) Agreement with ergative-marked subject

'aayat-om hi-nees-kiwyek- \emptyset -e 'ipee \hat{x} qetqet-ne
woman-ERG 3SUBJ-O.PL-feed-P-REM.PAST bread duck-OBJ
The woman fed bread to the ducks.

The examples we have seen in this dissertation so far are all consistent with Agreement Condition (759). Is this conformity to the generalization accidental, or symptomatic of a deeper regularity? The empirical question is fundamentally a question of the way that Rude's Generalization should be understood, and the theoretical question cuts right to the heart of ongoing debates about ergative case. If the Agreement Condition holds – as I will argue it does – we can bring together Rude's Generalization and the Object Case Generalization into a *Transitive Subject Condition* in the following way.

(762) *Transitive Subject Condition*

A third person nominal which agrees with Asp is marked ergative iff the second-highest nominal in its vP agrees under c-command with v .

If, by contrast, Agreement Condition (759) did *not* hold, we would need some different way of cashing out reference to *subject* in the original statement of Rude's Generalization. An alternative might be to bring together the object agreement facts with a view of ergative as a special marker for *external arguments* (Woolford 1997), to the degree we can make this view compatible with the facts on the thematic interpretation of ergative nominals reviewed in section 5.1.2. A potential analysis along these lines would recall a family of recent proposals that treat ergative across languages as an inherent case for vP specifiers (e.g. Legate 2002, 2006, 2008, Aldridge 2004, 2008, Woolford 2006, Anand and Nevins 2006).

How, then, might we test Agreement Condition (759)? The most direct tests will come from constructions in which a nominal originates in Spec, vP but does *not* agree with Asp, thus contrasting minimally with a typical ergative subject as in (761). Were such a nominal

- b. haatya-**nm** pee-sepe-wlik- \emptyset -e tewliki-**ne**
 wind-ERG 3/3-CAUS-fall[of trees]-P-REM.PAST tree-OBJ
 The wind blew over the tree [made the tree fall]

Overall, in terms of case and agreement, the causatived intransitive clause (763b) behaves as a typical monotransitive.

Causative *sepe* may also be prefixed to transitive verbs, producing a sentence with three nominal arguments. The result, however, is not the typical one for ditransitives in Nez Perce. As we saw in section 5.3.3, typical Nez Perce ditransitives (including applicative constructions) show a rigid asymmetry between their two object nominals. With a verb like *'ini* 'give', only the goal nominal, never the theme nominal, marks objective case and agrees.

(764) Simple ditransitive

- 'ip-nim pe-'eny- \emptyset -e nukt ciq'aamqal-**a**
 3SG-ERG 3/3-give-P-REM.PAST meat dog-OBJ
 He gave meat to a dog (Aoki, 1994, 1035)

In causativized transitives, on the other hand, objective case is marked on *both* the causee nominal and the nominal corresponding to the object of the basic transitive (the *verbal object*). These constructions lack the case-marking asymmetry of simple ditransitives and applicative constructions.

(765) Causativizing a transitive

- a. 'e-nees-tiwik-ce- \emptyset siisel kaa marsi-na
 3OBJ-O.PL-accompany-IMPERF-PRES Cecil and Marcie
 I am accompanying Cecil and Marcie (Crook, 1999, 180)

- b. siisel kaa marsi-**na** 'e-nee-sepe-twik-ce- \emptyset
 Cecil and Marcie-OBJ 3OBJ-O.PL-CAUSE-accompany-IMPERF-PRES
 ceeki-**ne**.
 Jackie-OBJ
 I make Cecil and Marcie accompany Jackie. (Crook, 1999, 180)

Causativized transitives are unusual not only for their “extra” objective case, but for what they reveal about the relationship between case and agreement. Strikingly, where we find two objective case markers, we do *not* find two markers of object agreement on the verb. The verb agrees *only* with the causee argument. This looks, *prima facie*, like a violation of the Object Case Generalization. In (765b) and again in (766), the causee argument is plural, and plural object agreement surfaces; in (767), the causee argument is singular, and plural object agreement cannot surface, even though the verbal object is plural.

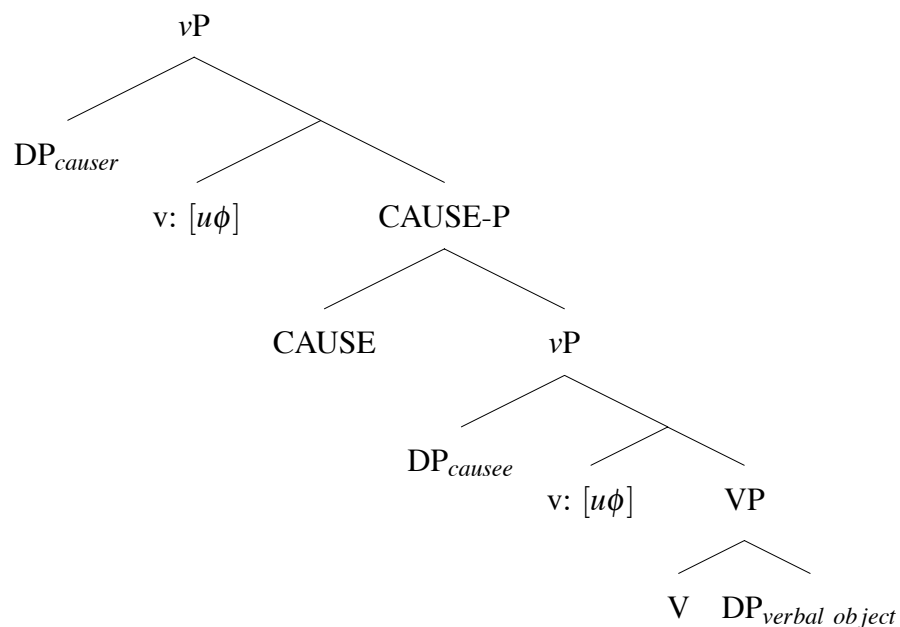
- (766) 'e-nee-sepe-cukwe-n-e ha-'ayato-na Bessie-ne
 3OBJ-O.PL-CAUSE-know-P-REM.PAST PL-woman-OBJ Bessie-OBJ
 I made the women know Bessie. I introduced Bessie to the women.
- (767) marsi-na 'e-sepee-twik-ce- \emptyset geyb kaa ceeki-ne
 Marcie-OBJ 3OBJ-CAUS-accompany-IMPERF-PRES Gabe and Jackie-OBJ
 I make Marcie accompany Gabe and Jackie. (Crook, 1999, 180)

What is the difference between causative constructions and other (di)transitive constructions that accounts for this extra case, and this seeming violation of the Object Case Generalization?

The question relates to the precise way in which the causative augments the argument structural vP corresponding to the original verb. Theories of causatives such as von Stechow (1996) and Pylkkänen (2002) provide us with a starting hypothesis on this matter. We might treat the causative prefix as spelling out a functional head CAUSE. In Nez Perce, the structure below CAUSE contains a complete argument-structural projection for the verb, including a vP. The specifier of this vP is to be filled by the causee nominal. The causer

nominal originates higher. It might be introduced in either of two ways: CAUSE might itself be a member of the *v* class (a class of external-argument introducing functional heads), introducing a causer argument along with a causing event; or CAUSE might introduce only a causing event, leaving the introduction of an individual argument to a higher *v* head.¹ For our present purposes, neither approach offers an obvious advantage. I adopt the second option in the representation below, but could equally well have chosen the first option.

(768) Structure of causativized transitives



Regardless of whether we separate the higher *v* from CAUSE, the structure we arrive at is different from our structures for simple ditransitives and for applicative constructions in an important way. Only the causative structure includes *two* *v* heads and two *v*Ps.

This structure is important for the concerns about ergative case that lead us to the investigation of causatives. If the structure in (768) can be adopted, causativized transitives will provide a testing ground for the Transitive Subject Condition (762). The causee ar-

¹The former option is suggested by the lexical decompositions of Levin and Rappaport Hovav (1995), and by the “voice bundling” analysis of English causatives proposed by Pykkänen (2002); the latter is suggested by the lexical decompositions of Parsons (1990), and by the syntactic proposal of Deal (2009b).

gument sits in Spec,vP, but is not relatively local to Asp;² if it systematically *cannot* mark ergative case, we derive support for the Agreement Condition (759). If, on the other hand, the causee nominal *can* mark ergative case, we derive support for an alternative view of ergative, perhaps as a vP-linked inherent case.

Given our interest in this test, we want to make sure that the structure in (768) is on firm empirical ground. Two aspects of the structure are crucial to our argument and deserve focused testing. The first crucial piece is that the complement of CAUSE includes a second vP. The second piece, assuming we can establish the first, is that the complement of CAUSE includes *nothing more* than a second vP; it is not a full clause, for instance. If we had a full lower clause under CAUSE, we could be much less confident of the position of the causee nominal with respect to the lower vP. As it is central to our argument that the causee nominal occupies the lower Spec,vP, a full clausal story will have to be ruled out.

8.1.2 Testing for a second vP

As it happens, we have a handy prediction that falls out from positing a second *v* head in the causativized transitive. We predict that both the causee nominal and the verbal object will participate in syntactic object agreement. Both the higher and lower *v* heads are provided with an absolutely and relatively local DP object: for the higher *v*, this is the causee nominal, and for the lower *v*, this is the verbal object.

For the causee nominal, we have evidence of the posited agreement relation in the morphology of the verb. This morphology presumably spells-out material corresponding to the higher *v*. For the verbal object and lower *v*, we have no such morphological evidence, and the issue is far more theoretically crucial. Insofar as *indirect* evidence can be provided for the participation of the verbal object in an object-agreement relationship with a lower *v*,

²The causer nominal asymmetrically c-commands the causee nominal, and thus agreement with Asp will be controlled by the causer nominal, not the causee nominal.

the threat to the Object Case Generalization is lifted, and the structural hypothesis in (768) is supported as a testing ground for the Transitive Subject Condition.

It turns out that there is evidence of two kinds for the participation of the verbal object in syntactic agreement. The tests we can run for this object correspond to our two types of caseless clauses. In an indefiniteness-conditioned caseless clause, the topic of chapter 7, the object is structurally too small to agree; in keeping with the Object Case Generalization, it does not mark case. Tellingly, just as for other verbal objects, if the verbal object of a causativized transitive is indefinite, it may exceptionally surface without case.

(769) Harold-nim pee-sepe-wemsi-se- \emptyset **sik'em** Lini-ne.
 Harold-ERG 3/3-CAUSE-borrow-IMPERF-PRES horse Lindy-OBJ
 Harold is having Lindy borrow a horse (lending a horse to Lindy).

(770) 'e-sepee-q'uyim-se- \emptyset *pro* **tewliikt**.
 3OBJ-CAUSE-climb-IMPERF-PRES (causee) tree
 I make him climb a tree. (Crook, 1999, 179)

The connection between indefiniteness and caselessness for the verbal object is fully expected if two pieces can be assured. First, the verbal object *does* participate in syntactic agreement, as the structure in (768) leads us to expect. Second, the Object Case Generalization is in force for *all* case-marked objects, whether or not we see morphological signs of the agreement relation in which they partake. The generalization links case not to the *morphology* of agreement, but to the syntactic dependencies agreement creates.

Likewise, if the verbal object includes a possessor phrase which is locally bound by the causee nominal, the verbal object does not mark case. The caselessness of the verbal object with bound possessor phrase recalls the extended reflexive construction of chapter 6. The (a) examples below show binding of the verbal object possessor phrase by the causee nominal; the (b) examples provide a baseline without binding.

- (771) a. Meeli-nm Annie-ne paa-sapa-'yaḥ-n-a ['ip-nim-nix
 Mary-ERG Annie-OBJ 3/3-CAUSE-find-P-REM.PAST [3SG-GEN-EMPH
 ciq'aamqal]
 dog]
 Mary made Annie_i find her_i dog.
- b. Meeli-nm Annie-ne paa-sapa-'yaḥ-n-a ciq'aamqal-na
 Mary-ERG Annie-OBJ 3/3-CAUSE-find-P-REM.PAST dog-OBJ
 Mary made Annie find the dog.
- (772) a. Payton-ne pee-sepe-tim'e-n-e [*pro* we'niikt].
 Payton-OBJ 3/3-CAUSE-write-P-REM.PAST [(possessor) name]
 She made Payton_i write his_i name.
- b. Payton-ne pee-sepe-tim'e-n-e we'niki-ne.
 Payton-OBJ 3/3-CAUSE-write-P-REM.PAST name-OBJ
 She made Payton write a/the name.
- Comment: “If you say *we'nikine*, it's just a name, not *his* name.”

In (771a) and (772a), but not (771b) or (772b), the verbal object contains a possessor phrase. A possessor phrase within an object c-commands the object DP in whose specifier it structurally resides. Given the presence of this possessor phrase, the overall verbal object is no longer structurally closest to the lower *v*. It does not participate in syntactic agreement; and just as we expect, this means it cannot mark case.

The overall picture that takes shape for verbal objects in causative constructions is a familiar one: just as we find a form of indefiniteness-conditioned caselessness for the verbal object, so too do we find a form of extended reflexive. This has a consequence for the agreement relationships in which the verbal object is involved. I have argued that both types of caselessness come about in a way *crucially tied* to interference with object agreement. Objects mark case just in case they syntactically agree. If this is so, then in our original causative transitive examples like (765b), the participation of the verbal object in an object agreement relationship must be assured. And in fact this is assured by the same aspect of

the structure in (768) that proves crucial to testing the Transitive Subject Condition. The crucial piece on both counts is the postulation of the lower vP .³

8.1.3 Against a full lower clause

The structure in (768) provides a structurally minimal phrase marker including a second vP under CAUSE. We might imagine that the structure of the causative is actually a bit more complex than this. Causatives in many languages are reported to be biclausal (Dixon 2000, Song 2008); if this were so in Nez Perce, we would expect further functional structure, besides vP , in the complement of CAUSE. English periphrastic causatives with *force* provide a view of what a full biclausal causative structure could look like. The complement of this verb cannot just be vP . It includes *to*, an exponent of T. The structure of the TP-embedding structure involves ECM: *him* in (773) is a matrix object, and the subject of the lower TP is a null element, standardly PRO.⁴

(773) They forced him_i [$_{TP}$ PRO $_i$ to be [$_{vP}$ t_{PRO} eating natto]]

Crucially, if Nez Perce causatives had an ECM structure as in (773), we would *not* be able to learn about the case properties of a nominal in the lower Spec, vP by examining the marking of the causee nominal (here, *him*). The causee nominal would be a matrix object

³Note that we cannot replace the lower v head in (768) with a higher v head which participates in *multiple Agree* with two nominals in its c-command domain. If v heads agreed multiply under c-command in Nez Perce, we would lose our account of the extended reflexive construction discussed in chapter 6. Agreement with v in the extended reflexive crucially targets only the single closest DP in v 's c-command domain, which happens, in this construction, to lack features; it does not matter what other nominals are c-commanded by v .

⁴*Force* is analyzed as an ECM verb in view of standard tests. Two of these tests, involving expletive *there* and idiom chunks, separate ECM *force* from a raising verb like *cause*. The judgments below are my own; a concurring judgment for (ia) is made by Bresnan (1970).

- (i) a. * What would force there to be a gas smell?
b. * They forced the shit to hit the fan.
- (ii) a. What would cause there to be a gas smell?
b. They caused the shit to hit the fan.

For some English speakers, this difference between *force* and *cause* is collapsed, with both behaving as raising-to-object verbs. As my goal is only to illustrate a possible analysis of biclausal causatives that does not have the overt causee nominal originate in the lower Spec, vP , I skim over this interesting variation here.

occupying an object position in the higher clause. The subject of the lower *vP* would be not the causee nominal, but a coindexed PRO. Causatives would have little to teach us about the Transitive Subject Condition.

Our interest in causatives as testing grounds for the Transitive Subject Condition therefore requires that we set aside a structural analysis like (773). We should notice to begin with that the crucial pieces of functional structure that argue for clause-like structure in the complement of English *force* – non-finite T head *to* and progressive aspect, in (773) – are notably missing from the complement of the causative in Nez Perce. The causative verb may have only one tense marker and only one aspect marker total, not one set for each of two clauses. The absence of additional tense and aspect markers in the causative is neatly captured by the *vP*-under-CAUSE analysis in (768), but would require additional stipulations if CAUSE embedded a TP.

We can also provide an argument against the biclausal structure from binding. We saw in chapter 6 that terms bound locally and those bound long-distance show markedly different agreement properties in Nez Perce. Locally bound terms prove unable to participate in agreement in the syntax; long-distance bound terms show no such handicap. On a biclausal analysis akin to (773), we expect binding into the lower *vP* from the higher *vP* to represent long-distance binding. We see evidence of this in the morphosyntax of bound terms in English. The reflexive form *themselves* is not locally bound in the *force* structure (774b), and thus the sentence is ruled out.

(774) Binding in a biclausal causative

- a. They_j forced him [_{TP} PRO to [_{vP} t_{PRO} join them_j]]
- b. * They_j forced him [_{TP} PRO to [_{vP} t_{PRO} join themselves_j]]

On the analysis of the causative in (768), on the other hand, the verbal object and the causer nominal occupy the same clause, and we expect any binding relationship between them to count as a local one.

the detransitivizing reflexive discussed in section 5.3.4 is unavailable.) If non-possessive pronouns are subject to condition B, and thus unable to be locally bound, the predictions we make will change. We will expect that it will *not* be possible for the causer argument to bind a non-possessive pronoun occupying the verbal object position, and so (776) will be ill-formed. The sentence should be well-formed with case on the verbal object, as in (777):

(777) *Condition B effect?*

PREDICTED: Meeli-nm Annie-ne paa-sapa-’yaŋ-n-a ’ip-ne
 Mary-ERG Annie-OBJ 3/3-CAUSE-find-P-REM.PAST 3SG-OBJ
 PREDICTED: Mary_i made Annie_j find her_{k/*i/*j}.

Here, however, if the non-possessive pronoun is sensitive to condition B, we expect only a free (non-bound) interpretation to be possible.

These complications and ongoing research questions should not obscure the overall picture we arrive at in view of current evidence on the structure of causatives in Nez Perce. Both the absence of additional tense and aspect morphology in causatives and the results of the possessor-binding test suggest that an ECM structure is not appropriate for the causative construction of Nez Perce. We find no evidence of additional functional material creating a structure where the causee nominal can serve as a matrix object, controlling a lower PRO. Rather, the causee nominal most plausibly simply occupies Spec,vP in the complement of CAUSE, as in the structure in (768).

8.2 Ergative requires subject agreement

We can now inspect the case marking of causee nominals as a window onto the contribution of subject agreement to the conditioning of ergative case. Causee nominals, like ergative-marked subjects in simple transitives, originate in Spec,vP. Unlike ergative subjects of simple transitives, however, causee nominals do not participate in subject agreement with Asp. If ergative case is marked on all 3rd person nominals *which originate in*

Spec,vP when *v* successfully agrees with an object (a view akin to Woolford (2006)'s *inherent case* theory), 3rd person causee nominals should mark ergative when the verbal object agrees. If ergative is marked on 3rd person nominals *which agree with Asp* in a *vP* with successful object agreement, causee nominals should *not* mark ergative, whether the verbal object agrees or not.

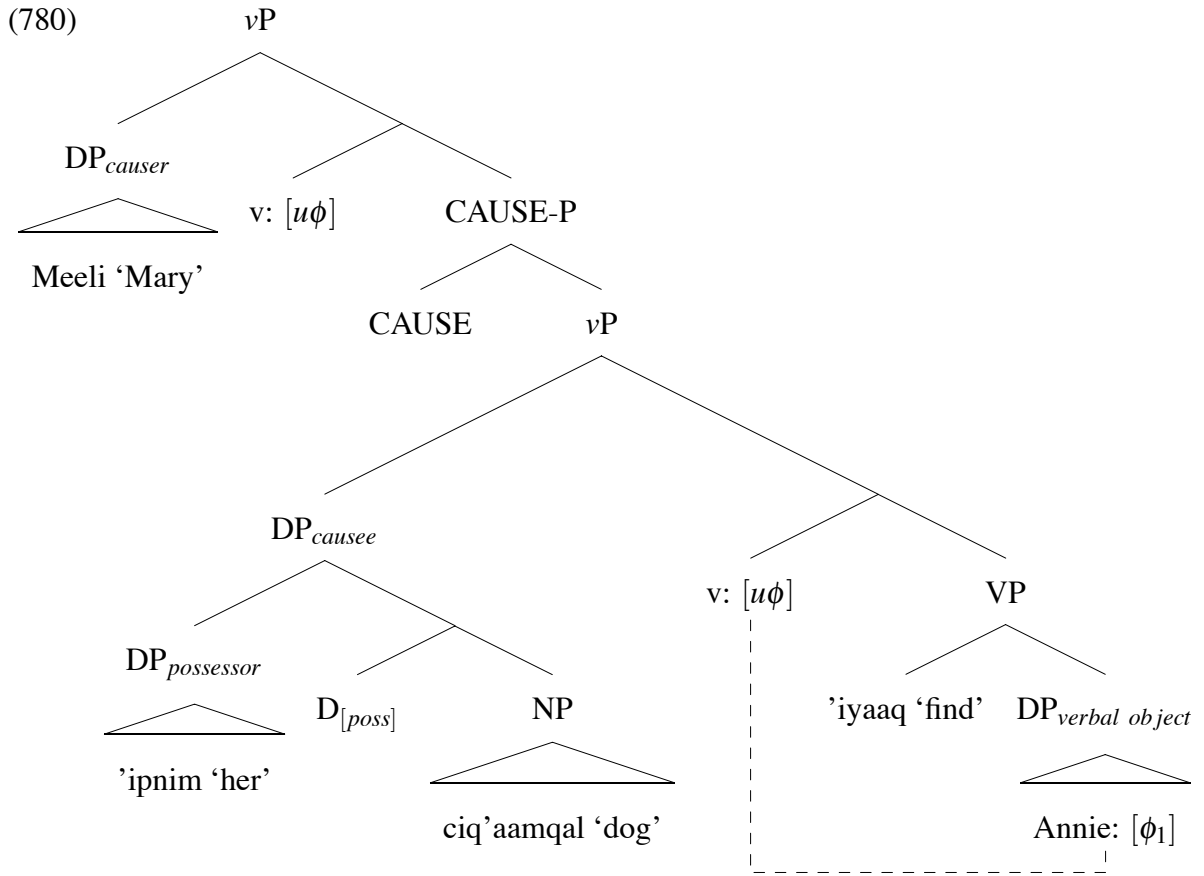
The causative examples we have seen so far are indicative of the general picture of causee marking. Causee nominals do not mark ergative case in sentences like (778); they can only mark objective.

- (778) Meeli-nm **Annie-ne/*nim** paa-sapa-'yaχ-n-a ciq'aamqal-na
 Mary-ERG Annie-OBJ/*ERG 3/3-CAUSE-find-P-REM.PAST dog-OBJ
 Mary made Annie find the dog.

This is consistent with the prediction of the Transitive Subject Condition (762). The causee nominal does not agree with *Asp* and so cannot mark ergative. It *does* agree with (the higher) *v* under *c*-command, however, and so objective is marked.

We might wonder whether the latter fact conceals any nuance regarding the former. Is the absence of ergative case on the causee nominal somehow due to a need to mark objective? We can control for this type of potential case competition by switching to a structure where the causee nominal does *not* participate in object agreement with the higher *v*. Such an environment can be found when a possessor phrase within the causee nominal is locally bound by the causer nominal, forming an extended reflexive. Sentence (779), with structure (780), exemplifies. (Agree relations, but not SH-Agree relations, are shown.)

- (779) Meeli hi-sapa-'yaχ-n-a 'ip-nim ciq'aamqal Annie-ne
 Mary 3SUBJ-CAUSE-find-P-REM.PAST 3SG-GEN dog Annie-OBJ
 Mary_i had her_i dog find Annie.



In this structure, the closest nominal to the higher v is the bound possessor phrase *'ipnim* 'her'. This nominal is locally bound and cannot agree. The overall causee nominal *'ipnim ciq'aamqal* 'her dog' cannot participate in agreement due to a relative locality effect: its possessor subconstituent counts as closer to the c-commanding v head. The causee nominal cannot, therefore, mark objective case. The absence of ergative case on the causee nominal cannot be due to case competition with objective in this example. What we see is that a nominal's origination in Spec,vP is simply not enough to guarantee that it will be marked ergative. Ergative case in Nez Perce is not an inherent case fully determined by agreeing v in a Spec-head relation. Rather, the conditioning environment for ergative case crucially involves subject agreement.

8.3 Preliminaries to case as agreement

8.3.1 *No superfluous symbols*

What should a theory of morphological case look like, such that the Transitive Subject Condition and Object Case Generalization are derived?

(781) *Transitive Subject Condition*

A third person nominal which agrees with Asp is marked ergative iff the second-highest nominal in its *v*P agrees under c-command with *v*.

(782) *Object Case Generalization*

A nominal controls object agreement iff it is marked with objective case.

The standard treatment for facts like these goes via a system of abstract Case features and Case-feature-valuation dependencies. Abstract Case dependencies will be syntactic objects required, given our generalizations, to track agreement dependencies through their several peculiarities in Nez Perce. In the morphology, agreement affixes realize agreement dependencies established by the syntax; case affixes realize abstract Case dependencies established in an entirely parallel way.

The intuition behind this standard treatment is a simple one, which any theory of case aspires to capture: agreement marking (head-marking) and case-marking (dependent-marking) are intimately grammatically related. At the same time, the redundant character of the system posited to capture the intuition should be clear. Given our need for agreement dependencies in the syntax, additional abstract Case features and dependencies have no independent role to play. Any abstract Case dependencies we might posit will add no information that cannot already be recovered from the system of dependencies involved in agreement. This duplication runs afoul of the basic heuristic of economy that Chomsky (1995, 27) calls *Full Interpretation*: there should be no superfluous symbols in syntactic

representations.⁵ If we have agreement features and dependencies in our syntax, therefore, we should look for a way to do without abstract Case features and dependencies alongside them. If we make this move, agreement affixes and case affixes will not be treated as morphological reflexes of separate, synchronized syntactic dependencies; they will both be reflexes in the morphology of the syntactic system of agreement. Head marking and dependent marking, in other terms, will be two sides of the *same* syntactic coin. Syntactically-established agreement relationships are sufficient to condition both.

Describing the connection between case and agreement in this way, we impose certain demands on the morphological system and on the way that morphology relates to syntax. Let us take a look at this picture in more depth.

8.3.2 Morphological tools

The morphological toolkit I draw on here is based on two key ideas about the relationship between syntax and morphology which many approaches to syntax and morphology share. The first is *late insertion*:

(783) *Late Insertion hypothesis*

The way particular syntactic terminals are pronounced is not determined until the syntactic object is transferred to the PF portion of the grammar.

⁵Could abstract Case features play a role beyond that played by agreement features in regulating the overt-ness of nominals, for instance, or determining the positions to which nominals can undergo A-movement? Such properties of Nez Perce syntax deserve further investigation. At the same time, a great deal of cross-linguistic work makes it look increasingly unlikely that syntactic mechanisms involved in regulating overt-ness and movement will be linkable to morphological case-marking in any non-stipulative way. This is the conclusion of McFadden (2004) (among many others), who writes:

Whatever syntactic Case/DP-licensing is, it has no empirical connection to case morphology. ... There is no single syntactic feature (complex) which is responsible for both DP-licensing and the determination of morphological case. The implication is that syntactic 'Case' is a misnomer. True case is a phenomenon of the post-Spell-out PF branch of the derivation, and in order to understand its real role in language, we must keep it separate from whatever handles DP-licensing within the pre-Spell-out narrow syntax. (McFadden, 2004, 10)

A similar conclusion is reached by Marantz (1991) and Landau (2006) in discussion of the licensing conditions on PRO, and by Zaenen et al. (1985) in discussion of passivization in Icelandic.

This idea is familiar from the generative semanticists' lexical insertion transformations (McCawley, 1968). In the contemporary theoretical landscape, late insertion is best known as a feature of the Distributed Morphology framework of Halle and Marantz (1993), Harley and Noyer (1999), but is not confined to this theory; implementations outside of Distributed Morphology can be found in the work of Emonds (2007), and in Wolf (2008)'s work in a version of Optimality Theory.

A grammar with Late Insertion is a grammar where syntactic terminals will have to be matched to pronunciations via an algorithm of some type. Halle and Marantz (1993) propose that the matching be accomplished by a procedure following the "elsewhere principle" familiar from rule-based phonology (Kiparsky, 1973). In their Distributed Morphology framework, the feature content of a syntactic terminal is evaluated for match against a list of language-specific feature-sound pairs called *Vocabulary Items*. Of the language's Vocabulary Items, the one matching the *most* features of the syntactic node in question, without conflicting in any feature, is inserted. I will adopt this matching algorithm here.

Morphological models incorporating late insertion differ as to the range of elements that are inserted late. With Emonds (2007) and Richards (2010), I assume here that late insertion is an aspect of the syntax-morphology mapping relevant to functional material only. Late Insertion of functional material plays a role in allowing us to treat case affixes and agreement affixes, despite their differences of phonological form, as spelling-out the same set of syntactic features – ϕ -features, the currency of syntactic agreement dependencies. The surface forms of nodes bearing ϕ -features will be determined post-syntactically under a process of Vocabulary Item competition. There is no guarantee that the Vocabulary Items competing with one another are bound to look morphophonologically alike. Some might look like suffixes on nouns ("case"), and some like prefixes on verbs ("agreement").

The second key idea I will draw on is a natural consequence of a Late Insertion grammar. Late Insertion is "late" in virtue of taking place, in a Y-model (Chomsky, 1981), *after* syntactic structures are constructed. Some part of the grammatical architecture must

be identified as the locus of operations of this kind. Hierarchical, syntactic representations will be read in to this grammatical system; linear, phonological representations will be read out. The idea I adopt here is that the relevant part of the architecture is to be treated as a subcomponent of PF which is specialized in a certain way.

(784) *Morphological Structure hypothesis*

The mapping between syntactic terminals and phonological features is established in a subcomponent of PF specialized for morphological operations.

The Morphological Structure hypothesis makes precise reference to “phonology” in the formulation of insertion rules (as, for instance, in Borer (1984, 67)’s insertion rule for dummy Hebrew preposition *šel*). It furthermore provides a natural way of understanding proposals like Chomsky’s (2000) that a syntax-like operation – in this case, head movement – takes place “in the phonological component”. The name *Morphological Structure* for the posited subcomponent of grammar draws from Halle and Marantz (1993), who propose that the operations to be countenanced in this grammatical subcomponent include morpheme insertion (feeding *Vocabulary Insertion*, the realization of nodes with Vocabulary Items), movement, merger, and fission.

The Morphological Structure hypothesis contextualizes Late Insertion; the postulation of morphological rules makes the morphological system more powerful. The added power of morphological rules allows us to account for the shape of Nez Perce words and certain mismatches between syntax and morphology without complicating our syntactic representations. Three applications deserve mention.

First, morphological operations offer a natural way to map the articulated syntactic structures we have provided for the Nez Perce verb onto single words and a range of portmanteau affixes.

Second, in the nominal domain, Morphological Structure operations allow an account of concord as morpheme insertion, as Halle and Marantz propose: a single case/number/gender feature specification for the DP is copied into inserted morphemes which associate with

one or more DP-internal subconstituents. Number concord between a noun and adjective is shown in (785); case concord is shown in (786).

(785) lepit ki-kuckuc pi-pit'in'

two PL-small PL-girl
two small girls

(786) himeeq'iis-nim 'atamooc-nim poo-yawq-n-a kuckuc-ne 'atamooc-na

big-ERG car-ERG 3/3-wreck-P-REM.PAST little-OBJ car-OBJ
The big car wrecked the little car

If we handle concord post-syntactically, we could imagine that a morphological process is responsible for “spreading” material associated with DP over a range of DP-internal subconstituents. When we calculate the case-marker to be inserted for a DP, therefore, the result of our calculation will be realized not as the DP *per se*, but as a number of inserted morphemes copied onto subconstituents thereof.

A third application of Morphological Structure operations concerns the binding effects discussed in chapter 6. Locally bound terms do not participate in syntactic agreement dependencies because they lack ϕ -features in the syntax. By the time bound terms are pronounced, however, ϕ -features have somehow appeared. To account for this mismatch, an operation applying at Morphological Structure will be posited. We might conceive of the operation involved as a sort of “copy lowering” rule producing duplication of features in a way akin to what happens in concord. The features of a binder term are copied onto the bound term, resulting in a speakable pronominal form. As in the instances of morphological lowering discussed by Embick and Noyer (2001), this has the effect of moving speakable material “downwards” in a tree. For example (787), this means the syntactic representation in (a) will be interpreted morphologically as in (b).⁶

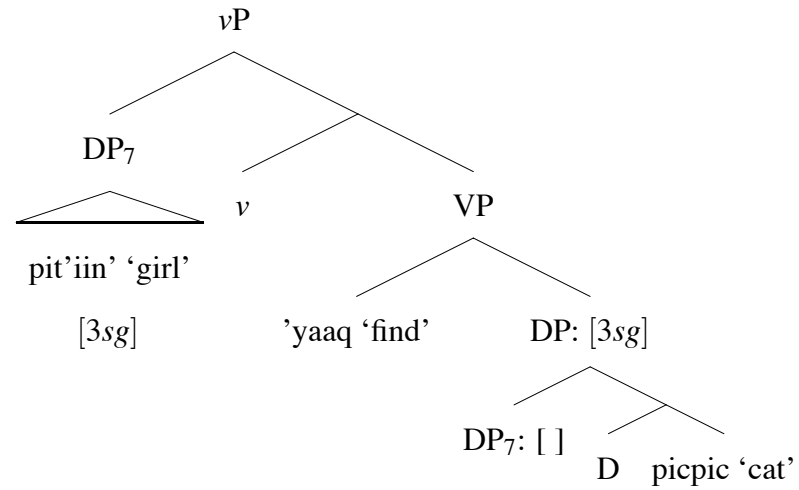
⁶For simplicity, I gloss over movement of the subject. Subscripts on nominals indicate indexes, as discussed in section 6.2.4. I assume the index on the overall object DP has been deleted via Spare Index Deletion.

(787) pit'iin' hi-'yaaĥ-n-a ['ip-nim picpic]

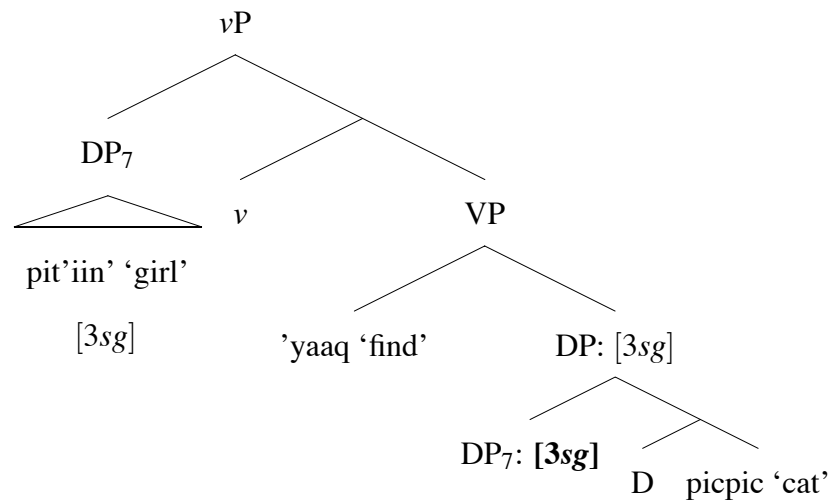
girl 3SUBJ-find-P-REM.PAST [3SG-GEN cat]

The girl₇ found her₇ cat

a. vP in syntax:



b. Post-syntactic copy-lowering conditioned by binding:



The lowering aspect of this operation is familiar from English T to V lowering or “affix hopping” (on which see Embick and Noyer 2001); the copying we see is familiar from the process of concord.

8.3.3 The division of labor between morphology and syntax

The morphological tools we have adopted bring several commitments about the relationship between morphology and syntax – among them, Late Insertion – but leave other aspects of the division of labor open. In particular, our framework is compatible both with a syntactic treatment of agreement, such as the one outlined in section 5.3, and with a treatment of agreement dependencies as strictly morphological objects, as Bobaljik (2005) proposes.

Where in the grammar should agreement processes be localized? On what grounds should our syntactic view be adopted in face of a morphological alternative? The choice we make will matter for our argument from Full Interpretation (section 8.3.1). An economy condition militating against superfluous symbols in representations clearly does not hold at PF, where redundancy abounds. If agreement takes place at PF, then, establishing separate, redundant dependencies in terms of agreement and case (or Case), there is perhaps no principled economy-based objection to be made. My argument that Case features and Case-dependencies be dispensed with in the calculation of morphological case in Nez Perce therefore presupposes that dependencies of the relevant kind lie within the purview of syntax proper.

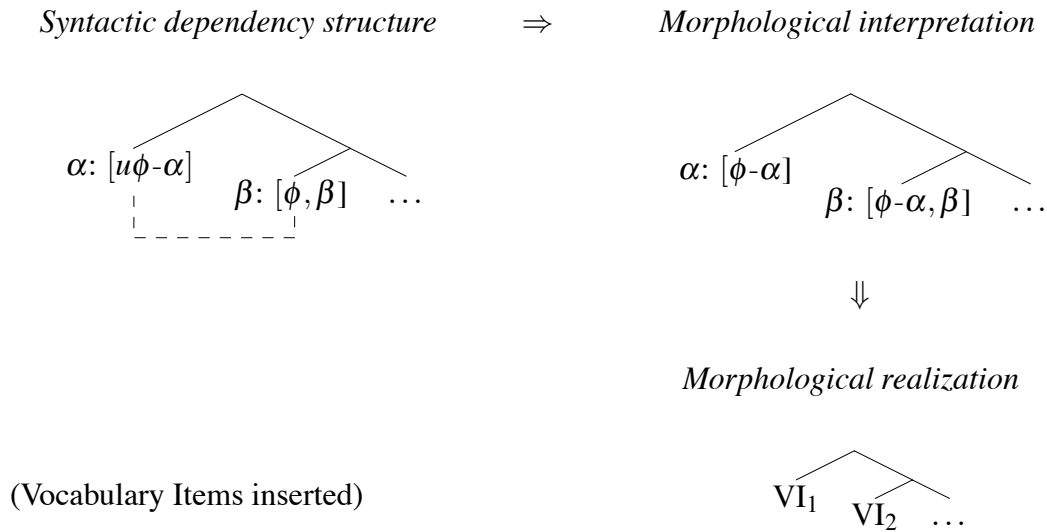
The evidence we have seen on Nez Perce provides two possible arguments for a syntactic treatment of agreement-dependency formation. First, we see in the behavior of bound terms a need to order agreement-dependency formation *crucially before* the morphological operation that provides speakable features to bound pronouns. If bound pronouns do not have features in the syntax (and thus do not carry features with them to LF) and agreement operates in the syntax, this result is derived. The result is also logically consistent, of course, with a view of agreement-dependency formation as essentially morphological, provided that agreement dependencies can only be formed in the morphology *prior* to morphological operations that provide speakable features to bound pronouns. This ordering would furthermore need to be a principle of natural language morphology, given the appar-

ent universality of anaphor agreement effects.⁷ Adopting a syntactic view offers what looks to be a simpler picture of this universal than what we could provide on the morphological approach. Agreement-dependency formation is universally ordered before morphological enrichment of bound pronouns because all syntactic processes precede all morphological ones.

A second reason to favor a syntactic view of agreement dependency-formation comes from the connection between agreement and movement. In discussing the connection between possessor raising and object agreement in chapter 6, we observed that agreement dependencies and possessor-raising movement dependencies are subject to precisely the same locality constraints. This led us to adopt a view of movement as “decomposed” into agreement-dependency formation plus syntactic displacement, following Chomsky (2000). According to the theory we developed, possessor-raising movement is necessary to ensure that the applicative head found in the possessor-raising *v*P has a semantic argument. This movement is unlikely to be postponed to PF, then. To maintain a morphological view of agreement, while treating such movement dependencies as part of the syntax, we would need to state the locality conditions on agreement and movement in separate components of the grammar. This threatens to miss the generalization about locality effects that the syntactic view affords us.

These arguments are of course insufficient to refute all forms of the morphological view of agreement, but they make it possible to prefer the syntactic view on principled grounds. We proceed, therefore, with a grammar that can be schematized in the following way:

⁷See in particular Woolford (1999) for the cross-linguistic picture.



Interpretation (feature sharing) feeds realization (vocabulary insertion).

Figure 8.1. Agreement: syntax and morphology

signature α can be thought of as a feature of the ϕ_n bundle, a *second-order feature* in the terms of Adger and Svenonius (2009).⁸ The acquisition of ϕ -features by the agreement head feeds the morphological realization of agreement. The acquisition by the nominal of features reflecting the identity of the agreement head feeds the morphological realization of case. Features acquired by nominals in this way allow nominals agreeing with v – “objects” – to be case-marked differently than those agreeing with Asp – “subjects”. This system of dependency *interpretation* and *realization* is schematized in figure 8.1.

A system of this type will be familiar on several counts. At its core, it responds to two related intuitions which are shared across many approaches to case. It captures, first, the intuition that head-marking and dependent-marking are fundamentally related. This idea is cashed out within the broad outlines of abstract Case theory in particularly parallel form by Pesetsky and Torrego (2001, 2004), in whose approach T(ense) features, transmitted via

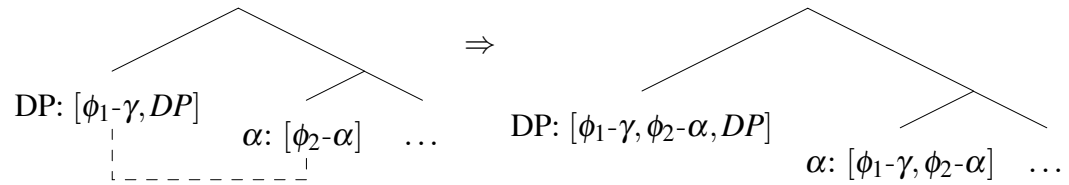
⁸Other second-order features discussed by Adger and Svenonius include feature weakness/strength in Chomsky (1995); feature valuation in Chomsky (2001); and the [EPP] feature of Chomsky (2000).

agreement dependencies, play the role formerly accorded to features of abstract structural Case. The system pursued here differs foundationally from this view perhaps only in extending the idea of “case as the signature of the agreeing head” beyond T, and (crucially) in limiting its scope to the explanation of morphological cases only.

The second intuition shared with many previous approaches concerns the non-atomic nature of (morphological) cases. As in the Pesetsky/Torrego system and as in the work of Williams (1981), Halle (1997) and McFadden (2004), in my system, “case features” (e.g. [ERG]) are not primitives in any grammatical representation, syntactic *or* morphological. The case marker that we call the ergative marker will spell out not a primitive feature [ERG], but a complex of features *built from the primitives of the agreement system*.

A small additional complication deserves discussion before we turn this system on the generalizations we have arrived at. This arises when the pairing of agreement heads and controller DPs is not one-to-one. It will sometimes be the case that an agreement dependency between a DP and a functional head α is interpreted after α 's ϕ -features have already obtained a value via the interpretation of another agreement dependency. It will also sometimes be the case that an agreement dependency between a DP and a functional head is interpreted after the DP's ϕ -features have already obtained a second-order categorial signature feature via the interpretation of another agreement dependency. A combination of these scenarios is depicted in (788), where DP occupies the specifier of agreeing head α . (This is the interpretation of an SH-Agree dependency, therefore.) Here we have already interpreted the agreement of DP with an additional agreement head γ , as well as the agreement of α with a DP with features ϕ_2 .

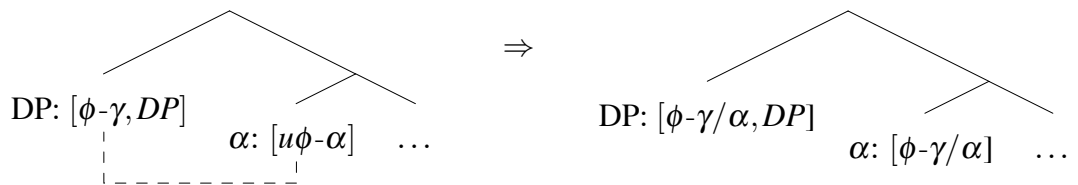
(788) Agreement where both DP and α have already been subject to agreement dependency interpretation



The simplest means of achieving ϕ -feature redundancy in this scenario is shown in (788): we merely copy the ϕ -bundle from DP onto α , and from α onto DP.

A mechanism of this type is not available where the DP but not the agreement head α has already been subject to agreement dependency interpretation. This scenario is depicted in (789), again as the interpretation of SH-Agree.

(789) Agreement with a DP that doubly agrees

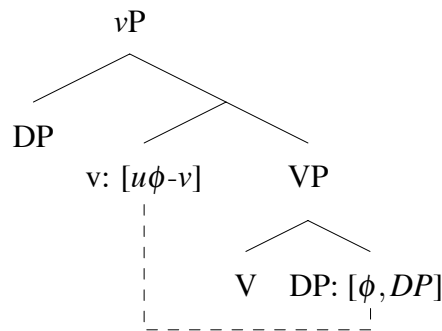


Here, the DP's $[\phi-\gamma]$ feature can be shared with α , but α 's own unvalued ϕ -bundle must be valued, not simply shared. Whereas in the interpretation of the dependency in (788), the total information transmitted by agreement consists of two ϕ -bundles and two second-order categorial features, in this case the total information transmitted consists of one ϕ -bundle and two second-order categorial features. As the categorial features must find a ϕ -bundle host, I propose that they be brought together as the complex second-order categorial feature γ/α , reflecting both the DP's antecedently interpreted agreement with γ and its present agreement with α .

8.4.2 Dependencies of the object

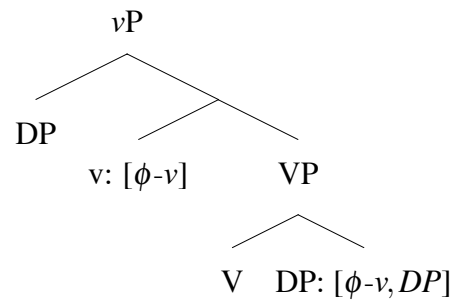
Let us consider the morphological interpretation of an object agreement relationship as a first example of the way this system works. At Morphological Structure, the agreement dependency established in the syntax is interpreted by introducing redundancy in ϕ and in the categorial feature v .

(790) *Output of Syntax*



Interpretation in Morphology

⇒



The interpretation of the syntactic dependency removes from the Morphological representation a syntactic relationship that cannot be realized by Vocabulary Insertion, and replaces it with a redundancy that can. The redundant feature specification which interprets the dependency feeds Vocabulary Insertion of two types. One Vocabulary Item spells-out the ϕ -features on v , resulting in object agreement (provided additional realization conditions on object agreement are met; see 8.4.4); another realizes the feature bundle of DP (spread throughout DP via morphological concord) as a case-marker. The Vocabulary Item for the second realization might look something like the following.⁹

(791) *Vocabulary Item for objective case marker*

$[\phi-v, DP]$

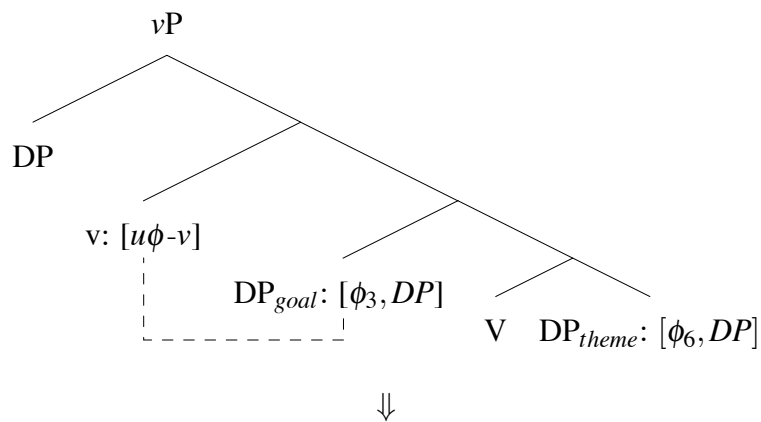
Phonology: /ne/

⁹Suffix *ne* is plausibly the elsewhere form of objective case in Nez Perce; further allomorphs may be triggered phonologically and by certain stems (e.g. relational kinship stems, discussed in section 6.2.3). A proper treatment of this allomorphy will perhaps call for refining our Vocabulary Item in (791) in certain ways, though I take it these details do not detract from the main line of investigation here.

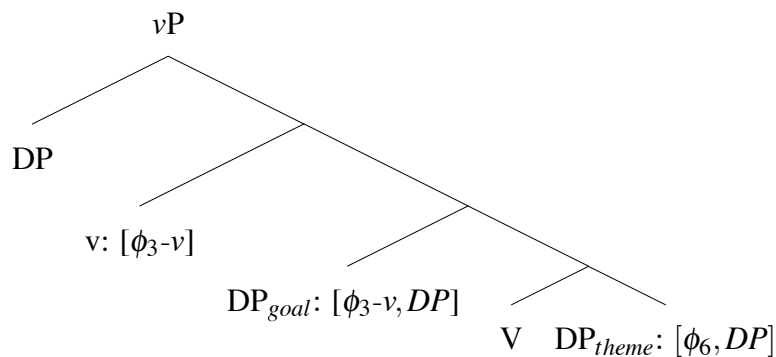
This Vocabulary Item ensures that the Object Case Generalization (782) will be in force in Nez Perce. A non-agreeing object, in virtue of not having received the v signature as part of the morphological interpretation of agreement, will not be a candidate for insertion of the objective case marker. This is the situation for a theme argument in a ditransitive, for instance.

(792) Morphological interpretation of object agreement in a ditransitive

Syntactic dependency



Morphological interpretation



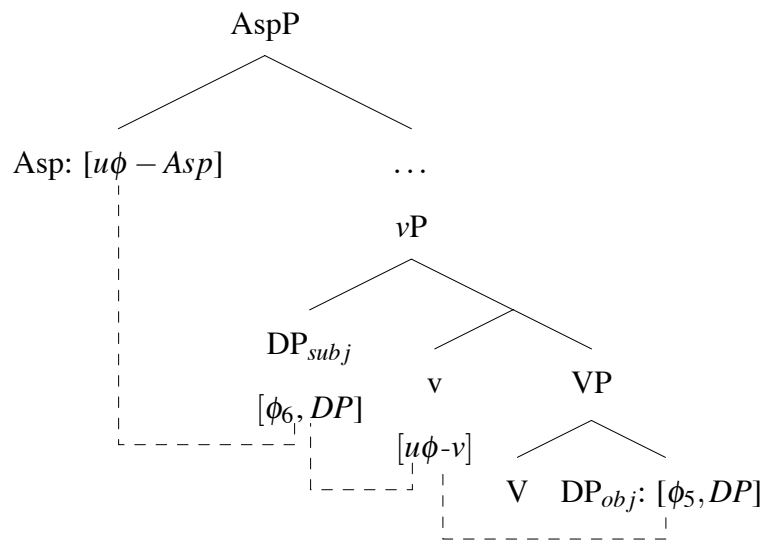
The objective case-marker Vocabulary Item is *overspecified* for the realization of the theme DP. It calls for a v -signature which the theme DP, in virtue of not having agreed, does not have.

8.4.3 Dependencies of the subject

Just as for objects, agreement and case-marking for subjects are crucially related. In view of the Transitive Subject Condition (781), our final statement of this relationship, we will want the morphological interpretation of both subject and object agreement dependencies to feed realization of the ergative case. The Vocabulary Item we will give for ergative case will only be insertable for a nominal which has agreed with Asp and which occupies the specifier of a *v* that has agreed with the lower, object DP.

To capture this distribution, we must juggle an overall picture of clausal agreement which involves three interlocking dependencies. Give our hypothesis from section 5.3.4 that subjects originating in Spec,*v*P agree via SH-Agree with their local *v* head, the morphology will be tasked with interpreting two distinct agreement dependencies involving a transitive subject: one connects the subject DP's ϕ -features to Asp, and the other connects them to *v*. It will also be tasked with interpreting two dependencies involving the head *v*: one is established via SH-Agree with the subject, and the other via Agree with the object. The three agreement dependencies of the transitive clause with agreeing object are shown below.

(793)



The patterns summarized as the Transitive Subject Condition provide guidance as to the order in which the morphology interprets the three dependencies. In particular:

The SH-Agree dependency of v must be interpreted after its Agree dependency. It is not enough to condition ergative case for the subject DP to agree with v , and annotate its features $[\phi-v]$: given what we saw in chapters 6 and 7, the subject DP must agree with a v which has itself successfully obtained ϕ features from an object. (If the object is too small to agree, as in an indefiniteness-conditioned caseless clause, or is a bound variable without ϕ -features in syntax, as in an extended reflexive caseless clause, ergative case is never marked.) Therefore, the SH-Agree dependency between the subject DP and v must crucially be morphologically interpreted *after* the Agree dependency between the object DP and v . Once this Agree(v, DP_{obj}) agreement dependency is interpreted, v can pass the object's ϕ -features on to the subject via SH-Agree. SH-Agree between the subject DP and v can transit the information that v has successfully entered into an object-agreement dependency and obtained the ϕ -features of the object.

We might imagine that this order reflects an overall differentiation of Agree relationships and SH-Agree relationships in the morphological component. The literature on case-marking associated with specifiers of particular functional heads recognizes that in certain, but not all instances, nominals so-marked cannot participate in normal agreement (Rezac, 2008). This might be because their SH-Agree relationship (feeding their special case-marking) is morphologically interpreted prior to their Agree relationship, therefore passing features on via Agree in a way that interferes with the subsequent realization of Agree dependencies. In languages like Nez Perce where a DP can participate both in SH-Agree and in Agree which is interpreted in the normal way, the interpretation of Agree dependencies precedes the interpretation of SH-Agree dependencies. Given the variation among languages that Rezac (2008) finds, this is plausibly a parametric choice that distinguishes Nez Perce from languages like Icelandic.

(794) *Agree/SH-Agree Morphological Parameter*

Morphological interpretation begins with { Agree relationships, SH-Agree relationships }

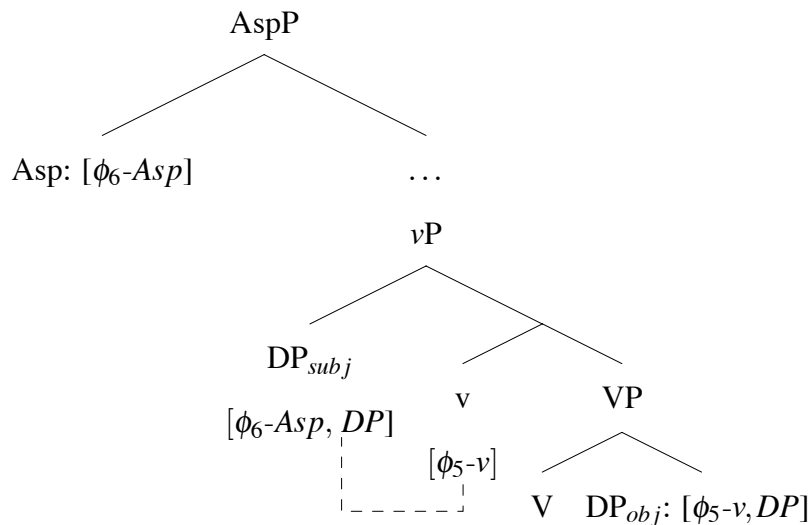
In Nez Perce, Agree relationships are interpreted first.

Our three agreement dependencies are therefore partially ordered in the following way:

Agree(Asp, DP_{subj}) is interpreted before SH-Agree(DP_{subj}, v)
 Agree(v, DP_{obj}) is interpreted before SH-Agree(DP_{subj}, v)

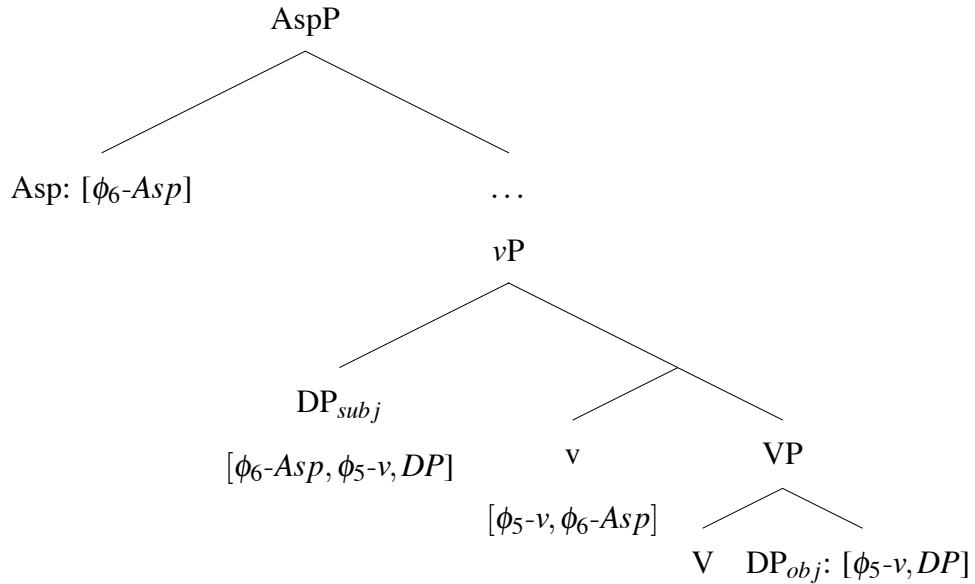
Given these orderings, morphological interpretation of the dependencies of the full transitive clause, as in (793), can begin with a step in which both Agree dependencies are interpreted, separately:

(795) First step



Fully specified ϕ -features are then made redundant between v and its specifier DP in the morphological interpretation of SH-Agree.

(796) Second step



After the second interpretation step (796), all syntactic dependencies have been converted into morphological redundancies, and realization via Vocabulary Insertion can take place. A Vocabulary Item for the ergative case marker (which, like the objective case-marker vocabulary item (791), targets nodes throughout DP produced by morphological concord) can now be given as follows:

(797) *Vocabulary Item for ergative case marker:*

[3-Asp, φ-v, DP]

Phonology: /nm/

This Vocabulary Item can only be inserted for a nominal which (i) is 3rd person, (ii) has agreed with Asp, and (iii) has inherited φ-features from the object via a SH-Agree dependency interpreted after the interpretation of object agreement. It is via the combination of these factors specified by the Vocabulary entry that the Transitive Subject Condition (781), whose establishment occupied us through chapters 5, 6 and 7, should hold.

Let us now walk through a few examples. This will help both to exemplify the system just proposed and to cast some light on the second piece of the morphological realization of agreement dependencies – the realization of object agreement head *v*.

8.4.4 Example derivations

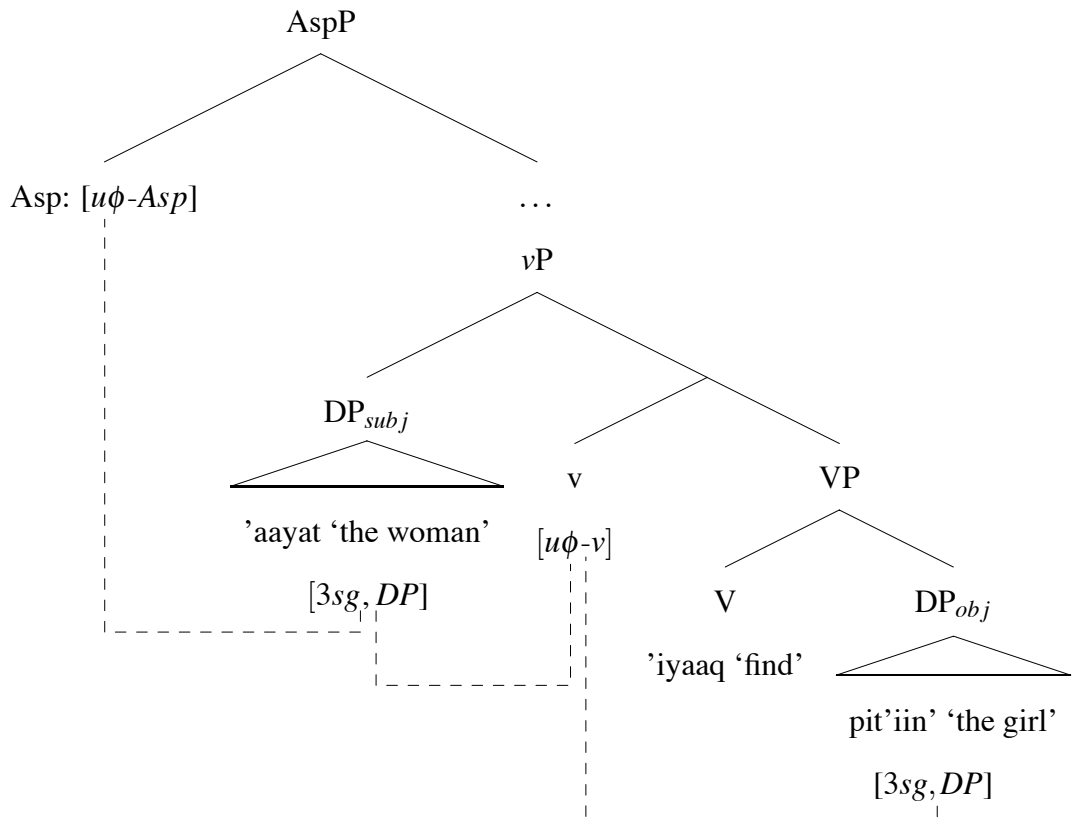
Our first example is (798), a simple monotransitive with agreeing object. Given Agree between Asp and the subject DP, Agree between v and the object DP, and SH-Agree between the subject DP and v , this sentence has a dependency structure in syntax as in (798b).

(798) a. 'aayat-**om** paa-'yaâ-n-a pit'iin-**ine**

woman-ERG 3/3-find-P-REM.PAST girl-OBJ

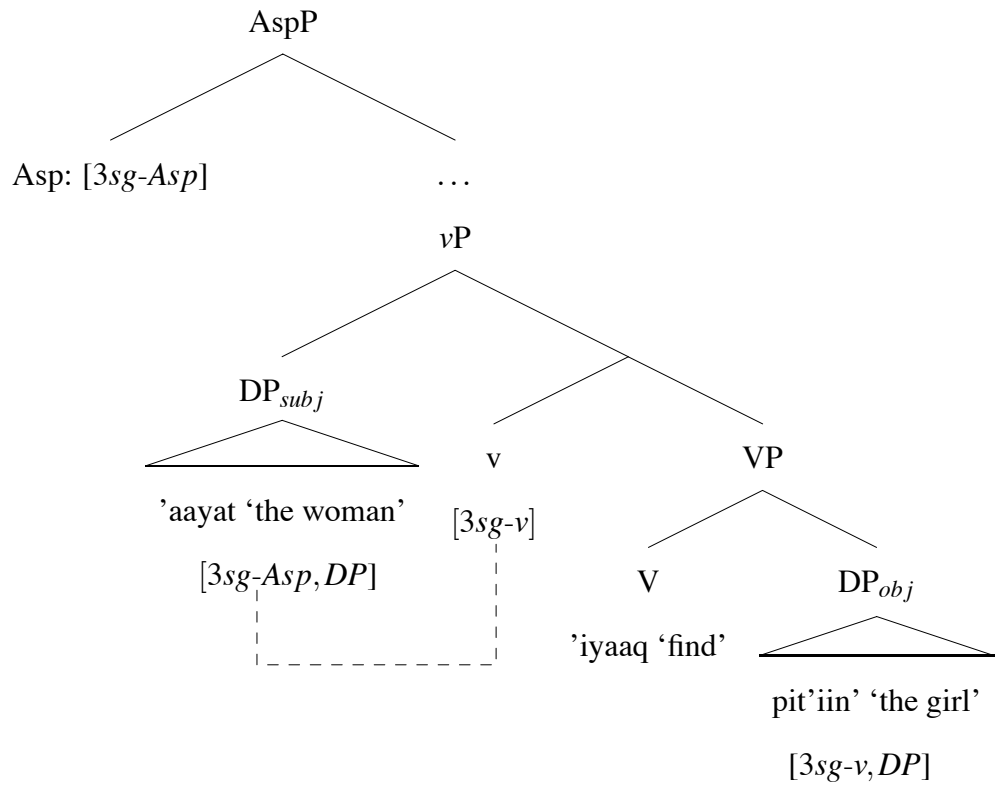
The woman found the girl

b. Syntactic dependencies

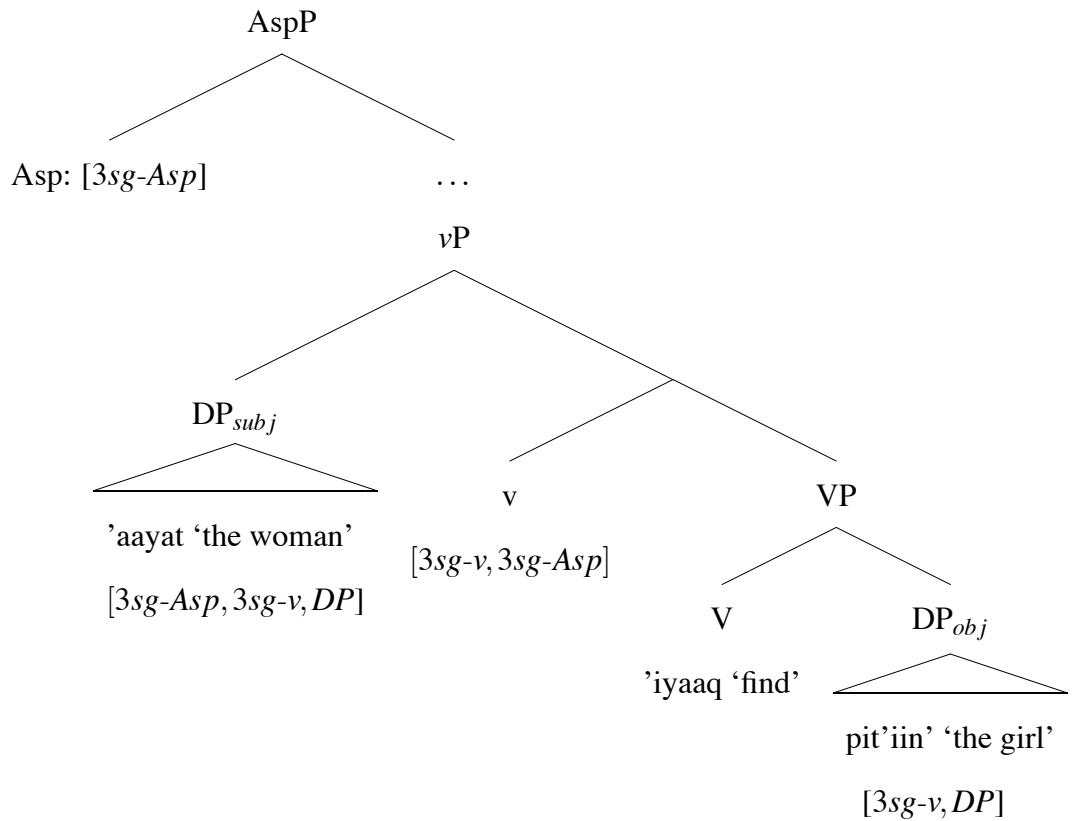


In Morphological Structure, the first step is interpretation of Agree dependencies, followed by interpretation of SH-Agree dependencies.

- c. First interpretation step: interpretation of Agree dependencies (only the SH-Agree dependency remains)



- d. Second interpretation step: interpretation of SH-Agree dependency (no dependencies remain)



This produces the context for Vocabulary Insertion.

- e. Realization via Vocabulary Items:

DP_{subj} [3sg-Asp, 3sg-v, DP] → /nm/ergative

DP_{obj} [3sg-v, DP] → /ne/objective

Both ergative and objective cases are inserted. Insertion of agreement portmanteau *pee* '3/3' might also follow here in a natural way as the spell-out of *v* that has received 3rd person features both from a subject (agreeing with Asp) and from an object (agreeing with *v*).

(799) *Vocabulary Item for 3/3 portmanteau agreement*

[3-Asp, 3-v]

Phonology: /pee/

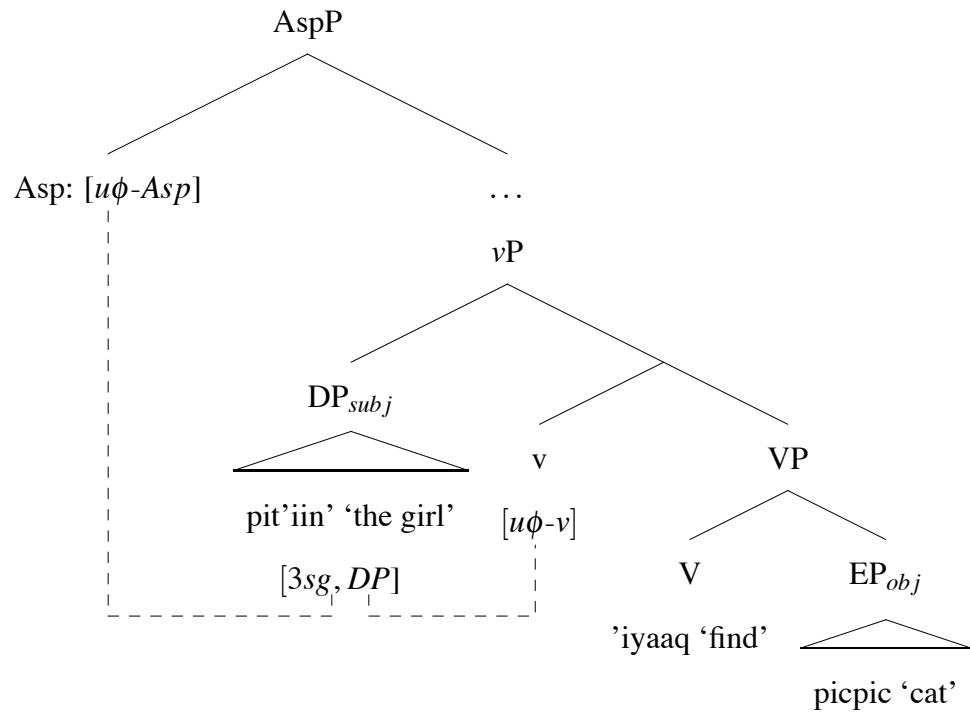
This marker is not chosen in the place of ergative case, as it realizes a proper subset of the features the ergative Vocabulary Item realizes.

Our second example is an instance of indefiniteness-conditioned caselessness. In this type of clause, the object is not a full DP, and does not agree under c-command with *v*.

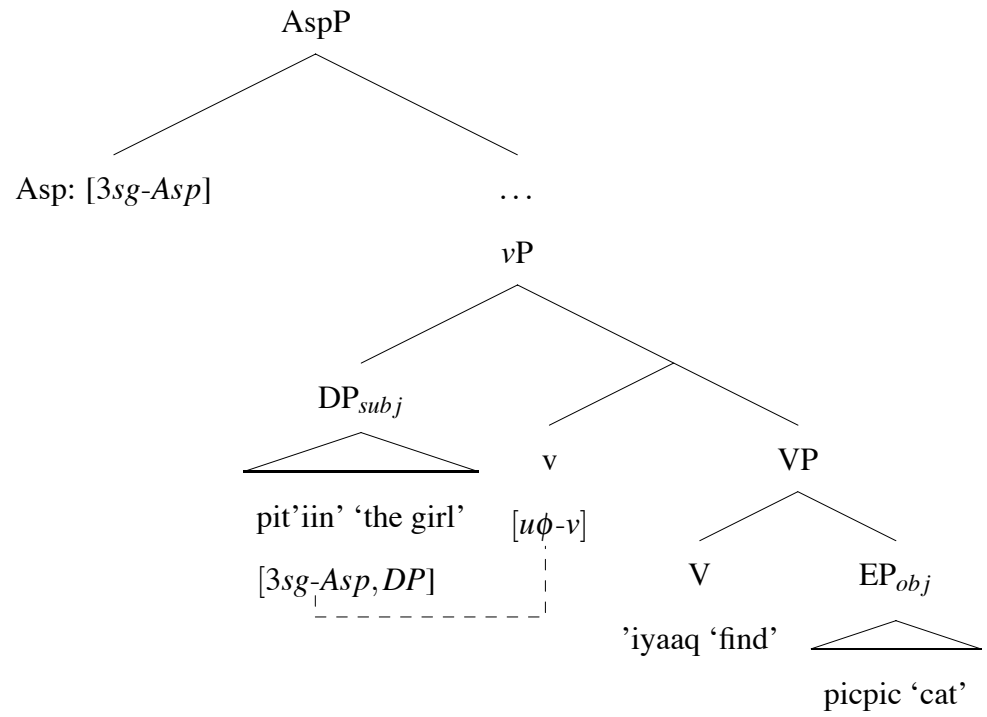
(800) a. pit'iin' hi-'yaaâ-n-a picpic.

girl 3SUBJ-find-P-REM.PAST cat
The girl found a cat.

b. Syntactic dependencies



- c. First interpretation step: interpretation of Agree dependency (only SH-Agree dependency remains)



This hypothesis offers a simple explanation for the absence of overt object agreement in participles. In a participle like (802) (previously seen in (569)), the object marks objective case, suggesting participation in a syntactic agreement relationship with *v* inside the participial structure. The participial form cannot include Asp morphemes, however, and relatedly, object agreement cannot overtly surface.

(802) kaa kine hi-pe-ku- \emptyset -ye

and here 3SUBJ-S.PL-go-P-REM.PAST

hi-pe-'niik- \emptyset -e yik'iwn taklay

3SUBJ-S.PL-put-P-REM.PAST sunshine at.the.same.time

[**wewkuni-t'es** kon-**ya** yaw'iis-**na** sic'e-**ne.**]

[meet-PART2 that-OBJ coldness-OBJ freezing-OBJ]

They [Warmweather people] went and met the freezing cold with sunshine. (Aoki and Walker, 1989, 521)

lit. And here they went, at the same time they placed sunshine to meet that freezing coldness.

Any DP that might occupy the specifier of *v* inside the participial phrase marker will be insufficiently local to Asp to agree with it. Therefore, it cannot pass features to *v* which reflect an Agree dependency with Asp, and object agreement head *v* inside the participial form cannot be spelled out.

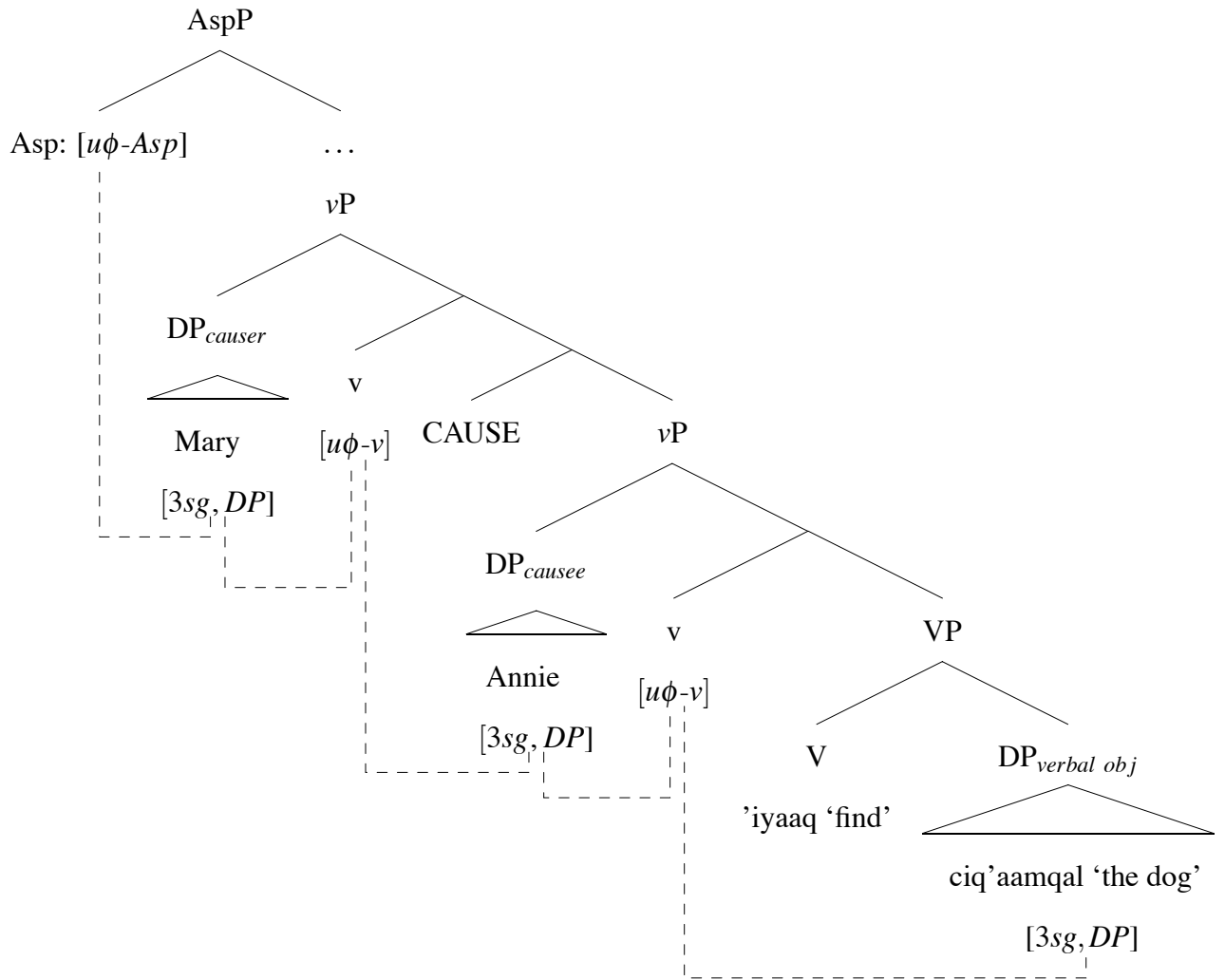
Parallel reasoning can be called on to explain the absence of an overtly realized second *v* head in the causative construction. Our third and most complex example derivation is a causative construction with two agreeing objects.

(803) a. Meeli-nm Annie-ne paa-sapa-'ya \hat{x} -n-a ciq'aamqal-na

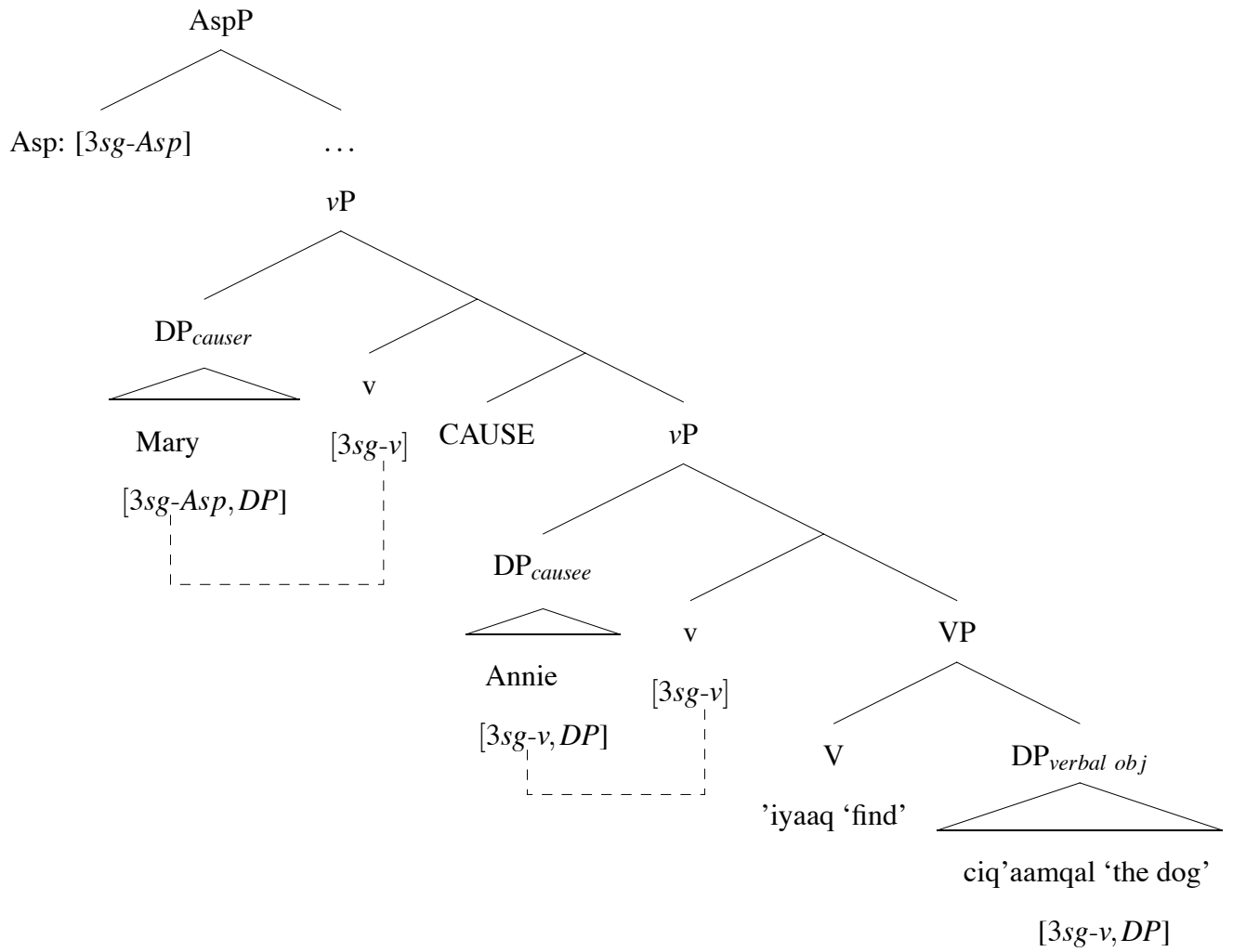
Mary-ERG Annie-OBJ 3/3-CAUSE-find-P-REM.PAST dog-OBJ

Mary made Annie find the dog.

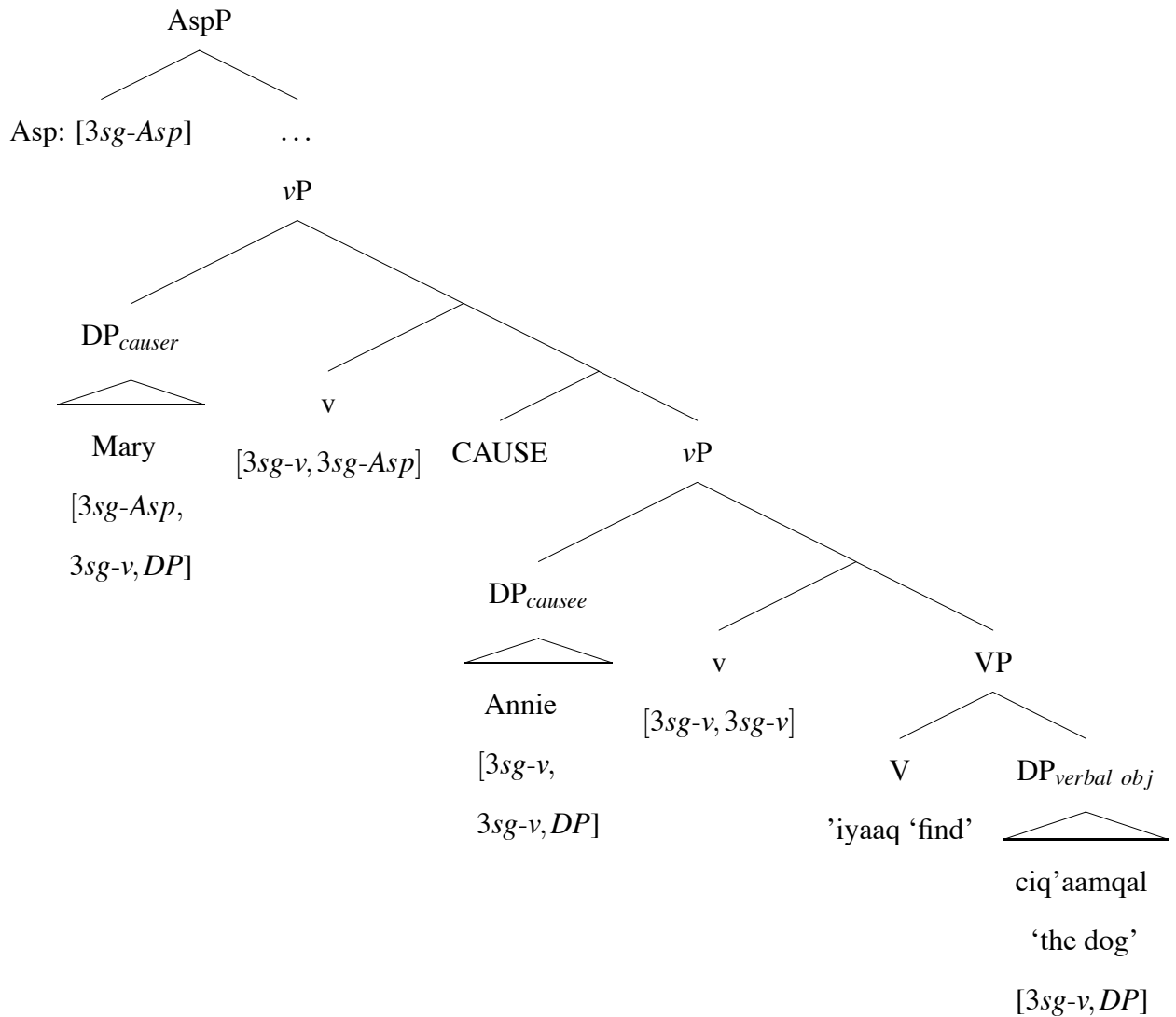
b. Syntactic dependencies



c. First interpretation step: interpretation of Agree dependencies (only SH-Agree dependencies remain)



- d. Second interpretation step: interpretation of SH-Agree dependencies (no dependencies remain)



After all agreement dependencies are interpreted, the clause's three DPs can be fitted with case-marker Vocabulary Items. The features of subject DP *Mary* match the ergative vocabulary item, which realizes [3-Asp, ϕ -v, DP]. The features of both the causee DP and the verbal object DP match the objective vocabulary item, which realizes [ϕ -v, DP]. The higher *v* head, containing information both from the subject and from the object, is realized via portmanteau 3/3 marker *pee*, which calls for [3-Asp, 3-v]. The lower *v* head, however, does

not meet the realization condition (801). It contains no features from a nominal having agreed with Asp, and therefore, the lower *v* head is not realized morphologically.

8.5 Sahaptin

Our analysis makes a prediction about a pattern that will be possible in any language that produces ergative case via agreement mechanisms of the Nez Perce kind: ergative case-marker insertion might be sensitive to the features of the subject, as it is in Nez Perce, but it might equally well be sensitive to the features of the object. After all, what the ergative marker spells out is in essence *both subject agreement and object agreement on a nominal*.

This prediction is borne out in Sahaptin, a family of dialects closely related to Nez Perce (but not mutually intelligible with it). In Sahaptin, the presence of an ergative case marker on the subject is dependent on the person features of both subject and object. The two languages differ in the precise vocabulary item for the ergative case marker, but the mechanism by which the grammar produces ergativity is plausibly the same.

In Sahaptin, ergative case is only expressed on a 3rd person singular subject in the presence of a 1st or 2nd person object. (Note that the object is *pro* in (805). Its person information is easily recoverable via the second position clitic; however, this clitic does not express distinctions of case.)¹⁰

(804) i-tuĥná-na=aš wínš-nim (ína).

3SUBJ-shoot-ASP=1SG man-ERG 1SG.ACC

The man shot me. (Rude, 1985, 144)

¹⁰In Sahaptin examples I provide the name of the Sahaptin dialect if provided by the source. Some slight dialect differences are seen in the data below, e.g. the varying form of ‘man’ in (804) versus the other examples; following Rude (1997) and Rigsby and Rude (1996), I assume that Sahaptin dialects behave alike in the phenomena discussed here.

Abbreviations in Sahaptin glosses are those of the sources cited: 3SUBJ 3rd person subject agreement, 3OBJ 3rd person object agreement, ASP aspect, IMPERF imperfective aspect, ERG ergative case, ACC accusative case.

(805) iwíns-nim=naš i-q'ínun-a.

man-ERG=1SG 3SUBJ-see-PAST

The man saw me. (Rude, 1997, ex 25)

(806) x^wisaat-nim=naš i-ní-ya ináy k'úsi.

old.man-ERG=1SG 3SUBJ-give-PAST 1SG.ACC horse

The old man gave me a horse. (Rigsby and Rude, 1996, 674)

A third person subject with a third person object takes no ergative marking. In the following examples both transitive (807) and intransitive (808) clauses show the same verbal agreement and form of the subject, despite the presence of an accusative object in (807).

(807) iwíns i-q'ínun-a miyánaš-na.

man 3SUBJ-see-PAST child-ACC

The man saw the child. (Rude, 1997, ex 26)

(808) i-wiyánawi-ya iwíns.

3SUBJ-arrive-PAST man

The man arrived. (Rude, 1997, ex 2)

This pattern is readily explained if we suppose that agreement dependencies in Sahaptin are established and interpreted just as in Nez Perce. The crucial difference comes only in morphological *realization*. In Sahaptin, it matters exactly what the features are that are inherited by the subject from the object via SH-Agree with *v*. The ergative case marker is inserted only if the object features are 1st or 2nd person. This means we can give a vocabulary item for the Sahaptin ergative as follows:

(809) *Vocabulary Item for Sahaptin ergative case marker:*

[3sg-*Asp*,+participant-*v*,*DP*]

Phonology: /nim/

Here [+participant] may be taken as a feature that subsumes 1st and 2nd person, as in Harley and Ritter (2002); or (809) may be taken as an abbreviation for two vocabulary

items, one in terms of a referential feature [1st] and one in terms of a referential feature [2nd], in line with the proposal by Kratzer (2009).

8.6 Conclusions and prospects

The investigation in this second part of this dissertation leads to conclusions for both the study of ergativity in Nez Perce and the general study of morphological ergativity.

On the former count, we have seen that an adequate theory of case and caselessness in Nez Perce must be closely concerned with agreement of both object and subject. The conditions on ergative case marking in Nez Perce require syntactic agreement by the subject with its subject agreement head (in this language, Asp) and Spec-head agreement by the subject with the v in whose specifier position it originates. The contribution of v is responsible for our initial characterization of the ergative as a component of “transitive” clauses: the subject, to mark ergative, must share features not merely with a v , but with a v that has successfully participated in object agreement with a feature-specified DP object. In terms of the case typology of Woolford (2006), ergative case on the Nez Perce subject is therefore partially *inherent*, but also partially *structural*; it is furthermore crucially *dependent* on the agreement behavior of the object. For the subject, both participation in subject agreement and origination in v P play a crucial role; and the case of the subject cannot be calculated except given mechanisms that in some way communicate featural information from one DP to another.

On our way to this analysis of the case system we have delved deeply into the origins of caselessness in Nez Perce, concluding that caseless clauses are heterogeneous syntactically and semantically. One class of caseless clauses is found where the syntax of agreement intersects with the syntax of binding. The other is found where the object is structurally small. The two caseless clause types have in common that the object nominal is not capable of forming an agreement dependency with the v head. From this absence of object agreement, the entire pattern of caselessness in the Nez Perce clause follows at last.

Extending the study beyond the Nez Perce facts, we saw how the present view might account for the dependency of ergative case on object person in Sahaptin. How widely the precise analysis offered for these languages may be extended in pursuit of a universal theory of ergativity will depend on how syntactically and morphologically unified “ergative languages” are. Comparative work on this typological class begins in earnest once we have established the ways in which languages do and do not make use of identical means in singling out the “transitive subjects” for which the traditional label *ergative* calls. Where the relevant structural pieces in Nez Perce concern participation in syntactic processes of agreement, it is clearly logically possible that other languages may pick out “transitive clauses” and “subjects” in quite different ways. Yet it is also possible that languages might make use of the Nez Perce system without wearing it on their sleeves, for instance by coupling the case-agreement connection with a general reluctance to spell out one or the other end of the relation. Where in Nez Perce the morphological realization of the agreement system makes the case for case as agreement, in languages with no visible agreement systems we need to look for independent clues of the role of syntactic agreement in determining case patterns. The discussion of anaphor agreement effects suggests that such effects might serve as a promising laboratory for the diagnosis of syntactic agreement that goes without general morphological expression.

Finally, our analysis has also opened up a broad range of phenomena in Nez Perce that call for further in-depth investigation. The analyses of agreement in ditransitives, of locally bound terms as featurally unspecified, and of possessor raising as movement for an “affectee” theta-role stand out as particularly striking examples of instances where further investigation of Nez Perce is likely to lead to results of theoretical and typological interest. Perhaps the most general moral of this study is that our ultimate quest for results of this type will hardly come independently of in-depth documentation of the fundamental syntactic structures of the languages we are interested in. The hunt for solid ground in cross-linguistic work on any syntactic phenomenon requires intense attention to details po-

tentially quite far away from that phenomenon proper. In the case of case in particular, those who take on the hunt can expect rich rewards in a deepened understanding of the backbones of any case system – the architecture of clauses.

APPENDIX A
GLOSS LINE ABBREVIATIONS

1PL.INCL	1st person plural inclusive pronoun
3/3	third person subject and third person object portmanteau verbal agreement
3GEN	3rd person genitive subject agreement
3OBJ	3rd person object agreement
3SUBJ	3rd person subject agreement
AGT	agentive nominal suffix (deverbal)
APPL:AFF	affected party applicative (benefactive/malefactive)
APPL:BYPASSER	bypasser applicative
APPL:AWAY	'away' applicative
APPL:GOAL	goal applicative
BEN	benefactive case
CAUSE	causative verbal prefix
CIS	cislocative space marking
DEM	demonstrative
DESID	desiderative verbal suffix
DIMIN	diminutive suffix
DIST	distributive
DUNNO	ignorance marker (see section 3.3)
EMPH	emphatic nominal suffix
ERG	ergative case
GEN	genitive case

HAB.PRES	present habitual aspect
HAB.PRES.PL	present habitual, plural subject
HAB.PAST	past habitual aspect
HAB.PAST.PL	past habitual, plural subject
HUM	human classifier
IMPER	imperative
IMPER.CIS	cislocative imperative suffix
IMPER.PL	imperative, plural subject
IMPERF	imperfective aspect
IMPERF.PL	imperfective aspect, plural subject
INDEF	indefinite prefix for indeterminate pronouns
INFER	inferential evidential (see section 3.3)
INST	instrumental case
LOC	locative case
LOW.FUT	low future
MOD	modal suffix
NEG	clausal negation
NEG.COMMAND	negative imperative particle
NMLZR	nominalizing suffix
OBJ	objective case
O.PL	plural object agreement
OPT	optative
PART1	first participle (“active participle”, Crook (1999))
PART2	second participle (see section 3.4)
PART3	third participle (“passive participle”, Crook (1999))
P	P aspect (see section 2.3)
PROSP	0-prospective (see section 2.4 and chapter 4)

QA.PROSP	qa-prospective (see section 2.4 and chapter 3)
K.PROSP	k-prospective (see section 2.4)
K.QA.PROSP	k-qa-prospective (see section 2.4)
RECIP	reciprocal verbal prefix
REC.PAST	recent past tense (see chapter 2)
REFL	reflexive verbal prefix (see sections 1.7.2.3 and 5.3.4)
REL	relativizer (see section 1.6)
REM.PAST	remote past tense (see chapter 2)
SF	stem formative (meaning unclear)
S.PL	plural subject agreement
TRANS	translocative space marking
VBLZR	verbalizing suffix
Y.N	yes/no question particle

APPENDIX B

EXAMPLES OF MORPHEME COMBINATIONS

In this appendix I collect examples of the morphemes and morpheme combinations described in figures 2.1 (imperfective), 2.2 (notional habitual) and 2.3 (P aspect), and in section 2.4 (prospective), as well as examples of optatives and imperatives.

B.1 Imperfective

- (810) Imperfective [S-class], singular, present

miyapkaawit hi-pnim-sa- \emptyset

baby 3SUBJ-sleep-IMPERF-PRES

The baby is sleeping (right now)

- (811) Imperfective [C-class], singular, present

hi-paay-ca- \emptyset

3SUBJ-arrive-IMPERF-PRES

He is arriving, he is coming

- (812) Imperfective [S-class], plural, present

kismis-pe sapatk'ayn wewluq-siix- \emptyset Meeli kaa Coosef

christmas-LOC show want-IMPERF.PL-PRES Mary and Joseph

For the Christmas show we want a Mary and a Joseph

- (813) Imperfective [C-class], plural, present

hi-paay-ciix- \emptyset

3SUBJ-arrive-IMPERF.PL-PRES

They are arriving / coming

hi-yk'iw-ce-nki- \emptyset

3SUBJ-be.sunny-IMPERF-TRANS-PRES

The sun is shining over there. (Aoki and Walker, 1989, 58)

- (824) Imperfective [S-class], plural, translocative, present

hi-wece-si-nki- \emptyset

3SUBJ-dance-IMPERF.PL-TRANS-PRES

They are dancing (at a place over the hill) (Aoki and Walker, 1989, 488)

- (825) Imperfective [S-class], singular, translocative, recent past

qo'c timaayi-na 'aw-'nah-wayik-sa-nqa-qa

still girl-OBJ 3OBJ-carry-move.across-IMPERF-TRANS-REC.PAST

I was still moving the girl away across (Aoki and Walker, 1989, 455)

- (826) Imperfective [C-class], plural, translocative, remote past

hi-wehye-ci-nki-ke

3SUBJ-go-IMPERF.PL-TRANS-REM.PAST

They were going away (Aoki and Walker, 1989, 292)

B.2 Notional habitual

- (827) Present habitual, singular

haamti'c c'iq-teetu- \emptyset

quickly speak-HAB.PRES-PRES

I talk fast

- (828) Present habitual, plural

'imuu-nix pi-tek'e-tee'nix- \emptyset

3PL-EMPH RECIP-distribute-HAB.PRES.PL-PRES

They give away to their own friends. They distribute to each other (at a giveaway).

- (829) Present habitual, singular vs. plural

a. sik'em hi-wlekix-teetu-∅ haamti'c

horse 3SUBJ-run-HAB.PRES.PL-PRES fast
The horse runs fast.

b. sik'em hi-wlekix-tee'nix-∅ haamti'c

horse 3SUBJ-run-HAB.PRES.PL-PRES fast
Horses run fast.

(830) Present habitual, singular, cislocative

ku'us-u' ke-m yoŋ 'eete-m 'e-ek-tetu-m-∅

thus-EMPH REL-2SG DEM INFER-2SG 3OBJ-see-HAB.PRES-CIS-PRES

ka kona kaa wee-s-∅ 'iniit 'uuyikeem-pe

REL there then be-P-PRES house loose.rock-LOC

Just as, surely, you see it, I have a house there at the loose rocks (Aoki and Walker, 1989, 288)

(831) Past habitual [S class], singular, recent past

ko-qa-qa Portland-x

go-HAB.PAST-REC.PAST P-to

I used to travel frequently to Portland. I used to go there all the time. (not okay if you only went twice)

(832) Past habitual [S class], singular, remote past

nuku-ne 'a-p-qa-na waqiipa kii kaa weet'u

meat-OBJ 3OBJ-eat-HAB.PAST-REM.PAST long.ago this then not

I used to eat meat a long time ago but now I don't

(833) Past habitual [S class], plural, recent past

kal'a ku'us hi-kiy-a'nii-qa nuun-im pisit-me na-'toot

just thus 3SUBJ-do-HAB.PL.PAST-REC.PAST 1PL-GEN father-PL 1SG-father

kaa 'im-'toot

and 2SG-father

It's raining in Waykiki

- (840) P [C-class], translocative, present

kaa 'ispak'aax-nim hi-nees-wiye-twee-ce- \emptyset

and pinion.bird-ERG 3SUBJ-O.PL-as.one.goes-follow-IMPERF-PRES

heelex la'am-kin'ix hi-wehye-n-ki- \emptyset kona.

behind all-from 3SUBJ-go-P-TRANS-PRES there.

And Pinion Bird is following them, behind all of them he went there. (Aoki and Walker, 1989, 173)

- (841) P [S-class], cislocative, remote past

kine hi-weqi- \emptyset -m-e

here 3SUBJ-rain-P-CIS-REM.PAST

It rained here.

- (842) P [S-class], cislocative, remote past and P [C-class], cislocative, present (in order of appearance)

ka ku'us-ki wihne- \emptyset -m-e

and thus-INST leave-P-CIS-REM.PAST

ciklii-ni-m-e 'iin kaa kine 'ee wic'ee- \emptyset -ye.

go.home-P-CIS-REM.PAST I and here you become-P-REM.PAST

And for that reason I left, I came home, and you were born here. (Aoki and Walker, 1989, 327)

- (843) P [S-class], translocative, remote past

pist hi-weeylek-uu- \emptyset -ki-ke

father 3SUBJ-run-APPL:GOAL-P-TRANS-REM.PAST

She ran into her father (Aoki and Walker, 1989, 62)

- (844) P [C-class], translocative, remote past

kaa yô hi-quyim-ni-ki-ke tewliikt 'uykin'ix.
 then DEM 3SUBJ-climb-P-TRANS-REM.PAST tree farther
 Then that one went farther up the tree. (Aoki and Walker, 1989, 12)

B.4 Imperative

(845) Imperative [S-class], singular

a. hiica-y hiica-nwas-pa!
 climb-IMPER climb-place-LOC
 Climb the ladder!

b. ta'c sepelixni-x!
 good work-IMPER
 Work good! Work hard!

c. nuku-ne 'e-hip-x!
 meat-OBJ 3OBJ-eat-IMPER
 Eat the meat!

(846) Imperative [C-class], singular

a. 'e-nees-hiis-in!
 3OBJ-O.PL-win.over-IMPER
 Win! Beat them!

b. ciklii-n
 go.home-IMPER
 Go home!

(847) Imperative [S-class], plural

cepkiliki-tx piswe!
 pick.up-IMPER.PL rock
 Pick up rocks!

(848) Imperative [C-class], plural

'e-nees- \emptyset -nu' kuu-te-tx!
 3OBJ-O.PL-say-PROSP go-go.away-IMPER.PL
 You will say to them, go!

(849) Imperative [C-class], cislocative

- a. haamti'c nees-kiwye-te-m!
 quick O.PL-feed-go.away-IMPER.CIS
 Come and feed us!
- b. toyaam-x q'uyim-nim!
 top-to climb-IMPER.CIS
 Climb up to the top! Climb up here to me!

(850) Imperative [S-class], cislocative, plural

- a. mitaat pi-pi'tin' 'allay-kix ku-m-tx!
 three PL-girl down-to go-CIS-IMPER.PL
 Three girls come down!
- b. leeqeyt 'inii-m-tx!
 twig give-CIS-IMPER.PL
 Give me little pine twigs. (Aoki and Walker, 1989, 107)

B.5 Optative

The optative appears only with S-class verbs.

(851) ke hi-weqi]_{S.class}-t'e
 REL 3SUBJ-rain-OPT
 Let it rain!

(852) *ke hi-yk'iw]_{C.class}-t'e
 REL 3SUBJ-be.sunny-OPT
 Intended: Let it shine!

The following are examples of the optative on S-class verbs.

- (853) haawt-niin' ke-m 'imee-m we'nikt wee-t'e
 sanctify-PART3 REL-2SG 2SG-GEN name be-OPT
 Hallowed be thy name
 Note: my consultant felt this to be a literal translation of this passage of the Lord's Prayer
- (854) Context: volunteering to make coffee after someone has complained that there's nothing to eat or drink
 ke-x 'iin hani-t'a lalx̃
 REL-1SG I make-OPT coffee
 Let me go and make coffee
- (855) 'ilaapqat-'ayn ke-m 'ew-'nii-t'e
 shoe-BEN REL-2SG 3OBJ-give-OPT
 Give her (buckskin) for moccasins (Aoki and Walker, 1989, 81)
- (856) kii'u ke hi-wee-t'e kinyu' kal'a pee-cukwece-nu' ku'us 'uuyikeemmeḡs.
 this REL 3SUBJ-be-OPT here just 3/3-know-PROSP thus shalerock-fountain.
 Let this be known as Shalerock Fountain. (Aoki and Walker, 1989, 34)
- (857) Context: an old man is showing hospitality to the ungrateful coyote, who has taken a boy's toy ball of grease and eaten it. The old man invites coyote to return to his well-stocked lodge, saying:
 kona ke-m 'imoo-pa-yata-t'a
 there REL-2SG 2SG.REFL-hand-help-OPT
 kaa kal'a ke-m-'ituu sil'eq'is hi nukt
 and just REL-2SG-what fresh be meat
 taḡc'ee kona 'imee-k'usmi-yu' 'imoo-pa-yata-t'a.
 soon.you there 2SG.REFL-roast-PROSP 2SG.REFL-hand-help-OPT
 There you can help yourself. You can have fresh meat or anything. You can help yourself and roast it. (Aoki and Walker, 1989, 504)

lit. There, may you help yourself. And just whatever is there in the way of fresh meat, you will roast it there, may you help yourself.

(858) Optative, cislocative

qo'c ke-pe-m pe-'seep-ke'yk-t'e-m qaaca kal'a

still REL-PL-2 S.PL-CAUSE-go-OPT-CIS grandchildren just

May you carry me over there, grandchildren! (Aoki and Walker, 1989, 147)

APPENDIX C

COMPENDIUM OF MORPHEMES AND ALLOMORPHIC RULES

In this appendix I collect the morphemes discussed in this chapter, their class information (insofar as it may be discerned), and their allomorphic patterns. These patterns may be seen in action in the paradigm chart on page 441. Three general observations can be made about the paradigm:

- Allomorphs following C-class constituents generally start with *n*.
- The allomorphy of the plural forms (imperfective, present habitual, past habitual) conspires with the allomorphy of the cislocative to avoid *x* in coda position.
- What might be expected to surface as *kVq* sequences surface as *qVq*, suggestive of lexically-conditioned dorsal harmony. Harmony does not occur over a nasal: in the prospective family we find *komqa*.

C.1 Aspect morphemes

The class of aspect markers may be discerned by the form of following remote past and translocative suffixes. For present habitual, which combines with neither, it is not possible to make a class assignment.

(859) Imperfective: Class C

a. Imperfective singular

i. [se] /]*S.class* –

ii. [ce] /]*C.class* –

- b. Imperfective plural
 - i. [siix] /]*S.class* _#
 - ii. [siin] /]*S.class* _m
 - iii. [sii] /]*S.class* _ (elsewhere)
 - iv. [ciix] /]*C.class* _#
 - v. [ciin] /]*C.class* _m
 - vi. [cii] /]*C.class* _ (elsewhere)

(860) Present habitual: Unknown class

- a. Present habitual singular
 - i. [tetu]
- b. Present habitual plural
 - i. [tee'nix]

(861) Past habitual: Class C

- a. Past habitual singular
 - i. [qa] /]*S.class* _
 - ii. [naqa] /]*C.class* _
- b. Past habitual plural
 - i. [e'nii] /]*S.class* _ q
 - ii. [e'niix] /]*S.class* _ (elsewhere)
 - iii. [ne'nii] /]*C.class* _ q
 - iv. [ne'niix] /]*C.class* _ (elsewhere)

(862) P-aspect: Class S

- i. [s] /]*S.class* _#
- ii. [∅] /]*S.class* _ (elsewhere)
- iii. [ni] /]*C.class* _C

iv. [n] /]*C.class* _ (elsewhere)

C.2 Space markers

The class of cislocative may be seen in the following allomorph of remote past. Since translocative conditions a special allomorph of remote past, a class identification cannot be made.

(863) Cislocative: Class S

i. [inm] / x_

ii. [m] / elsewhere

(864) Translocative: Unknown class

i. [ki] /]*S.class* _

ii. [nqa] / a]*C.class* _qa

iii. [nqi] /]*C.class* _q

iv. [nki] /]*C.class* _ (elsewhere)

C.3 Tense markers

Since no suffix may follow a tense marker, it is not possible to discern whether these affixes produce S- or C-class constituents.

(865) Present

i. [∅]

(866) Recent past

i. [qa]

(867) Remote past

i. [e] /]*S.class* _

ii. [ne] /]*C.class* _

iii. [ke] / ki _

C.4 Prospective portmanteaux

(868) 0-prospective

i. [u'] /]*S.class* _

ii. [nu'] /]*C.class* _

(869) Qa-prospective

i. [o'qa] /]*S.class* _

ii. [no'qa] /]*C.class* _

(870) K-prospective

i. [u'kum] /]*S.class* _

ii. [nu'kum] /]*C.class* _

(871) K-Qa-prospective

i. [o'komqa] /]*S.class* _

ii. [no'komqa] /]*C.class* _

C.5 Paradigm chart (including optative and imperative)

Aspect	Tense	Number	Space marker	S-class form	C-class form
Imperfective	Present	Singular		se	ce
			Cisloc	se-m	ce-m
			Transloc	se-nki	ce-nki
		Plural		siix	ciix
			Cisloc	siin-m	ciinm
			Transloc	sii-nki	ciinki

The paradigm of inflectional suffixation (con't)

Aspect	Tense	Number	Space marker	S-class form	C-class form	
	Recent past	Singular		sa-qa	caqa	
			Cisloc	sa-m-qa	camqa	
			Transloc	sa-nqa-qa	caanqaqa	
		Plural		sii-qa	ciiqa	
			Cisloc	siin-m-qa	ciinmqa	
			Transloc	sii-nqi-qa	ciinqiqa	
	Remote Past	Singular		se-ne	cene	
			Cisloc	see-m-e	ceeme	
			Transloc	see-nki-ke	ceenkike	
		Plural		sii-ne	ciine	
			Cisloc	siin-m-e	ciinme	
			Transloc	sii-nki-ke	ciinkike	
	Pres. habitual	Present	Singular		teetu	teetu
				Cisloc	teetu-m	teetum
				Transloc	–	–
Plural				tee'nix	tee'nix	
			Cisloc	tee'nix-inm	tee'nixinm	
			Transloc	–	–	
Past habitual	Recent past	Singular		qaa-qa	naqaaqa	
			Cisloc	qaa-m-qa	naqaamqa	
			Transloc	–	–	
		Plural		a'nii-qa	na'niiqa	
			Cisloc	a'niix-inm-qa	na'niixinmqa	
			Transloc	–	–	
	Remote Past	Singular		qaa-na	naqaana	

The paradigm of inflectional suffixation (con't)

Aspect	Tense	Number	Space marker	S-class form	C-class form
			Cisloc	qaa-m-a	naqaama
			Transloc	–	–
		Plural		e'niix-ne	ne'niixne
			Cisloc	e'niix-inm-e	ne'niixinme
			Transloc	–	–
P aspect	Present	(pref)		s	n
			Cisloc	m	nim
			Transloc	ki	niki
	Recent past			–	–
	Remote Past	(pref)		(y)-e	ne
			Cisloc	m-e	nime
			Transloc	ki-ke	nikike
0-prospective		(pref)		u'	nu'
K-prospective		(pref)		u'kum	nu'kum
Qa-prospective		(pref)		o'qa	no'qa
K-qa-prospective		(pref)		o'komqa	no'komqa
Optative		(pref)		t'e	–
			Cisloc	t'e-m	–
			Transloc	–	–
Imperative		Singular		y, x, 0	n, 0
			Cisloc	m	nim
			Transloc	–	–
		Plural		tx	nitx
			Cisloc	mtx	nimtx
			Transloc	–	–

BIBLIOGRAPHY

- Abney, Steven. 1987. The English noun phrase in its sentential aspect. Doctoral Dissertation, Massachusetts Institute of Technology.
- Abusch, Dorit. 1994. The scope of indefinites. *Natural Language Semantics* 2:83–136.
- Adger, David, and Peter Svenonius. 2009. Features in minimalist syntax. MS, Queen Mary, University of London and CASTL, University of Tromsø, February 2009.
- Ainslie, GEO. 1876a. *Johnnim taaiskt (Gospel according to John)*. Philadelphia: Presbyterian Board of Publication.
- Ainslie, GEO. 1876b. *Uyitpa Johnnim timas (First epistle general of John)*. Philadelphia: Presbyterian Board of Publication.
- Aissen, Judith. 1990. Towards a theory of agreement controllers. In *Studies in relational grammar 3*, ed. Paul M. Postal and Brian D. Joseph, 279–320. Chicago: University of Chicago.
- Aissen, Judith. 1999. Agent focus and inverse in Tzotzil. *Language* 75:451–485.
- Aldridge, Edith. 2004. Ergativity and word order in Austronesian languages. Doctoral Dissertation, Cornell.
- Aldridge, Edith. 2008. Minimalist analysis of ergativity. *Sophia Linguistica* 55:12–142.
- Alexiadou, Artemis, and Chris Wilder, ed. 1998. *Possessors, predicates and movement in the determiner phrase*. John Benjamins.
- Anand, Pranav, and Andrew Nevins. 2006. The locus of ergative case assignment: evidence from scope. In *Ergativity: emerging issues*, ed. A. Johns, D. Massam, and J. Ndayiragije. Springer.
- Aoki, Haruo. 1963a. On Sahaptian-Klamath linguistic affiliations. *International Journal of American Linguistics* 29:107–112.
- Aoki, Haruo. 1963b. Reduplication in Nez Perce. *International Journal of American Linguistics* 29:42–44.
- Aoki, Haruo. 1966. Nez Perce vowel harmony and Proto-Sahaptian vowels. *Language* 42:759–767.

- Aoki, Haruo. 1970. *Nez Perce grammar*. University of California Publications in Linguistics. Berkeley: University of California Press.
- Aoki, Haruo. 1979. *Nez Perce texts*. Berkeley: University of California Press.
- Aoki, Haruo. 1994. *Nez Perce dictionary*. Berkeley: University of California Press.
- Aoki, Haruo, and Deward Walker. 1989. *Nez Perce oral narratives*. University of California Press.
- Arad, Maya. 2003. Locality constraints on the interpretation of roots: the case of Hebrew denominal verbs. *Natural Language and Linguistic Theory* 21:737–778.
- van der Auwera, Johan, and Andreas Ammann. 2008. Overlap between situational and epistemic modal marking. In *The world atlas of language structures*, ed. Martin Haspelmath, Matthew S. Dryer, David Gil, and Bernard Comrie, chapter 76, Available online at <http://wals.info/feature/76>. Max Planck Digital Library.
- Avrutin, Sergey. 1994. The structural position of bound variables in Russian. *Linguistic Inquiry* 25:709–728.
- Baker, Mark. 1985. The mirror principle and morphosyntactic explanation. *Linguistic Inquiry* 16:373–416.
- Baker, Mark. 1988. *Incorporation: a theory of grammatical function changing*. Chicago: University of Chicago Press.
- Bakovic, Eric. 2000. Harmony, dominance and control. Doctoral Dissertation, Rutgers University.
- Barker, Chris. 1995. *Possessive descriptions*. Stanford University: CSLI Publications.
- Barss, Andrew, and Howard Lasnik. 1986. A note on anaphora and double objects. *Linguistic Inquiry* 17:347–354.
- Beghelli, Filippo, and Tim Stowell. 1997. Distributivity and negation: the syntax of *each* and *every*. In *Ways of scope taking*, ed. A. Szabolcsi, 71–109. Kluwer.
- Bejar, Susana, and Diane Massam. 1999. Multiple case checking. *Syntax* 2:65–79.
- Bhatt, Rajesh. 2004. Pronominal possessor obviation: locality and subjecthood. Handout from talk at UMass Amherst, February 2004.
- Bhatt, Rajesh. 2005. Long distance agreement in Hindi-Urdu. *Natural Language and Linguistic Theory* 23:757–807.
- Bittner, Maria. 1987. On the semantics of the Greenlandic antipassive and related constructions. *International Journal of American Linguistics* 53:194–231.
- Bittner, Maria. 1994. *Case, scope and binding*. Dordrecht: Kluwer.

- Bittner, Maria. 2005. Future discourse in a tenseless language. *Journal of Semantics* 22:339–387.
- Bobaljik, Jonathan. 2002. A-chains at the PF-interface: copies and ‘covert’ movement. *Natural Language and Linguistic Theory* 20:197–267.
- Bobaljik, Jonathan David. 2005. Where’s phi? In *Leiden Papers in Linguistics*, ed. Marjo van Koppen.
- Bobaljik, Jonathan David, and Susi Wurmbrand. 2005. The domain of agreement. *Natural Language and Linguistic Theory* 23:809–865.
- Boeckx, Cedric, and Norbert Hornstein. 2004. Movement under control. *Linguistic Inquiry* 35:431–452.
- Bohnemeyer, Jürgen. 2002. *The grammar of time reference in Yukatek Maya*. Lincom Europa.
- Bonomi, Andrea. 1997. The progressive and the structure of events. *Journal of Semantics* 14:173–205.
- Borer, Hagit. 1984. *Parametric syntax*. Dordrecht, Holland: Foris Publications.
- Borer, Hagit, and Yosef Grodzinsky. 1986. Syntactic vs. lexical cliticization: the case of Hebrew dative clitics. In *The syntax of pronominal clitics*, ed. Hagit Borer. San Diego: Academic Press.
- Borgman, Donald M. 1990. Sanuma. In *Handbook of Amazonian languages*, ed. Desmond Derbyshire and Geoffrey Pullum, volume 2, 15–248.
- Bošković, Željko. 1994. D-structure, θ -criterion, and movement into θ -positions. *Linguistic Analysis* 24:247–286.
- Bowers, John. 1993. The syntax of predication. *Linguistic Inquiry* 24:591–656.
- Bresnan, Joan. 1970. A grammatical fiction. *Linguistic Inquiry* 1:261–262.
- Bresnan, Joan. 2001. *Lexical-functional syntax*. Blackwell.
- Bresnan, Joan, and Lioba Moshi. 1990. Object asymmetries in comparative Bantu syntax. *Linguistic Inquiry* 22:147–186.
- Büring, Daniel. 2005. *Binding theory*. Cambridge University Press.
- Burzio, Luigi. 1986. *Italian syntax*. Reidel Publishers.
- Cardinaletti, Anna. 1998. On the deficient/strong opposition in possessive systems. In *Possessors, predicates and movement in the determiner phrase*, ed. Artemis Alexiadou and Chris Wilder, 17–54. Amsterdam: John Benjamins Publishing Company.

- Carlson, Gregory N. 1977. Reference to kinds in English. Doctoral Dissertation, University of Massachusetts, Amherst.
- Carnie, Andrew, and Phillip Cash. 2006. Tree-geometric relational hierarchies and Nuumiipuutímt (Nez Perce) case. In *Ergativity*, ed. A. Johns, D. Massam, and J. Ndayiragije, 229–244. Springer.
- Carstens, Vicki. 2005. Agree and EPP in Bantu. *Natural Language and Linguistic Theory* 23:219–279.
- Cash, Phillip. 2004. Nez Perce verb morphology. Ms., University of Arizona.
- Cataldo, J.M. 1914. *Jesus-Christ-nim kinne uetas-pa kut ka-kala time-nin i-ues pilep-eza-pa taz-pa tamtai-pa numipu-timt-ki (The life of Jesus Christ from the four gospels in the Nez Perces language)*. Portland, Oregon: Schwab Printing Co.
- Chierchia, Gennaro. 1998. Reference to kinds across languages. *Natural Language Semantics* 6:339–405.
- Chierchia, Gennaro. 2006. Broaden your views: Implicatures of domain widening and the “logicality” of language. *Linguistic Inquiry* 37:535–590.
- Chomsky, Noam. 1981. *Lectures on government and binding*. Dordrecht, The Netherlands: Foris Publications.
- Chomsky, Noam. 1986. *Barriers*. Cambridge, Massachusetts: MIT Press.
- Chomsky, Noam. 1995. *The minimalist program*. Cambridge, Massachusetts: MIT Press.
- Chomsky, Noam. 2000. Minimalist inquiries: The framework. In *Step by step: Essays on minimalist syntax in honor of Howard Lasnik*, ed. Roger Martin, David Michaels, and Juan Uriagereka, 89–156. MIT Press.
- Chomsky, Noam. 2001. Derivation by phase. In *Ken Hale: A life in linguistics*, ed. Michael Kenstowicz, 1–52. Cambridge, Massachusetts: MIT Press.
- Chomsky, Noam, and Morris Halle. 1968. *The sound pattern of English*. New York: Harper & Row, Publishers.
- Chung, Sandra. 1998. *The design of agreement: evidence from Chamorro*. University of Chicago Press.
- Chung, Sandra, and William A. Ladusaw. 2004. *Restriction and saturation*. Cambridge, MA: MIT Press.
- Cinque, Guglielmo. 1994. On the evidence for partial N movement in the Romance DP. In *Paths towards universal grammar: Studies in honor of Richard s. Kayne*, ed. Guglielmo Cinque, Jan Koster, Jean-Yves Pollock, Luigi Rizzi, and Raffaella Zanuttini, 85–110. Georgetown University Press.

- Cinque, Guglielmo. 1999. *Adverbs and functional heads: a cross-linguistic perspective*. New York: Oxford University Press.
- Cinque, Guglielmo, ed. 2002. *Functional structure in DP and IP: the cartography of syntactic structures*, volume 1. Oxford University Press.
- Cinque, Guglielmo. 2005. Deriving Greenberg's universal 20 and its exceptions. *Linguistic Inquiry* 36:315–332.
- Collins, Chris. 2004. The agreement parameter. In *Triggers*, ed. Anne Breitbarth and Henk van Riemsdijk, 115–136. Walter de Gruyter.
- Comrie, Bernard. 1976. *Aspect*. Cambridge University Press.
- Comrie, Bernard. 1978. Ergativity. In *Syntactic typology: studies in the phenomenology of language*, ed. W. P. Lehman, 329–394. University of Texas Press.
- Comrie, Bernard. 1985. *Tense*. Cambridge University Press.
- Condoravdi, Cleo. 2001. Temporal interpretation of modals. In *Stanford papers on semantics*, ed. D. Beaver et al, 59–87. CSLI.
- Cooper, Robin. 1983. *Quantification and syntactic theory*. D. Riedel.
- Corbett, Greville G. 2006. *Agreement*. Cambridge University Press.
- Cresti, Diana. 1995. Extraction and reconstruction. *Natural Language Semantics* 3:79–122.
- Crook, Harold David. 1999. The phonology and morphology of Nez Perce stress. Doctoral Dissertation, University of California at Los Angeles.
- Davidson, Donald. 1967. The logical form of action sentences. In *The logic of decision and action*, ed. Nicholas Rescher, 81–95. Pittsburgh: Pittsburgh University Press.
- Davis, Henry, Ryan Waldie, and Rachel Wojdak. 2007. Condition C effects in Nuu-chah-nulth. *Canadian Journal of Linguistics* 52:185–222.
- Dayal, Veneeta. 1998. Any as inherently modal. *Linguistics and Philosophy* 21:433–476.
- Dayal, Veneeta. 2003. A semantics for pseudo-incorporation. Semantics Archive.
- Deal, Amy Rose. 2007. Antipassive and indefinite objects in Nez Perce. In *Proceedings of SULA 4*, ed. A.R. Deal, 35–47. Amherst: GLSA.
- Deal, Amy Rose. 2008. Property-type objects and modal embedding. In *Proceedings of Sinn und Bedeutung 12*, ed. Atle Grøn. Oslo: ILOS 2008.
- Deal, Amy Rose. 2009a. Events in space. In *Proceedings of SALT 18*, ed. T. Friedman and S. Ito, 230–247. Cornell: CLC Publications.

- Deal, Amy Rose. 2009b. On the origin and content of expletives: evidence from "selection". *Syntax* 12:285–323.
- Deal, Amy Rose. 2010. Ergative case and the transitive subject: a view from Nez Perce. *Natural Language and Linguistic Theory* 28:73–120.
- DeLancey, Scott. 1996. The bipartite stem belt: disentangling areal and genetic correspondences. In *Proceedings of the 22nd annual meeting of the Berkeley Linguistics Society*.
- Delsing, Lars-Olof. 1998. Possession in Germanic. In *Possessors, predicates and movement in the determiner phrase*, ed. Artemis Alexiadou and Chris Wilder, 87–108. Amsterdam: John Benjamins Publishing Company.
- Diesing, Molly. 2000. Aspect in Yiddish: the semantics of an inflectional head. *Natural Language Semantics* 8:231–235.
- den Dikken, Marcel, Richard Larson, and Peter Ludlow. 1996. Intensional “transitive” verbs and concealed complement clauses. *Rivista di Linguistica* 8:331–348.
- Dikken, Marcel den. 2006. A reappraisal of vP being phasal: a reply to Legate. Ms CUNY.
- Dixon, R.M.W. 1994. *Ergativity*. Number 69 in Cambridge Studies in Linguistics. Cambridge University Press.
- Dixon, R.M.W. 2000. A typology of causatives: form, syntax and meaning. In *Changing valency: case studies in transitivity*, ed. R.M.W. Dixon and Alexandra Aikhenvald, 30–83. Cambridge University Press.
- Dowty, David R. 1979. *Word meaning and Montague grammar*. Dordrecht, The Netherlands: Kluwer Academic Publishers.
- Elbourne, Paul. 2005. *Situations and individuals*. Cambridge, MA: MIT Press.
- Embick, David, and Rolf Noyer. 2001. Movement operations after syntax. *Linguistic Inquiry* 32:555–595.
- Emonds, Joseph E. 2007. *Discovering syntax: clause structures of English, German and Romance*. Mouton de Gruyter.
- Enç, Mürvet. 1996. Tense and modality. In *The handbook of contemporary semantic theory*, ed. S. Lappin, 345–358. Blackwell.
- Farkas, Donka, and Henriëtte de Swart. 2003. *The semantics of incorporation*. Stanford, CA: CSLI.
- Fiengo, Robert, and Robert May. 1994. *Indices and identity*. Cambridge, Massachusetts: MIT Press.
- Fodor, Janet Dean, and Ivan Sag. 1982. Referential and quantificational indefinites. *Linguistics and Philosophy* 5:355–398.

- Fox, Danny. 2000. *Economy and semantic interpretation*. Cambridge, Massachusetts: MIT Press.
- Fox, Danny. 2002. Antecedent-contained deletion and the copy theory of movement. *Linguistic Inquiry* 33:63–96.
- van Geenhoven, Verle. 1998. *Semantic incorporation and indefinite descriptions*. Stanford, CA: CSLI.
- van Geenhoven, Verle, and Louise McNally. 2005. On the property analysis of opaque complements. *Lingua* 115:885–914.
- Giannakidou, Anastasia. 2001. The meaning of free choice. *Linguistics and Philosophy* 24:659–735.
- Gillon, Carrie. 2006. The semantics of determiners: domain restriction in Skwxwú7mesh. Doctoral Dissertation, University of British Columbia.
- Givon, Talmy, ed. 1983. *Topic-continuity in discourse: a quantitative cross-language study*, volume 3 of *Typological Studies in Language*. Amsterdam: John Benjamins.
- Goldberg, Lotus Madelyn. 2005. Verb-stranding VP ellipsis: A cross-linguistic study. Doctoral Dissertation, McGill University, Montreal.
- Grimshaw, Jane. 1982. On the lexical representation of Romance reflexive clitics. In *The mental representation of grammatical relations*, ed. J. Bresnan. MIT Press.
- Grodzinsky, Yosef, and Tanya Reinhart. 1993. The innateness of binding and coreference. *Linguistic Inquiry* 24:69–102.
- Hacquard, Valentine. 2006. Aspects of modality. Doctoral Dissertation, MIT.
- Haegeman, Liliane. 1983. *The semantics of will in present-day British English: a unified account*. Brussels: Koninklijke Academie voor Wetenschappen, Letteren en Schone Kusten van België.
- Hall, Beatrice, and R.H.R. Hall. 1977. Nez Perce vowel harmony: an Africanist explanation and some theoretical questions. In *Issues in vowel harmony*, ed. R.M. Vago, Studies in Language Companion Series 6. John Benjamins.
- Halle, Morris. 1997. Distributed morphology: impoverishment and fission. In *PF: Papers at the interface*, ed. Benjamin Bruening et al., number 30 in MIT Working Papers in Linguistics, 425–449. MITWPL.
- Halle, Morris, and Alec Marantz. 1993. Distributed morphology and the pieces of inflection. In *The view from building 20*, ed. Kenneth Hale and Samuel Jay Keyser, 111–176. Cambridge, Massachusetts: MIT Press.
- Harley, Heidi, and Rolf Noyer. 1999. Distributed morphology. *GLOT International* 4:3–9.

- Harley, Heidi, and Elizabeth Ritter. 2002. Person and number in pronouns: a feature-geometric analysis. *Language* 78:482–526.
- Haspelmath, Martin. 1997. *Indefinite pronouns*. Oxford: Oxford University Press.
- Heim, Irene. 1982. The semantics of definite and indefinite Noun Phrases. Doctoral Dissertation, University of Massachusetts, Amherst.
- Heim, Irene. 2008. Features on bound pronouns. In *Phi theory*, ed. Daniel Harbour, David Adger, and Susana Bejar, 35–56. Oxford University Press.
- Heim, Irene, and Angelika Kratzer. 1998. *Semantics in generative grammar*. Malden, MA: Blackwell.
- Hestvik, Arild. 1992. LF movement of pronouns and antisubject orientation. *Linguistic Inquiry* 23:557–595.
- Higginbotham, James. 2004. The English progressive. In *The syntax of time*, ed. J. Guéron and J. Lecarme, 329–358. MIT Press.
- Hopper, Paul J, and Sandra A. Thompson. 1980. Transitivity in grammar and discourse. *Language* 56:251–299.
- Hornstein, Norbert. 1995. *Logical Form: from GB to Minimalism*. Cambridge, Massachusetts: Basil Blackwell.
- Hornstein, Norbert. 1999. Movement and control. *Linguistic Inquiry* 30:69–96.
- Jacobsen, William. 1968. On the history of Nez Perce vowel harmony. *Language* 44:819–829.
- Jóhannsdóttir, Kristín, and Lisa Matthewson. 2008. Zero-marked tense: the case of Gitksan. In *Proceedings of NELS 37*, ed. E. Elfner and M. Walkow. Amherst, MA: GLSA.
- Johnson, Kyle. 1991. Object positions. *Natural Language and Linguistic Theory* 9:577–636.
- Johnson, Kyle. 1997. A review of *The Antisymmetry of Syntax*. *Lingua* 102:21–53.
- Julien, Marit. 2005. Possessor licensing, definiteness and case in Scandinavian. In *The function of function words and functional categories*, ed. Marcel den Dikken and Christina Tortora, 217–249. John Benjamins.
- Kachru, Yamuna. 1990. Experiencer and other oblique subjects in Hindi. In *Experiencer subjects in South Asian languages*, ed. Manindra Verma and K.P. Mohanan, 59–75. CSLI.
- Kamp, Hans. 1981. A theory of truth and semantic representation. In *Formal methods in the study of language*, ed. J. Groenendijk. Amsterdam: Mathematical Center.

- Kamp, Hans, and Uwe Reyle. 1993. *From discourse to logic*. Dordrecht: Kluwer Academic Publishers.
- Kaplan, Ron, and Joan Bresnan. 1982. Lexical-functional grammar: a formal system for grammatical representation. In *The mental representation of grammatical relations*, ed. J. Bresnan. MIT Press.
- Kayne, Richard S. 1989. Facets of Romance past participle agreement. In *Dialect variation and the theory of grammar*, ed. Paola Beninca, 85–104. Dordrecht, Holland: Foris Publications.
- Kayne, Richard S. 1994. *The antisymmetry of syntax*. Cambridge, Massachusetts: M.I.T. Press.
- Keen, Sandra. 1983. Yukulta. In *Handbook of Australian languages*, ed. RMW Dixon and Barry Blake, volume 3, 191–304. ANU Press.
- Keenan, Edward L., and Bernard Comrie. 1977. Noun phrase accessibility and universal grammar. *Linguistic Inquiry* 8:63–99.
- Kempchinsky, Paula. 1992. The Spanish possessive dative construction: θ -role assignment and proper government. In *Linguistic symposium on Romance languages 20*, ed. P. Hirschbuhler, 135–149.
- Kinyalolo, Kasangati K. W. 1991. Syntactic dependencies and the Spec-head agreement hypothesis in Kilega. Doctoral Dissertation, UCLA.
- Kiparsky, Paul. 1973. “Elsewhere” in phonology. In *A festschrift for Morris Halle*, ed. S. Anderson and P. Kiparsky, 93–106. Holt, Rinehart and Winston.
- Kissine, Mikhail. 2008. Why *will* is not a modal. *Natural Language Semantics* 16:129–155.
- Klein, Wolfgang. 1994. *Time in language*. London: Routledge.
- Klein, Wolfgang, Peng Li, and Henriette Hendriks. 2000. Aspect and assertion in Mandarin Chinese. *Natural Language and Linguistic Theory* 18:723–770.
- Kratzer, Angelika. 1977. What “must” and “can” must and can mean. *Linguistics and Philosophy* 1:337–355.
- Kratzer, Angelika. 1981. The notional category of modality. In *Words, worlds and contexts: new approaches in word semantics*, ed. H.-J. Eikmeyer and H. Reiser, 38–74. Berlin: de Gruyter.
- Kratzer, Angelika. 1991. Modality. In *Semantics: An international handbook of contemporary research*, ed. Arnim von Stechow and Dieter Wunderlich, 639–650. Walter de Gruyter.

- Kratzer, Angelika. 1996. Severing the external argument from its verb. In *Phrase structure and the lexicon*, ed. Johan Rooryck and Laurie Zaring, 109–137. Dordrecht, The Netherlands: Kluwer Academic Publishers.
- Kratzer, Angelika. 1998a. More structural analogies between pronouns and tenses. In *Proceedings of SALT VIII*. CLC Publications.
- Kratzer, Angelika. 1998b. Scope or pseudoscope? Are there wide-scope indefinites? In *Events and grammar*, ed. Susan Rothstein, 163–196. Dordrecht: Kluwer Academic Publishers.
- Kratzer, Angelika. 2009. Making a pronoun: Fake indexicals as windows into the properties of pronouns. *Linguistic Inquiry* 40:187–237.
- Kratzer, Angelika, and Junko Shimoyama. 2002. Indeterminate pronouns: The view from Japanese. In *Proceedings of the Tokyo conference on psycholinguistics*, ed. Yukio Otsu, volume 3, 1–25. Tokyo: Hituzi Syobo.
- Landau, Idan. 1999. Possessor raising and the structure of VP. *Lingua* 107:1–37.
- Landau, Idan. 2006. Severing the distribution of PRO from Case. *Syntax* 9:153–170.
- Landman, Fred. 1992. The progressive. *Natural Language Semantics* 1:1–32.
- Landman, Fred. 2000. *Events and plurality*. Kluwer Academic Publishers.
- Larson, Richard. 2002. The grammar of intensionality. Ms., SUNY Stony Brook.
- Legate, Julie Anne. 2002. Warlpiri: theoretical implications. Doctoral Dissertation, MIT.
- Legate, Julie Anne. 2003. Some interface properties of the phase. *Linguistic Inquiry* 34:506–516.
- Legate, Julie Anne. 2006. Split absolutive. In *Ergativity: emerging issues*, ed. Alana Johns, Diane Massam, and Juvenal Ndayiragije, 143–172.
- Legate, Julie Anne. 2008. Morphological and abstract case. *Linguistic Inquiry* 39:55–101.
- Leu, Thomas. 2008. The internal syntax of determiners. Doctoral Dissertation, New York University.
- Levin, Beth, and Malka Rappaport Hovav. 1995. *Unaccusativity*. Cambridge, Massachusetts: MIT Press.
- Lin, Jo-Wang. 2006. Time in a language without tense: the case of Chinese. *Journal of Semantics* 23:1–53.
- Lyons, Christopher. 1999. *Definiteness*. Cambridge University Press.
- Mackenzie, Sara, and Bezalel Elan Drescher. 2004. Contrast and phonological activity in the Nez Perce vowel system. In *Proceedings of BLS 29*, ed. P. Nowak et al.

- Maling, Joan. 1984. Non-clause-bounded reflexives in modern Icelandic. *Linguistics and Philosophy* 7:211–241.
- Marantz, Alec. 1984. *On the nature of grammatical relations*. Cambridge, Massachusetts: MIT Press.
- Marantz, Alec. 1991. Case and licensing. In *Eastern States Conference on Linguistics*, ed. Germán Westphal, Benjamin Ao, and Hee-Rahk Chae, 234–253. University of Maryland, Baltimore: Ohio State University.
- Marantz, Alec. 1997. No escape from syntax: Don't try morphological analysis in the privacy of your own lexicon. In *University of Pennsylvania working papers in linguistics vol. 4.2*, ed. Alexis Dimitriadis, Laura Siegel, Clarissa Surek-Clark, and Alexander Williams, 201–225. University of Pennsylvania.
- Marantz, Alec. 2010. Locality domains for contextual allophony in words. Talk at MIT, March 2010.
- Markman, Vita. 2009. On the parametric variation of case and agreement. *Natural Language and Linguistic Theory* 27:379–426.
- Massam, Diane. 2001. Pseudo noun incorporation in Niuean. *Natural Language and Linguistic Theory* 19:153–197.
- Matthewson, Lisa. 1999. On the interpretation of wide-scope indefinites. *Natural Language Semantics* 7:79–134.
- Matthewson, Lisa. 2001. Quantification and the nature of crosslinguistic variation. *Natural Language Semantics* 9:145–189.
- Matthewson, Lisa. 2004. On the methodology of semantic fieldwork. *International Journal of American Linguistics* 70:369–415.
- Matthewson, Lisa. 2006. Temporal semantics in a superficially tenseless language. *Linguistics and Philosophy* 29:673–713.
- Matthewson, Lisa, Hotze Rullmann, and Henry Davis. 2005. Modality in St'at'imcets. In *MIT Working Papers on Endangered and Less Familiar Languages*.
- Matushansky, Ora. 2006. Head movement in linguistic theory. *Linguistic Inquiry* 37:69–109.
- McCawley, James D. 1968. Lexical insertion in a transformational grammar without deep structure. In *Proceedings of CLS 4*.
- McFadden, Thomas. 2004. The position of morphological case in the derivation: a study on the syntax-morphology interface. Doctoral Dissertation, University of Pennsylvania.
- Menendez-Benito, Paula. 2005. The grammar of choice. Doctoral Dissertation, University of Massachusetts Amherst.

- Moltmann, Friederike. 1997. Intensional verbs and quantifiers. *Natural Language Semantics* 5:1–52.
- Morvillo, Anthony. 1891. *Grammatica linguae numipu. Auctore presbytero missionario e Soc. Jesu in Montibus Saxosis*. Desmet, ID: Indian Boys' Press.
- Morvillo, Anthony. 1895. *A dictionary of the Numipu or Nez Perce language. Part I, English-Nez Perce*. St Ignatius Mission, MT: St Ignatius Mission Print.
- Morvillo, Anthony. n.d. A dictionary of the Nez Perce language. Part II, Nez Perce-English. Ms, Gonzaga University Archives.
- Morvillo, Anthony, and Joseph Mary Cataldo. 1888. *Paradigma verbi activi, lingua numpu [sic] vulgo nez-perce*. Typis Missionis SS Cordis.
- Nunes, Jairo. 2004. *Linearization of chains and sideward movement*. MIT Press.
- O'Connor, M.C. 1992. *Topics in Northern Pomo grammar*. Outstanding dissertations in linguistics. Garland.
- O'Connor, M.C. 2007. External possession and utterance interpretation: a crosslinguistic exploration. *Linguistics* 45:577–613.
- O'Herin, Brian. 2002. *Case and agreement in Abaza*. SIL International.
- Parsons, Terence. 1990. *Events in the semantics of English: A study in subatomic semantics*. Cambridge, Massachusetts: MIT Press.
- Partee, Barbara. 1973. Some structural analogies between tenses and pronouns in English. *Journal of Philosophy* 70:601–609.
- Partee, Barbara H. 1974. Opacity and scope. In *Semantics and philosophy*, ed. M. Munitz and P. Unger, 81–101. NYU Press.
- Partee, Barbara H. 1987. Noun phrase interpretation and type-shifting principles. In *Studies in discourse representation theory and the theory of generalized quantifiers*, ed. D. de Jongh & M. Stokhof J. Groenendijk, 115–143. Dordrecht: Foris.
- Payne, Doris, and Immanuel Barshi. 1999. External possession: what, where, how, and why. In *External possession*, ed. Doris Payne and Immanuel Barshi, 3–31. Amsterdam/Philadelphia: John Benjamins.
- Perlmutter, David M. 1970. On the article in English. In *Progress in linguistics*, ed. Manfred Bierwisch and Karl E. Heidolph, 233–248. The Hague: Mouton.
- Perlmutter, David M. 1983. *Studies in relational grammar 1*. Chicago, Illinois: The University of Chicago Press.
- Pesetsky, David. 1995. *Zero syntax*. Cambridge, Massachusetts: MIT Press.

- Pesetsky, David, and Esther Torrego. 2001. T-to-C movement: Causes and consequences. In *Ken Hale: A life in language*, ed. Michael Kenstowicz, 355–426. MIT Press.
- Pesetsky, David, and Esther Torrego. 2004. Tense, Case, and syntactic categories. In *The syntax of time*, ed. J. Guéron & J. Lecarme, 495–537. MIT Press.
- Phinney, Archie. 1934. *Nez Percé texts*. Columbia University Contributions to Anthropology. Columbia University Press.
- Polinsky, Maria. 2005. Antipassive constructions. In *The world atlas of linguistic structures*, ed. M. Haspelmath et al., 438–441. Oxford: Oxford University Press.
- Pollock, Jean-Yves. 1989. Verb movement, UG and the structure of IP. *Linguistic Inquiry* 20:365–424.
- Potts, Christopher. 2002. No vacuous quantification constraints in syntax. In *NELS 32*. GLSA.
- Prince, Alan, and Paul Smolensky. 1993. Optimality theory: Constraint interaction in generative grammar. RuCCS technical report, Rutgers University Center for Cognitive Science, Piscataway, NJ.
- Pylkkänen, Liina. 2002. Introducing arguments. Doctoral Dissertation, MIT.
- Quine, W.V.O. 1960. *Word and object*. Cambridge, MA: MIT Press.
- Ravinsky, Christine. 2007. Possessor raising in Nuu-chah-nulth. *Canadian Journal of Linguistics* 52:167–184.
- Reinhart, Tanya. 1976. The syntactic domain of anaphora. Doctoral Dissertation, Massachusetts Institute of Technology.
- Reinhart, Tanya. 1983. *Anaphora and semantic interpretation*. Chicago, Illinois: University of Chicago Press.
- Reinhart, Tanya. 1997. Quantifier scope: How labor is divided between QR and choice functions. *Linguistics and Philosophy* 20:335–397.
- Reuland, Eric, ed. 2000. *Arguments and case: explaining Burzio's generalization*. John Benjamins.
- Rezac, Milan. 2004. Elements of cyclic syntax: Agree and Merge. Doctoral Dissertation, University of Toronto.
- Rezac, Milan. 2008. Phi-agree and theta-related case. In *Phi theory*, ed. Daniel Harbour, David Adger, and Susana Bejar. Oxford University Press.
- Richards, Norvin. 2001. *Movement in language: interactions and architectures*. Oxford: Oxford University Press.

- Richards, Norvin. 2010. *Uttering trees*. MIT Press.
- Rigsby, Bruce. 1965. Linguistic relations in the southern plateau. Doctoral Dissertation, University of Oregon.
- Rigsby, Bruce, and Noel Rude. 1996. A sketch of Sahaptin, a Sahaptian language. In *Handbook of North American Indians*, ed. Ives Goddard, volume 17, Languages, 666–692. Washington: Smithsonian Institution.
- Rigsby, Bruce, and Michael Silverstein. 1969. Nez Perce vowels and Proto-Sahaptian vowel harmony. *Language* 45:45–59.
- Ritter, Elizabeth. 1991. Two functional categories in the noun phrase: evidence from Modern Hebrew. In *Syntax and semantics 25*, ed. Stephen Anderson and Susan D. Rothstein, 37–62.
- Rizzi, Luigi. 1990. *Relativized minimality*. Cambridge, Massachusetts: MIT Press.
- Rizzi, Luigi. 1997. The fine structure of the left periphery. In *Elements of grammar*, ed. Liliane Haegeman, 281–337. Dordrecht: Kluwer Academic Publishers.
- Rosen, Carol G. 1984. The interface between semantic roles and initial grammatical relations. In *Studies in relational grammar 2*, ed. David M. Perlmutter and Carol G. Rosen, 38–77. University of Chicago Press.
- Rude, Noel. 1982. Promotion and topicality of Nez Perce objects. In *Proceedings of the annual meeting of the Berkeley Linguistics Society*, volume 8, 463–483.
- Rude, Noel. 1985. Studies in Nez Perce grammar and discourse. Doctoral Dissertation, University of Oregon.
- Rude, Noel. 1986a. Discourse pragmatic context for genitive promotion in Nez Perce. *Studies in Language* 10:109–136.
- Rude, Noel. 1986b. Topicality, transitivity, and the direct object in Nez Perce. *International Journal of American Linguistics* 52:124–153.
- Rude, Noel. 1987. Some Sahaptian-Klamath linguistic correspondences. *Kansas Working Papers in Linguistics* 12:67–83.
- Rude, Noel. 1992. Word order and topicality in Nez Perce. In *Pragmatics of word order flexibility*, ed. D. Payne, 193–208. John Benjamins.
- Rude, Noel. 1997. On the history of nominal case in Sahaptian. *International Journal of American Linguistics* 63:113–143.
- Rude, Noel. 1999. External possession in Sahaptian. In *External possession*, ed. D. Payne and I. Barshi, 403–427. John Benjamins.

- Rullmann, Hotze. 2004. First and second person pronouns as bound variables. *Linguistic Inquiry* 35:159–168.
- Rullmann, Hotze, Lisa Matthewson, and Henry Davis. 2008. Modals as distributive indefinites. *Natural Languages Semantics* 16:317–357.
- Sadock, Jerrold M. 1980. Noun incorporation in Greenlandic: A case of syntactic word formation. *Language* 56:300–319.
- Safir, Ken. 2004. *The syntax of anaphora*. Oxford University Press.
- Sag, Ivan. 2007. Remarks on locality. In *Proceedings of the HPSG07 Conference*, ed. S. Müffer, 394–414.
- Saito, Mamoru. 2001. Movement and θ -roles: a case study with resultatives. In *The proceedings of the second Tokyo conference on psycholinguistics*, ed. Yukio Otsu. Hituzi Syobo.
- Sapir, Edward. 1929. Central and North American languages. *Encyclopaedia Britannica, 14th edition* 5:138–141.
- Sauerland, Uli. 1998. The meaning of chains. Doctoral Dissertation, Massachusetts Institute of Technology, Cambridge, Massachusetts.
- Sauerland, Uli. 2004. The interpretation of traces. *Natural Language Semantics* 12:63–127.
- Schwarz, Florian. 2007. On needing propositions and looking for properties. In *Proceedings of SALT XVI*.
- Schwarzschild, Roger. 2002. Singleton indefinites. *Journal of Semantics* 19:289–314.
- Scott, Gary-John. 2002. Stacked adjectival modification and the structure of nominal phrases. In *Functional structure in DP and IP: the cartography of syntactic structures*, ed. G. Cinque, 91–120. Oxford University Press.
- Seely, Jonathan. 1977. An ergative historiography. *Historiographia Linguistica* IV:191–206.
- Seiter, William. 1980. *Studies in Niuean syntax*. New York: Garland Publishing.
- Shaer, Benjamin. 2003. Towards the tenseless analysis of a tenseless language. In *Proceedings of SULA 2*, 139–156.
- Shibatani, Masayoshi. 1977. Grammatical relations and surface cases. *Language* 53:789–807.
- Singh, Mona. 1998. On the semantics of the perfective aspect. *Natural Language Semantics* 6:171–199.
- Smith, Carlota S. 1991. *The parameter of aspect*. Kluwer.

- Song, Jae Jung. 2008. Periphrastic causative constructions. In *The world atlas of language structures*, ed. Martin Haspelmath, Matthew S. Dryer, David Gil, and Bernard Comrie. Max Planck Digital Library.
- Spalding, H.H. 1871. *Matthewnim taaiskt (The gospel according to Matthew)*. New York: American Bible Society.
- Starke, Michal. 2001. Move dissolves into Merge: a theory of locality. Doctoral Dissertation, University of Geneva.
- von Stechow, Arnim. 1996. The different readings of *wieder* “again”: A structural account. *Journal of Semantics* 13:87–138.
- Stechow, Arnim von. 2003. Feature deletion under semantic binding: tense, person and mood under verbal quantifiers. In *Proceedings of NELS 33*, ed. Makoto Kadowaki and Shigeto Kawahara, 379–404. Amherst: GLSA.
- Szabolcsi, Anna. 1984. The possessor that ran away from home. *The Linguistic Review* 2:89–102.
- Szabolcsi, Anna. 1987. Functional categories in the noun phrase. In *Approaches to Hungarian 2: theories and analyses*, ed. I. Kenesei, 167–191. Szeged: Jozsef Attila University.
- Takahashi, Shoichi. 2006. Decompositionality and identity. Doctoral Dissertation, MIT.
- Tellier, Christine. 1991. *Licensing theory and French parasitic gaps*. Dordrecht: Kluwer Academic Publishers.
- Thraínsson, Höskuldur. 2007. *The syntax of Icelandic*. Cambridge University Press.
- Tiberius, Carole, Greville G Corbett, and Julia Barron. 2009. Agreement: A bibliography. http://www.surrey.ac.uk/LIS/SMG/projects/agreement/agreement_bib_unicode.htm.
- Wharram, Douglas. 2003. On the interpretation of (un)certain indefinites in Inuktitut and related languages. Doctoral Dissertation, University of Connecticut.
- Williams, Edwin. 1981. On the notions ‘lexically related’ and ‘head of a word’. *Linguistic Inquiry* 12:245–274.
- Wiltschko, Martina, and Elizabeth Ritter. 2005. Anchoring events to utterances without tense. In *Proceedings of WCCFL 25*. Cascadilla.
- Winter, Yoad. 1997. Choice functions and the scopal semantics of indefinites. *Linguistics and Philosophy* 20:399–467.
- Wolf, Matthew. 2008. Optimal interleaving: serial phonology-morphology interaction in a constraint-based model. Doctoral Dissertation, University of Massachusetts Amherst.
- Woolford, Ellen. 1997. Four-way case systems: Ergative, nominative, objective and accusative. *Natural Language and Linguistic Theory* 15:181–227.

- Woolford, Ellen. 1999. More on the anaphor agreement effect. *Linguistic Inquiry* 30:257–287.
- Woolford, Ellen. 2006. Lexical case, inherent case and argument structure. *Linguistic Inquiry* 37:111–130.
- Zaenen, Annie, Joan Maling, and Hoskuldur Thráinsson. 1985. Case and grammatical functions: the Icelandic passive. *Natural Language and Linguistic Theory* 3:441–483.
- Zamparelli, Roberto. 1995. Layers in the determiner phrase. Doctoral Dissertation, University of Rochester.
- Zimmer, Karl. 1967. A note on vowel harmony. *International Journal of American Linguistics* 33:166–170.
- Zimmermann, Malte. 2007. Overt existential closure in Bura (Central Chadic). In *SALT XVII*, ed. T. Friedman and M. Gibson, 333–350. Ithaca, NY: Cornell University.
- Zimmermann, Thomas Ede. 1992. On the proper treatment of opacity in certain verbs. *Natural Language Semantics* 1:149–180.
- Zimmermann, Thomas Ede. 2005. Coercion versus indeterminacy in opaque verbs. In *Intensionality*, ed. Reinhard Kahle. A K Peters.
- Zimmermann, Thomas Ede. 2006. Monotonicity in opaque verbs. *Linguistics and Philosophy* 29:715–761.
- Zucchi, Alessandro. 1999. Incomplete events, intensionality and imperfective aspect. *Natural Language Semantics* 7:179–215.
- Zwicky, Arnold M. 1971. More on Nez Perce: an alternative analysis. *International Journal of American Linguistics* 37:122–125.