PRELIMINARY GRAMMAR OF AUCA

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PRELIMINARY GRAMMAR OF AUCA

by

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PREFACE

A twofold purpose underlies this work: first and foremost, initial presentation of Auca grammar, hitherto undescribed; and secondarily, exploration of the generative potential of a modified tagmemic model with a transformational component. While it is manifestly impossible to explicate native speaker intuition for an acquired language, and thus to produce an inerrantly generative grammar, yet it is possible to explicate the investigator's intuition to the extent of his own competence in exploiting grammatical relationships which pertain not to his own, but to the acquired language.

Even while making the above observation, a gap is acknowledged between the potential and the actual. This Auca grammar does not purport to be inerrantly generative, even of sentences which the investigator might produce. The aim has been, rather, in this initial investigation, to provide formulae which reveal major syntactic relationships as a framework on which a more detailed grammar may later account for actual restrictions necessary to the generation of specific utterances.

Field work for this study was made under the auspices of the Summer Institute of Linguistics. Although my acquaintance with the Auca people and language began in 1955, extensive field work was not possible until 1963 through 1965, during which time a total of nine months was spent in the Auca village of Tewaeno, in the company of Miss Rachel Saint, also of the Summer Institute of Linguistics.

Materials on which this grammar is based include three concordances produced by the Data Processing Project of the Summer Institute of Linguistics, made possible by a grant from the National Science Foundation. Concordances were produced at the University of Oklahoma Computer Laboratory. The word concordance includes approximately 20,000 entries of 6000 types. A morph, concordance alphabetized on the right context, has 60,000 entries and 126 types. In addition, by special request in view of the relevance of final verb suffixation to Auca sentence structure, an absolute run was made with alphabetization on the left context to the tenth character.

The grammar is not confined to the concordance as a corpus, however, since other text, vocabular, and paradigmatic materials were consulted freely, and appeal was frequently made to the author's own intuition, however incomplete that may be.

The writing of this dissertation was supported in part by a Fellowship for Advanced Graduate Studies in Linguistics from the American Council of Learned Societies. A grant for field work from Indiana University enabled me to spend a summer in Ecuador between two years of graduate study.

In addition to many hours of direct language teaching and profitable linguistic discussion, Miss Rachel Saint carefully provided me with copies of extensive Auca vocabulary, grammatical materials, and an abundance of taped text materials, the majority with transcriptions. My debt to her is perhaps even greater than I realize, since my whole orientation into the language was guided by her and by her well-trained language helper, Dayuma.

I also acknowledge with gratitude the substantial contribution of Mrs. Elisabeth Elliot, of Christian Missions in Many Lands, who freely placed at my disposal her copious linguistic notes and carefully filed information, as well as three valuable transcribed texts.

For my introduction into linguistics and especially for encouragement to continue therein, thanks are due to Dr. Kenneth L. Pike, President of the Summer Institute of Linguistics. Other members of the Institute who have helped to shape my theoretical outlook and whose critical judgment on previous manuscripts has contributed to the present thesis are Miss Olive Shell, Dr. Viola Waterhouse, and Dr. Esther Matteson. Dr. Robert E. Longacre has provided many insights and has kindly made available certain unpublished manuscripts.

My personal thanks go to Miss Grace E. Mitchell, formerly of the Indiana University Library staff, for innumerable kindnesses during the years of my graduate study.

For careful typing of the manuscript, as well as for steady counsel and encouragement through the years, my sincere appreciation goes to Miss Dorothy Huff.

I am grateful to Professor Carl F. Voegelin, Chairman of my Research Committee, for expert guidance in my writing; to Professors Fred W. Householder, Carleton E. Hodge, and John R. Krueger (whose absence from the campus prevented his continuing on the committee), who have given generously of their time and counsel; and to Professor Andreas Koutsoudas, who graciously accepted the responsibility of service on the committee without the corresponding privilege of sharing in formative stages of the manuscript.

Above all, I am thankful to God, through our Lord Jesus Christ, who alone has given me the strength for this undertaking. It is to the glory of God among monolingual tribespeople that this grammar is dedicated.

0. INTRODUCTION

Theoretical orientation for this grammar is primarily tagmemic, with modifications aimed at accounting for linguistic competence of native speakers. Rules are incorporated where most fundamentally useful, viz., to account for non-congruence between semantic and syntactic structures and between syntactic and phonemic structures.

My first basic assumption is that native linguistic competence exploits three areas ("hierarchies" in the tagmemic model)[1] of grammar, each being structured in ways relevant to the communication process. These are semantics, syntax, and phonology, three hierarchies not quite equivalent to those posited by Pike nor to Crawford's modification of Pike's proposal,[2] but probably equivalent to the three recognized by Longacre,[3] although details vary.

In addition, Chomsky's view of the three as necessarily integrated "components" (Chomsky 1965.16) has influenced the theoretical base of this Auca grammar, although the grammar is not restricted in form to a set of rules. Autonomy of semantics is maintained as a principle, such that the relationship of the semantic component to the syntactic is necessarily one of input, mediated via lexico-syntactic rules (cf. Section 1, below), and not an "interpretive" relationship such as Chomsky proposes.

Autonomy of phonology is likewise maintained as a principle, the morphophonemic output of the syntactic component being mapped onto the phonological component via morphophonemic rules.

To my assertion that structure exists in all three areas, I would add that components of that structure are functionally-related constructions (syntagmemes) which comprise functionally-defined sets (tagmemes) in syntagmatic relationship. It is often the case, but not necessarily so, that functional specification of set membership (or at least of subset membership) coincides with denumerability via features of one or more parameters in paradigmatic, or matrix relationship.

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[1]Cf. Pike (1967.8-9) where he characterizes the tagmemic theory as trying "to specify characteristics of units (contrast, variation, distribution–cf. feature mode, manifestation mode, distribution mode) as related to a three-way hierarchical relationship (lexicon, phonology, grammar). Insistence on three hierarchies which are partially independent while also partially interlocking continues to be necessary in the present climate of opinion..."

[2]Cf. Crawford (1963.183-84). "The four hierarchies constitute a doubly bipartite system. There are two hierarchies of segment units, the phonemic and lexical (morphemic) hierarchies, and two hierarchies of tagmeme units, the tagmemic (grammatical) and phonotagmemic hierarchies. Thus the basic division in language structure is between the lexical hierarchy and its parallel tagmemic hierarchy on the one hand, and the phonemic hierarchy and its parallel phonotagmemic hierarchy on the other. The basic division is between a lexico-grammatical area and a phonological area."

[3]Cf. Longacre (1964.5). "...one axis of reference is the division of language into phonology, grammar, and lexicon."

Further, members of manifesting sets are often complex in the sense of Fillmore's "intermediate units".[4] Each such complex unit is here regarded as an included construction, potentially of the same type as the embedding construction, but commonly of a different type. Included constructions are, in turn, syntagmatic strings of function-sets. Although I follow Longacre (1965.65) in likening the tagmeme to a function defined on a set, I do not accept his "level" orientation[5] in its strictest sense. Rather, Sentence is here conceived as the grammatical construction par excellence, the one syntactically-relevant "level". Included constructions are, then, distinguishable according to type (determined by internal functional relationship and distribution potential) and not according to level, where "level" is construed as a primitive.

Theoretical centrality of Sentence reflects Pike's original presentation of tagmemics,[6] where the sentence syntagmeme is regarded as "*the* verbal behavioreme" (emphasis mine).

For sample generative grammars (in extremely restricted areas) patterned according to the original tagmemic model, see Hart (1957), and Peeke (1962); my assumptions are still basically the same as in the 1962 article, although notation is simplified and the model is adapted in ways described in this introduction.

Application of my modified tagmemic model to Auca grammar focuses, then, on specification, according to formulae, of well-formed Auca sentences. Physical order of strings generated according to this model is subject to reordering rules of lexico-syntactic or morphophonemic status.

Even while viewed as subordinate to Sentence, clause structure must be described, for specification of internal composition is crucial to sentence identification. Moreover, capacity to generate any sentence depends on capacity to generate every construction

[4]Cf. Fillmore (1962.106). "The formation-rules are constructed to specify the distribution of the basic units of the theory within some larger entity, the distribution of these within some still larger entity, and so on until a level is reached corresponding to the elements of the domain. For this purpose the F-rules will be ordered and will introduce what we have been calling *intermediate units*..."

[5]Longacre (1965.72). "The notion of structural levels arranged in explicit systemic hierarchy is another basic concept of tagmemics. Syntagmeme and level are correlative concepts: the former is defined (as already noted) as a functionally contrastive string on a given level of hierarchical structuring. This correlativity of syntagmeme and level must be added to the correlativity of function and set (within the tagmeme) and the correlativity of tagmeme and syntagmeme."

[6]Cf. Pike (1967.133). This view of Sentence is currently in disuse; witness Pike's footnote 4 (ibid.) where he presents the contemporary point of view by redefining "sentence syntagmeme" as "a syntagmeme on the sentence level".

Cf. also Pike (1964b), where Weinreich's discussion includes disappointment over Pike's "step backward" through "insistence on autonomous descriptions of the word level, the phrase level, the clause level, etc."

Introduction of the "level" concept into tagmemics may, in fact, account for failure in generative power of specific language grammars in that the goal of accounting for speaker capacity to generate sentences has been unwittingly subordinated to taxonomic display of "x-level tagmemes".

included within that sentence. Complexity of clause structure in contrast to simplicity of sentence structure should not be misleading. The case is that the construction which is ordinarily labeled "Sentence" is, in order to evade redundancy, stripped of all that relates primarily to included or inclusive constructions. That which remains as obligatorily relevant to simple Sentence is the syntagmatic relationship among the functions, SUBJECT (manifested by Substantive-s), PREDICATION (manifested by some type of Clause), and PREDICATION-TYPE (manifested by one of a set of tense-mode markers).

Adoption of such a model for Sentence has far-reaching implications throughout the grammar; some of these implications are considered in introductory sections of succeeding chapters (cf. Sections 1.0, 2.0, 2.3.0, and 3.0).

Chapter 1 establishes the place of Sentence in Discourse, as viewed by this model, and provides for mapping onto Auca sentences the constraints imposed by discourse. In Chapter 2, the classificatory system of Auca sentences if presented. Chapter 3 presents the structure of these sentences via formulae, with derivational rules. Permutation rules are presented briefly in Chapter 4. Chapter 5 presents a supplement to the grammar in the form of a partial lexicon.

Immediately following in the Introduction, Section 0.1 presents minimum background information relevant to this study of the Auca language; and Section 0.2 offers a preview of Auca sentence structure, anticipating the presentation which is developed later, in Chapter 3.

0.1 Background information The Auca language, called indigenously waodãdi apæ̈dekã 'people's speech', is spoken by a few hundred Indians whose hunting rights comprise approximately one hundred square miles of rain forest in eastern Ecuador.[7] Auca territory, well-defined by mutual mistrust (on the part of Aucas and of outsiders), is bounded to the north and south, respectively, by the Napo and Curaray rivers; it embraces the first parallel, south, from approximately 76° to 77° longitude.

Auca is listed by McQuown (1955) as being equivalent to Ssabela, a single, unclassified, and extinct language of South America. Published linguistic evidence prior to 1949 was limited to a word list of some thirty entries, under the title of Ssabela (Tessman 1930.303). That short list pertains unquestionably to the Auca language described here. Tessman does, in fact, point out (1930.298) that Ssabela is among the tribes called "auka" (savage) by neighboring Quichua speakers.

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[7] The most extended ethnographic study available concerning the Auca Indians is included (pp. 298-303) in Tessman's *Die Indianer nordost-Perus*, 1930. Both Mason (1950) and Steward and Métraux (1948) rely principally upon Tessman's account.

More recent materials, in popular but reliable form, appear in Blomberg (1956), in Elliot (1961), and in Wallis (1965).

Tessman refers to three groups, the Tihuakuna, the Schiripuno, and the Tiputini, but since he was unable to offer linguistic evidence, the names reveal nothing more than that the Auca were located at that time on the Tivacuno, the Shiripuno, and the Tiputini rivers in Ecuador. Nevertheless, these names persist in the scant literature as alternate names for the tribe.

Confusion of Auca with Awishiri possibly stems from the local use of both terms to refer to any hostile group. A short Awishiri (Auschiri, Auishiris, Abijiras, Avigiras, Auxiras, Abiras, Ahuishiri, Ahuisiri, Avixiras) word list provided by Tessman (1930.486) shows clear Záparo affiliation, which the Ssabela wordlist does not. Thus, while some later compilers (cf. Steward and Métraux 1948.629) have correctly included Awishira as Zaparoan, there is no basis for the assumption that Ssabela, too, is Zaparoan (cf. Greenberg's classification, in Steward and Faron 1959).

No comparative study has been made of languages in the area, but recent descriptive analyses of Auca and of Zaparo (see Pike 1964a and articles by Saint and Pike, and by Peeke) show little structural or phonological similarity. No cognates are apparent in extensive unpublished word lists.

The language is not extinct, although there remain only a few hundred speakers, nor is it being replaced by Quichua, as some have asserted. Isolation was so complete that only two obvious loanwords were found upon initial entrance into the area in 1958.

0.2 Preview of sentence structure. Because the actual description of sentence structure (Chapter 3) is preceded by two full chapters which provide necessary background information, orientation into the general approach is here provided by way of introduction.

Briefly, and without pausing to explain taxonomy and nomenclature peculiar to this grammar, the structure of a simple Assertive Sentence, Sentence (1), is previewed– first, according to tagmemic formulae,[8] and then in branching diagram (see Figure I).

(1) ææ! tõbẽkã wããdã pĩkã ate, õdõke pæ wẽdete, bãdõbaĩ kædãdipa. 'Ah! seeing that her mother doesn't like it, they simply do it thus without discussion.' (Reference is to a wedding.)

Formula (1)
Assertive Sentence = ±INTRODUCTORY:Interjection
±SETTING:Prior Subordinate Sentence
±SUBJECT:third-person-plural-s +PREDICATION:Transitive-Clause
+PREDICATION-TYPE:assertive final

F (2)
Prior Subordinate Sentence = +SUBJECT:Substantive-s

[8] Representation is according to tagmemic formula, where +Function:set is to be read 'Obligatory Function is manifested by set.' The symbol "±" indicates optionality of a function within a construction type, although the function is present in this particular illustration.

+PREDICATION:intransitive verb stem
+PREDICATION-TYPE:prior subordinate

F (3)
Transitive Clause = ±Circum:Gerund
±Manner:demonstrative adverb
+Predicate: transitive verb stem

F (4)
Gerund = +PREDICATION:Intransitive Clause
+PREDICATION-TYPE:gerundial

F (5)
Intransitive Clause = ±Manner:adverb
+Predicate:Intransitive Verb Collocation

F (6)
Substantive-s = +Substantive:Possessed Noun Phrase
+subject marker:third-person-singular-s

F (7)
Possessed Noun Phrase = +Possessor: third-person-singular pronoun
+Item:noun-kin

F (8)
Interjection = +Axis:interjection word
+Relator:exclamatory intonation

Selection rules follow, to indicate the morphophonemic shape and gloss of terminal elements.

Rule (a)
Intransitive Verb Collocation ⟶ pæ wẽde 'to keep one's mouth shut'

Collocation of ideophones such as pæ with wẽde, is always restricted to specific verbs or small sets of verbs; this information must appear in the lexicon.

R (b)
intransitive verb stem ⟶ pī 'to be angry'

R (c)
transitive verb stem ⟶ kæ 'to do'

R (d)
noun-kin ⟶ wããdã 'mother'

R (e)
third-person-singular pronoun ⟶ tōbēkā 'she'

R (f)
adverb ⟶ ōdōke 'simply'

R (g)
demonstrative adverb ⟶ bādōbaĭ 'thus'

R (h)
interjection word ⟶ ææ 'ah'

R (i)
assertive final ⟶ person-pa. 'assertive final'

R (j)
prior subordinate ⟶ person ate, 'seeing' or 'after'

R (k)
gerundial ⟶ -te, 'ing,'

R (l)
third-person-plural-s ⟶ dādi-s 'they'

R (m)
third-person-singular-s ⟶ kā-s 'she'

R (n)
exclamatory intonation ⟶ -! 'exclamatory'

Phrase structure of Sentence (1) is displayed in Figure I. In branching diagrams of tagmemic formulae, branches specify function, and are so labeled, while labeled nodes specify manifesting set.[9]

The terminal string for Sentence (1) is ææ! tōbēkā wāādā kā-s pĭ person ate, dādi-s ōdōke pæ wēdete, bādōbaĭ kæ person-pa.

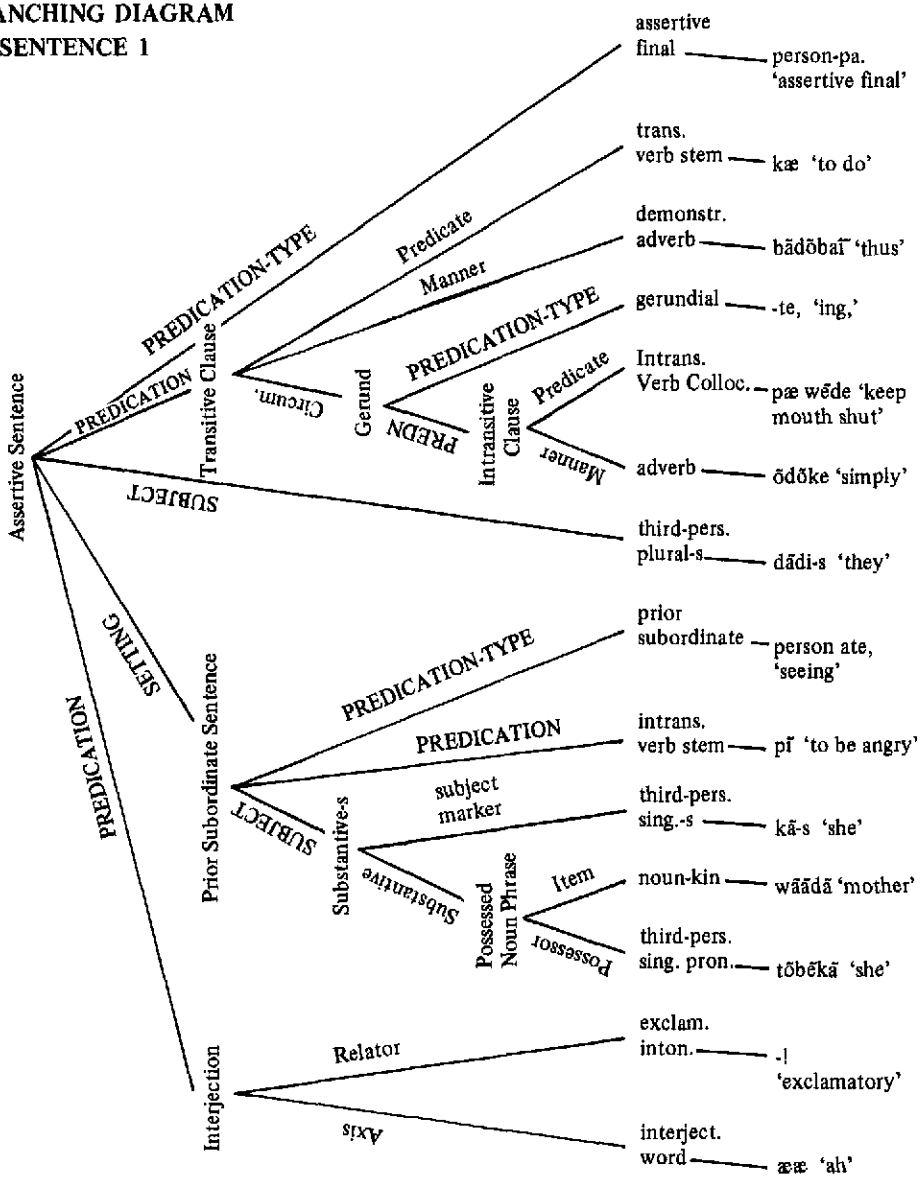
Subject markers, marked '-s' in the terminal string, and tense-mode sequences which are marked for '-person' are subject to a permutation rule which is recursively applicable as long as instances of the defined sequence may be found.

Obligatory Permutation Rule a.
X A-s Y B person-C Z ⟹ X Y BAC Z, where X, Y, Z, and/or C may be null,

[9] In utilizing this type of branching representation, I follow Longacre's assumptions and demonstration; cf. his 1967 mimeo where (p. 4) he states: "Branches represent tagmemes (an inherently relational notion) while nodes represent exponents of tagmemes (syntagmemes and morphemes)..."

FIGURE I

BRANCHING DIAGRAM
OF SENTENCE 1



and where Y may not include a repetition of A-s.

The second stipulation is necessary in case the subject of a matrix sentence precedes that of an embedded sentence. (An example of this may be found in Sentence (3), Chapter 1, below.)

Applying Permutation Rule a, we rewrite the subordinate clause as follows:

tõbẽkã wããdã kã–s pĩ person ate, ⟹ tõbẽkã wããdã pĩkã ate,

A second application of the permutation rule must be made to the principal clause, as follows:

dãdi–s õdõke pæ wẽdete, bãdõbaĩ kæ person-pa. ⟹ õdõke pæ wẽdete, bãdõbaĩ kædãdipa.

Presentation of the above illustration would be greatly modified, were it intended to include intimations from discourse or to provide for concord restrictions according to the method described in Chapter 1, or to specify the place of these principal and subordinate sentences in the set of all sentence types according to Chapter 2. Subsequent illustrations exemplify these facets of the description as they are developed.

CHAPTER 1

DISCOURSE CONSTRAINTS ON SENTENCE STRUCTURE

Discourse is here viewed from Sentence perspective as if each sentence represented one of a sequence of ACTIONS in a drama whose elements are SCENE, TIME, PROPS, SOUND EFFECTS, ROLE, ACTION-TYPE, and INTERLUDE. These elements are represented as abstract discourse functions manifested by sets of features which are directly relevant to the syntactic construction, Sentence. Features of a given discourse type must therefore be mapped onto each sentence generated in context of that type of discourse.

The following representation is a physically unordered list of obligatory and optional functions in Auca Discourse:

+SCENE:Orientation ±PROPS:Non-person
± SOUND-EFFECTS:Paralinguistics +TIME:Tense 9000
+ROLE:Person 900 +ACTION-TYPE:Mode 90099
± FOCUS:Reaction .999 ±INTERLUDE:Interruption

The decimal numbering system introduced here to specify certain sets is designed for mapping features of discourse onto paradigmatic sets of tense-mode markers designated according to a correlated system (see Section 2.2, especially Table IV). Discourse features of Tense are represented by numbers in millenium place, Person features by numbers in century place, Mode features by those in myriad, decade, and digit places, and Interruption features by those in decimal place.

Thus, in Sentence formulae, tense-mode markers which bear these features may be represented by simple juxtaposition of representative numbers. The primary advantage of such representation is for use in composite formulae which are capable of generating diverse sentences or sentence types. However, the system of juxtaposed numbering also allows for abbreviated representation of specific tense-mode sequences in the phrase structure of particular sentences.

Turning again to Sentence (1) (see Section 0.2), we note that manifestations of PREDICATION-TYPE may be represented as follows:

In Formula (1), "+PREDICATION-TYPE:assertive-final" may be written as "+PREDICATION-TYPE:801.003". Reference to Table IV, Section 2.2, will indicate to the reader that this must be rewritten as-{pgn-8} 'person' + -pa 'assertive' + -pa 'assertive' + -. 'final juncture'.

In Formula (2), "+PREDICATION-TYPE:prior subordinate" is to be written as "+PREDICATION-TYPE:800 2x.203". 800 2x.203 must be rewritten as {pgn-8} 'person' + ate, 'see, gerundial, medial juncture'. 2x refers to the auxiliary a- 'see', from a list presented in Section 2.2.

In Formula (4), "+PREDICATION-TYPE:gerundial" is represented as

"+PREDICATION-TYPE:.203", which is -te, 'gerundial, medial juncture'.

A further example, Sentence (2), may be cited in order to place the use of this numbering system in perspective.

(2) badã õdaẽka wodi ĩkãte bõgaẽkægadãĩpa. 'Mother used to carry the late Onaenka in her arms.'

Formula (1)
Habitual Sentence = +SUBJECT:Substantive-s
+PREDICATION:Transitive Clause +PREDICATION-TYPE:44141.003

The string of numbers 44141.003 which represents the manifestation of PREDICATION-TYPE has four distinct functions: it allows for direct mapping of discourse constraints (cf. Section 1.3), it specifies the exact shape of tense-mode markers intended (see Selection Rule f), it carries specification of features by which the sentence is classified as Habitual (cf. Section 2.3), and it determines distribution by its place in the derivational system (see Chapter 3).

F (2)
Transitive Clause = +Object:Substantive-affective
+Predicate:transitive verb

F (3)
Substantive-s = +Substantive:noun-kin
+subject marker:third-person-singular-honorific-s

F (4)
Substantive-affective = +Axis:Noun-Phrase-deceased
+Relator:affective case marker

F (5)
Noun-Phrase-deceased = +Head:noun-name +Modifier:deceased

The following selection rules include a rewrite of the reference number 44141.003 which specifies both shape and features manifested in the tense-mode sequence. This rule is not strictly selectional, since there is virtually no choice; it is, rather, a decoding rule made necessary by the lexico-syntactic mapping convention.

Rule (a)
transitive verb ⟶ bõgaẽ 'carry in arms'

R (b)
noun-kin ⟶ badã 'mother'

R (c)
noun-name ⟶ õdaẽka 'Onaenka'

R (d)
deceased ⟶ wodi 'now deceased'

R (e)
affective case marker ⟶ ĩkãte 'person affected by action'

R (f)
44141.003 ⟶ -kæga l-ĩpa. 'inceptive, far past, third person, inferential, assertive, final', i.e., 'habitual'

R (g)
third-person-singular-honorific-s ⟶ dã-s 'she (mother)'

Figure II presents structure of Sentence (2) in schematic fashion.

The terminal string for Sentence (2) is badã dã-s õdæ̃ka wodi ĩkãte bõgæ̃kæga l-ĩpa. 'Mother she-honorific onaenka now-deceased person-affected carry-in-arms-inceptive-far-past-third-person-inferential-assertive-final.'

Necessary permutation of the subject-marker to the verb suffix string must now be effected by a slightly modified permutation rule, to allow for representation of 'person' by the number '1'.

(Modified) Permutation Rule a.
X A-s Y B 1-C Z ⟹ X Y BAC Z, where X, Y, Z, and/or C may be null, and where Y may not include A-s.

Permutation Rule a is applied to Sentence (2) as follows:
badã dã-s õdæ̃ka wodi ĩkãte bõgæ̃kæga l-ĩpa. ⟹ badã õdæ̃ka wodi ĩkãte bõgæ̃kægadãĩpa.

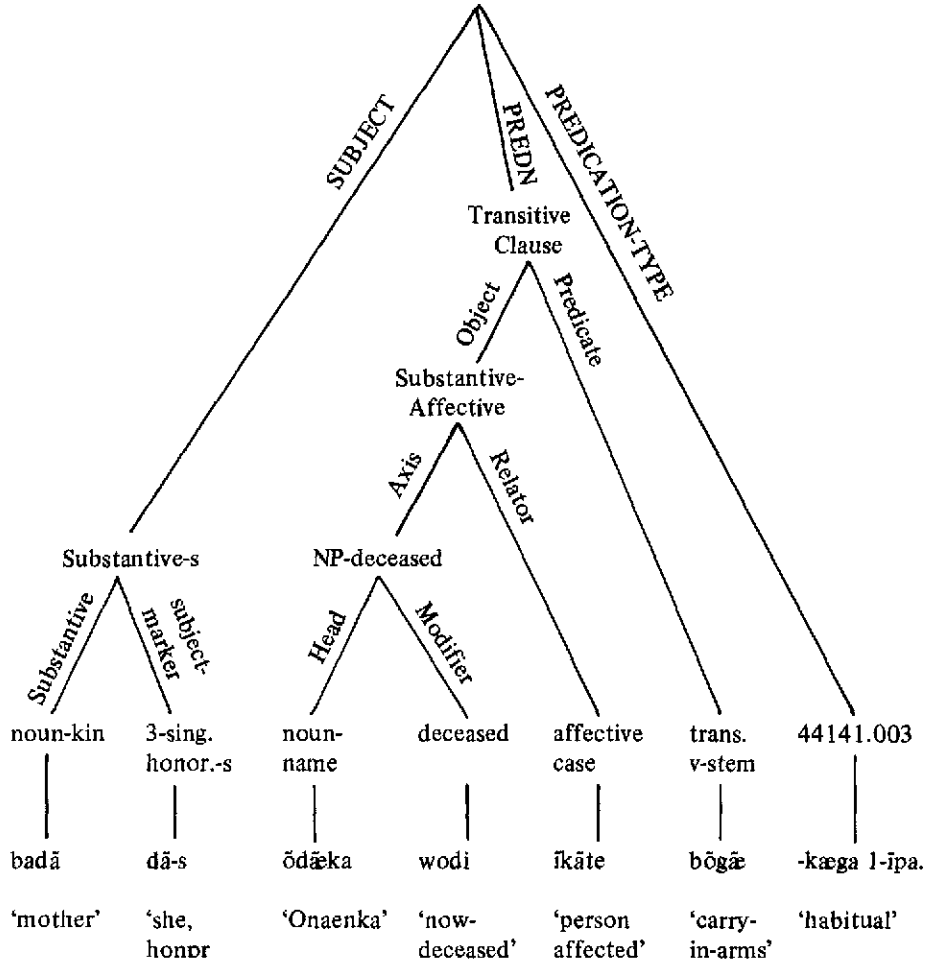
1.0 **Assumptions regarding Discourse.** Assertion of primacy of the sentence in grammar does not necessarily preclude recognition of syntactic structure in such more-inclusive types as the paragraph, although syntactic paragraph structure is not apparent in Auca. Examples so far cited of structure in this more diffuse area[1] have the earmarks of semantic rather than of syntactic structure, in my opinion. Such structure represents important constraints from semantic to syntactic component comparable to those here claimed for discourse. The inter-hierarchical nature of such constraints is clearly indicated by Pike (1961.581) where he describes "constraints from the lexical hierarchy which cut across the structural implications of the grammatical hierarchy," and (Pike 1964.5) where he refers to "constant situational

[1]Cf. Lauriault (1957); Loos (1963); Powlison (1965); Graham (1966); Bridgeman (1966).

FIGURE II

BRANCHING DIAGRAM OF SENTENCE (2)

<u>Habitual Sentence</u>



roles (of a plot) within changing grammatical roles". He does, on the other hand, posit grammatical structure "Beyond the Sentence" in an article bearing that title (Pike, October 1964).

Since this present syntactic model exists to generate sentences, no attempt is made to describe discourse structure per se, but only that information about discourse which may be directly mapped onto individual sentences is discussed.

1.1. **Functions of discourse.** In relation to Sentence, relevant functions of Auca discourse are +SCENE ±PROPS ±SOUND-EFFECTS +TIME +ROLE +ACTION-TYPE ±FOCUS ±INTERLUDE. These eight functions are equally obligatory or optional for every type of discourse. In this section functions are explained and illustrated briefly, and sets of manifestations are specified. Subsets which pertain to each discourse type are treated in Section 1.2.

1.1.1. **SCENE.** The sets of geographic locations and of meteorological variables are regarded as open sets not restricted by discourse type, and hence exerting no direct bearing on Auca sentences. They are therefore not considered here, although they would be highly pertinent to any study of SCENE from the standpoint of discourse analysis.

The one function of SCENE which is conditioned according to discourse type is the specification of Orientation features, or the choice of primary focal location from which indication of direction is oriented. The domain of application of Orientation features is to a dichotomy in Auca which is roughly equivalent to English 'here' versus 'there'. Sample segments are: põ 'to come' versus go 'to go'; ĩpãẽ- 'this side' versus ãẽpãẽ- 'that side'; ĩĩ 'this' versus wa- 'other'; -∅ 'toward' versus ˊi 'away from'; and the like.

Orientation Orn-9, as manifestation of SCENE, includes the following members: {Orn-1 'scene', Orn-4 'speaker', Orn-7 'listener'}. Note that this numbering system, prefixed 'Orn-', is not integrated with that introduced earlier in this section.

Orientation Orn-1 'scene' instructs the speaker to assume the primary focal location to be that of the central scene of action in his account (including speaker's action as central in personal report), regardless of present location of the speaker. Directionals and relative location markers are then chosen from that orientation. Thus, Auca põ 'to come' describes motion toward central scene of action, not motion toward speaker or hearer unless they happen to be at the same location as the scene of action.

Similarly, Orn-4 'speaker' instructs the speaker to assume his own present location as focal to orientation of directionals, and Orn-7 'listener' assigns present location of the listener as focal. The latter is generally relevant to Conversation subtypes, Calling and (Dictated) Message, which are not considered separately from Conversation in this grammar.

A secondary and unconditioned orientation assumes destination as focal, while point of departure is expressed in terms of 'motion away from'. Thus, "go ẽakæbõdai"

ãte põte, ... '"Let's go visit! " saying, coming, ...' really expresses the idea of 'After saying, "Let's go (from here) and visit," and having come (there), ...' Or, more literally, 'After they had decided to *leave* and go visiting, and after they had *arrived* there, ...'.

1.1.2. **PROPS.** The function of PROPS, relevant to analysis of discourse itself, is manifested by a set of features dominated by [-person] and having at its top node the feature animate/inanimate. No restrictions on occurrence correlate with discourse type. Although certain obvious constraints (such as animate/inanimate, edible/non-edible, and the like) have a bearing on syntax, these features have not been studied in detail. Beyond customary tagmemic specification of Function which automatically begins to carry such constraints, no provision is made for their mapping.

1.1.3. **SOUND-EFFECTS.** SOUND-EFFECTS is a function manifested in paralinguistic expressions, so prevalent in Auca discourse. These are unconditioned by discourse type, apparently, although they are most thoroughly exploited in personal Report. Onomatopoetic expressions (e.g., animal calls) are part of Verb Collocations such as appear in clause formulae of Chapter 3. Otherwise no provision is made for mapping occurrence of ideophonic features in this preliminary grammar.

Many of these onomatopoetic expressions are extra-systemic to the regular phonological system, and as such, have already received some attention in phonemics articles by Saint and Pike (1959, 1962). On the other hand, some paralinguistic expressions are distortions of normal phonological sequences– by apocopation, by addition of glottals which are extra-systemic, by extremes of pitch, stress, and length, or by use of voice qualifiers. For instance, a man has been heard to use falsetto for emphasis on the word, wodo 'almost', in the declaration, wodo gotabõdipa 'We almost went! '

Fortis consonants coupled with unvoiced vowels lend a staccato effect to dramatize hunting stories; as for example, kowatai wati, kõwãæ wati... 'pheasant, zip! turkey, zip! ...', where the ideophone for the sound of the dart as it hits its mark is phonetically [wat$_{\text{ll}}$I], with fortis [$_{\text{ll}}$].

Saint and Pike (1962.4,7) recognize three "extra-systemic sounds": /č/, /p</, and /m</. The first two– the assibilant and the inverse oral click– are, in fact, two of several such sounds: the third, an inverse pulmonic nasal, is part of a whole system of emotional speech where indrawn breath is the norm.

Further devices for dramatization are not directly relevant to syntactic sentence structure, and are not treated in this preliminary grammar.

1.1.4. **TIME.** The function of TIME is to specify features of Tense which may occur in a given discourse type. Tense features apply to time words and phrases, but primary focus is on tense suffixes with verbs (see Section 2.2). Members of the set Tense 9000, as reflected in suffixes bearing these Tense features are: [0000 unmarked 'real

(generic present)', 1000 -ta 'past', 3000 -dõ 'contingent past', 4000 -ga 'far past', 6000 -baĩ 'ideal', 8000 -kĩ 'future'}

Past tense is illustrated in the following example: kẽwẽyõdãdi bõipa ikãtapa 'While-they-live(d) (there), Moipa came-upriver.' (kẽwẽ 'to live', -yõ 'simultaneous', -dãdi 'they', bõipa 'Moipa [proper name]', i- 'come up-river', -kã 'he', -ta 1000 'past', -pa 'declarative').

1.1.5. **ROLE.** ROLE is a discourse function manifested by features of Person 900 {000 'impersonal', 100 'third person (P-30)', 300 'indefinite person', 400 'first person (P-10)', 500 'perfective', 700 'second person (P-20)'}.

Additional P-initial reference numbers given for each of the three Definite Person features refer to the set P-80 'Person', which is not integrated with the over-all numbering system for discourse features, 99999.999. Such redundant reference appears to be necessary because ROLE is involved in three separate syntactic systems: first, as three of the features of Person 900, 'Definite Person' features figure, along with the features 'impersonal', 'indefinite person', and 'perfective', in total specification of tense-mode features for Auca verbs; secondly, the three 'Definite Person' features of ROLE are involved with the set GN-8 'Gender-Number', in a system of concord restrictions; and thirdly, the feature of Orientation turns out to be isomorphic in basic content and in distributional restrictions with that of 'Definite Person' (cf. 1.3.1).

Prime motivation for specification of 'Definite Person' as P-80 is the necessity for recognizing PGN-88, class product of sets P-80 and GN-8, in order to map concord restrictions for the two sets simultaneously. Members of the set GN-8 'Gender-Number' are {GN-1 'singular', GN-2 'dual', GN-3 'plural', GN-4 'honorific'}. Resulting field display in terms of abstract features would not be revealing; instead, the reader is referred to Section 2.2, Matrix II, where application of the features in terms of pgn-88 'person-gender-number markers' is presented.

The following illustration exemplifies the need for specification of person concord: wãkĩbo ĩbopa, botõ. 'Waŋi-I am-I, I'; that is, 'I, I am Waŋi'. (wãkĩ 'Waŋi [proper name]', -bo PGN-11 'I', ĩ 'be', -bo PGN-11 'I', -pa 'assertive', bo- PGN-11 'I', -tõ 'pronominal').

1.1.6. **ACTION-TYPE.** The function ACTION-TYPE specifies Mode in three subsets based on paradigmatic substitutability, mutual incompatibility, and/or linear ordering of the verb suffix string which manifests features of Mode 90099. Membership of the three subsets {{90000}, {90}, {9}} is presented as reflected in mode markers bearing these features, in the columns of Table I.

Subset 90000 comprises a diverse set of Mode features which do not, in fact, substitute paradigmatically for one another in the same construction; grouping here represents mutual incompatibility and early placement in linear order of manifesting tense-mode complexes. Complete distributional information is presented in Section 2.3 in connection with the classificatory system for sentence types. Features of subset 90000

may be illustrated briefly as follows:

10000 -yõ 'simultaneous'
õkõdẽ põyõbõda, ĩdõke põ. 'As we two arrived home, it (the dog) came right this way.' (õkõ 'house', -dẽ 'in, at', põ 'come', -yõ 10000 'simultaneous', -bõda 'we two', ĩdõke 'right this way', -. 'final'), or 'At-house as-we-two-come, right-this-way comes.' (See also Section 2.3.3.)

40000 -kæ 'inceptive'
yõwo waa bakæboĩpa. 'Now I'm about to get well.' (yõwo 'now', waa 'well', ba 'become', -kæ 40000 'inceptive', -bo 'I', -ĩ 40 'inferential', -pa 1 'assertive', -. 'final'), or 'Now well I-shall-become.' (See 2.3.1, 2.3.2, 2.3.3.)

TABLE I

MODE 90099

90000	90	9
{00000 unmarked 'neutral',	{00 unmarked 'active',	{0 unmarked 'narrative',
10000 -yõ 'simultaneous',	10 -teĩ 'resultative',	1 -pa 'assertive',
	20 -dãbãĩ 'negative',	
		3 -wæ 'cognitive',
40000 -kæ 'inceptive',	40 -ĩ 'inferential',	4 -wo 'dubitative',
60000 -kẽ 'admonitive'}		
	70 -bẽ 'speculative',	7 -i 'imperative'}
	80 -bã 'urgency'}	

60000 -kẽ 'admonitive'
gokẽdẽ kætabipa. 'You should have gone.' (go 'go', -kẽ 60000 'admonitive', -dẽ 'perfective', kæ- 'do', -ta 'past', -bi 'you', -pa 1 'assertive', -. 'final'), or 'Ought-to-go you-did.' (See 2.3.1, 2.3.2.)

Subset 90 includes paradigmatically contrastive 00 unmarked 'active', 10 -teĩ 'resultative', and 40 -ĩ 'inferential', as well as three other mode features which occur in completely different constructions (see Section 1.3 for specification). Features of subset 90 are illustrated as follows:

10 -teĩ 'resultative'
doo gogateĩpa. 'He was already gone.' (doo 'already', go 'go', -ga 'far past', -teĩ 10 'resultative', -pa 1 'assertive' -. 'final'). The net semantic and syntactic effect of 'resultative' is equivalent to that of passive in other languages, the difference being that its occurrence is not restricted to transitive verbs, as would be expected of passive. Person, being unspecified, is generally expected to be third person. (Cf. Section 2.3.2.)

20 -dãbãĩ 'negative'
bedãbãĩ ĩtakãpa. 'She did not drink (it).' (be 'drink', -dãbãĩ 20 'negative', ĩ 'be', -ta 'past', -kã 'she', -pa 1 'assertive', -. 'final'); literally, 'Not-a-drinker was-she.' See 2.3.1 for place of Negative in sentence classification.

40 -ĩ 'inferential'
wĩdõte ãe põkãĩpa. 'Fleeing he is probably coming up.' (wĩdõ 'flee', ´te 'gerundial', ãe 'come up', põ 'come', -kã 'he', -ĩ 40 'inferential', -pa 1 'assertive', -. 'final'). Inferential denotes lack of speaker verification, either because action has not yet taken place, or because speaker did not observe the action. See Sections 2.3.2, 2.3.3, and 2.3.4 for various applications.

70 -bẽ 'speculative'
ebo põ tabẽida! 'The airplane is-coming; who-knows-if-you-two-are-taking-notice! ' (ebo 'airplane', põ 'come', ta- 'notice', -bẽ 70 'speculative', -i 7 'imperative', -da! 'number, imperative'). (See also 2.3.2.)

80 -bã 'urgency'
odebõ tee bõdebãiwe! 'Close the door! ' (odebõ 'door', tee bõde 'close door', -bã 80 'urgency', -i 7 'imperative', -we .7 'command', -! 'exclamatory'). (See Section 2.3.2.)

Subset 9 includes paradigmatically contrastive 0 unmarked 'narrative' and 1 -pa 'assertive', as well as three Mode features which mark other sentence types. The first feature, -pa 'assertive', is heavily illustrated in previous examples, and the final feature, -i 'imperative', is illustrated under 80 -bã 'urgency', in the immediately preceding example. Other features are illustrated as follows:

3 -wæ 'cognitive'

wãka bewaka wãkĩwædõ! 'Fungus is-itching-my-foot I-think-that-I-shall-die! ' (wãka 'fungus', be 'drink', -wa 'foot', -ka 'fungus', wã 'die', -kĩ 'future', -wæ 2 'cognitive', -dõ 'subjective', -! 'exclamatory'). Cognitive refers to speaker cognition; hence person is not expressed. Compare Section 2.3.2.

4 -wo 'dubitative'

botõ wẽĩbĩdi, põtabĩdiwo? 'My children, did you come?' (botõ 'my', wẽĩ 'children' -bĩdi 'second person plural', -, 'medial juncture', põ 'come', -ta 'past', -bĩdi 'second person plural', -wo 4 'dubitative', -? 'interrogative'); or 'My children-you did-you-come-or-not?' (See also 2.3.2.)

1.1.7. **FOCUS.** The discourse function, FOCUS, specifies speaker reaction or adaptation to linguistic or non-linguistic context. Reaction features of FOCUS, represented as .999, are manifest in tense-mode markers ⊣.99⊢, and in junctural or intonational markers ⊣.009⊢. Tabulation of mode markers bearing Reaction features is presented in the columns of Table II.

Subsets of Reaction features, like those of Mode features above, represent mutual incompatibility, primarily, but the subset of junctural and intonational features is, to some extent, paradigmatic. Complete indication of compatibility and distributional potential appears in Section 2.3.

Reaction features are illustrated as reflected in mode, junctural, and intonational markers, as follows:

.2 -te 'gerundial'

dãtabõkate ate, wede põdẽ ĩpa. 'After one's ears have hurt [by being pierced], he is faithful.' (dãta 'hurt', -bõka 'ear', -te .2 'gerundial', a- 'see', -te .2 'gerundial', -, .001 'medial', wede põdẽ 'faithful', ĩ 'be', -pa 'assertive', -. .003 'final'); or, more literally, 'Ear-hurting seeing, faithful he-is.' (See also 2.3.1, 2.3.2, and 2.3.3.)

.4 -aa 'frustrative'

æãtaboaa! 'As if I had taken it! ' (æã 'take', -ta 'past', -bo 'I', -aa .4 'frustrative', -! .007 'exclamatory'). In this case frustrative denies speaker involvement. In other constructions, frustration is expressed because the person addressed is either physically absent or psychologically so (i.e., not paying attention). Thus:

põbiaa! 'Pay attention and come! ' (põ 'come', -bi 'you', -aa .4 'frustrative', -! .007 'exclamatory'). (See also 2.3.2.2.)

.6 -wẽ 'remonstrative'

yæte, põkẽdẽ gowẽ! 'Yaete, you'd-better-come-here and stop-running-off! ' (yæte 'Yaete [proper name] ', põ 'come', -kẽ 'admonitive', -dẽ 'perfective', go 'go', -wẽ .6 'remonstrative'). Remonstrative reveals speaker disapproval of an action as being useless or detrimental. The implication is that detrimental action is to be stopped; approved

TABLE II

REACTION .999

.9	.09	.009
⟨.0 unmarked 'neutral',	⟨ .00 unmarked 'neutral',	⟨ .000 unmarked 'neutral',
	.01 -ke 'limitative',	.001 -, 'medial',
.2 -te 'gerundial',	.02 -baĩ 'similative',	.002 -; 'semifinal',
	.03 -dõ 'subjective',	.003 -. 'final',
.4 -aa 'frustrative'		
	.05 -V́ 'emphasis',	.005 -? 'interrogative',
.6 -wẽ 'remonstrative',		
.7 -we 'command'⟩	.07 -ãæ 'pejorative',	.007 -! 'exclamatory',
	.08 -o 'calling'⟩	.008 ⟨gn-8⟩ 'number, imperative'⟩

action is usually made explicit. See Section 2.3.2.3 for description of the construction.

.7 -we 'command'
ãdãkedẽ ãeite, wĩdõte gobãiwedãdi! 'Climbing the hill, all of you go fleeing! (ãdãkedẽ 'hill', ãei 'go up', -te .2 'gerundial', -, .001 'medial', wĩdõ 'flee', go 'go', -bã 'urgent', -i limperative', -we .7 'command', -dãdi! .008 [gn-8] 'number [plural]'). (Cf. 2.3.2.)

.01 -ke 'limitative'
giketa dãdõ põke põ. 'Giketa comes running.' (giketa 'Giketa [proper name], dãdõ 'his', põ 'come', -ke .01 'limitative', -. .001 'final'); or, more literally, 'Giketa his coming-limit comes.' (See also 2.3.2, 2.3.3, and 2.3.4.)

.02 -baĩ 'similative'
wẽẽdẽ dãdõ kædẽbaĩ gĩyẽ kækã. 'He makes magic gestures the way he formerly did.' (wẽẽdẽ 'former', dãdõ 'his', kæ 'do', -dẽ 'perfective', -baĩ .02 'similative', gĩyẽ 'magic gestures', kæ 'do', -kã 'he', -. .001 'final'); or, more literally, 'Formerly his deed-like magic-gestures he-does.' Similative likens described action or item to something known (cf. Section 2.3.4).

In another syntactic function, similative marks one form of unreal condition (cf. Section 2.3.1); this latter function may be illustrated as follows:

itæka õkõdẽ owotebaĩ ; doo akædõboĩpa. 'If Itaeka had been at home, I would have seen him already.' (itæka 'Itaeka [proper name]', õkõ 'house', -dẽ 'in', owo 'swing in hammock', -te .2 'gerundial', -baĩ .02 'similative', -; .002 'semifinal', doo 'already', a 'see', -kæ 'inceptive', -dõ 'contingent past', -bo 'I', -i 'inferential', -pa 'assertive', -. .001 'final'). That is, 'Itaeka in-house swing-in-hammock-like, already I-would-have-seen.'

.03 -dõ 'subjective'
wẽdæbẽ ĩdõ ãkẽdẽ! 'It must be recognized that he is probably a demon! ' (wẽdæ 'demon', -bẽ 'speculative', ĩ 'be', -dõ .03 'subjective', ã 'say', -kẽ 'admonitive', -dẽ 'perfective', -! .007 'exclamatory'); or, more literally, 'Demon-probably him-to-be must-be-said! ' (See also 2.3.1, 2.3.2, and 2.3.4.)

.05 -V́ 'emphasis'
æædõdõ gokĩbó? 'Which-way shall-I-go?' (æædõdõ 'which way', go 'go', -kĩ 'future', -bo 'I', -V́ [shift of stress to final vowel].05 'emphasis', -? .005 'interrogative'). (See 2.3.2.2.)

.07 -ãæ 'pejorative'
akãpaãæ! 'He is looking—how ridiculous! ' (a 'look', -kã 'he', -pa 'assertive', -ãæ 'pejorative', -! .007 'exclamatory'). (See 2.4.1.)

.08 -o 'calling'
ebo põpao! 'Hey, the airplane is coming! ' (ebo 'airplane', põ 'come', -pa 'assertive', -o .08 'calling', -! .007 'exclamatory'). Calling occurs when listener is at a distance,

but within hearing, and response is expected; compare Section 2.4.1.

The various junctural and intonational markers are illustrated in conjunction with exemplification of mode markers which manifest Reaction, above in this same section. Further information about these markers may be found in Section 2.3.

1.1.8. **INTERLUDE.** The optional function, INTERLUDE, allows for parenthetic Interpolation or substitution of another discourse for the discourse in progress. Members of Interpolation, called Ipl-9, are {Ipl-1 'laughter', Ipl-2 'verbal annotation', Ipl-4 'commentary', Ipl-5 'discourse'}. (The 'Ipl' initial numbering system is, like that of Orn-9, independent of the numbering system for Tense-Mode, which has no prefix.)

Ipl-2 'verbal annotation' denotes speaker-comment on subject matter of the discourse, formally marked for change of perspective by .03 'subjective' or by certain subjunctive tense-mode markers (see 2.3.2). Ipl-4 'commentary', on the other hand, refers to listener or speaker-comment on subject matter of the discourse, and with change of perspective, but not formally marked as such.

Ipl-5 'discourse' allows for substitution of another discourse, whether it be Legend, History, Report, or Conversation, such that the discourse in progress is interrupted or abandoned.

1.2. **Types of Discourse.** Four principal types of discourse, with some subtypical variation, form the grammatical context of Auca sentences; these are Legend, History Report, and Conversation. While these four discourse types are distinguished formally in the description which follows, it might be well to characterize the four with a brief comment.

Legend refers to that oral tradition commonly recognized as folk literature or folk tales. Whether or not it includes historical elements, the format itself is slightly stylized.

History refers to any informal account of action where the speaker himself is not involved. Style is that of any narration which involves the speaker, but certain restrictions obtain.

Report refers to any account which involves the speaker, even as non-participating observer. The style is informal.

Conversation refers to any account or exchange which involves both speaker and hearer. The style is completely informal.

Conversation is essentially the same in structure whether current or narrated, although narrated conversation is generally shorter in length. Doubtless there is omission (and perhaps also accretion!) in repetition of conversation, but any syntactic form is, in principle, permissible. Narrated conversation may be included within a clause or it may be quoted at length with or without overt indication that it is conversation. However, since these are variations pertaining to speech clauses which include stretches of conversation, and not to conversation itself, internal structure of conversation is not affected.

In subsections which follow the subject matter is: first, theoretical necessity for recognition of discourse types; second, distributional subsets; and finally, tagmemic definition of discourse types.

1.2.0. **Theoretical necessity for discourse types.** General definitions of discourse types, as given above, impose limitations on at least discourse functions SCENE (involving speaker/listener Orientation) and ROLE (involving participation of speaker or listener).

Thus the necessity for recognizing four distinct types of discourse derives from the practical problem of restrictions imposed on sentence generation, for each sentence provides a potential domain for manifestation of these and other functions. It has already been noted, in 1.1.2 and 1.1.3, above, that the functions of PROPS and SOUND-EFFECTS are independent of discourse type; accordingly, they are not considered in this section.

In the first subsection to follow, subsets of features corresponding to each discourse type are listed; in the second, results are tabulated and subsets are indicated numerically; and in the third, discourse types are defined in terms of tagmemic formulae.

1.2.1. **Distributional subsets of features.** For each of the six features which are restricted according to discourse type, subsets are listed below beside the corresponding discourse type. Glosses are provided only at first mention of a feature. By assigning lower numbers to the more restricted features, it is possible to number the subset, assuming that the subset includes all features numbered lower than itself.

SCENE:Orientation Orn-9

Legend	– Orn-2	{Orn-1 'scene'}
History	– Orn-2	{Orn-1}
Report	– Orn-6	{Orn-1, Orn-4 'speaker'}
Conversation	– Orn-9	{Orn-1, Orn-4, Orn-7 'listener'}

TIME:Tense 9000

Legend	– 2000	{0000 'real', 1000 'past'}
History	– 5000	{0000, 1000, 3000 'contingent past', 4000 'far past'}
Report	– 7000	{0000, 1000, 3000, 4000, 6000 'ideal'}
Convers.	– 9000	{0000, 1000, 3000, 4000, 6000, 8000 'future'}

ROLE:Person 900

Legend	– 200	{000 'neutral', 100 'third person'}
History	– 200	{000, 100}
Report	– 600	{000, 100, 300 'indefinite', 400 'first person', 500 'perfective'}
Convers.	– 900	{000, 100, 300, 400, 500, 700, 'second person'}

ACTION-TYPE:Mode 90099

Legend	– 30032	{00000 'neutral', 00 'active', 0 'narrative', 10000 'simultaneous',

10 'resultative', 1 'assertive', 20000 'desiderative', 20 'negative'}
History – 30032 {00, 0, 10000, 10, 1, 20000, 20}
Report – 50066 {00, 0, 10000, 10, 1, 20000, 20, 3 'cognitive', 40000 'inceptive', 40 'inferential', 4 'dubitative'}
Convers. – 90099 {00, 0, 10000, 10, 1, 20000, 20, 3, 40000, 40, 4, 60000 'admonitive', 70 'speculative', 7 'imperative', 80 'urgency'}

FOCUS: Reaction .999
Legend – .334 {.000 'objective', .01 'limitative', .001 'final', .2 'gerundial', .02 'similative', .002 'semifinal', .003 'medial'}
History – .334 {.000, .01, .001, .2, .02, .003}
Report – .566 {.000, .01, .001, .2, .02, .002, .003, .4 'frustrative', .03 -dõ 'subjective', .05 'emphatic', .005 'interrogative'}
Convers. – .999 {.000, .01, .001, .2, .02, .002, .003, .4, .03, .05, .005, .6 'remonstrative', .7 'command', .07 'pejorative', .007 'exclamatory', .08 'calling'}

INTERLUDE: Interpolation Ipl-9
Legend – Ipl-3 {Ipl-1 'laughter', Ipl-2 'verbal annotation'}
History – Ipl-9 {Ipl-1, Ipl-2, Ipl-4 'commentary', Ipl-5 'discourse'}
Report – Ipl-9 {Ipl-1, Ipl-2, Ipl-4, Ipl-5}
Convers. – Ipl-9 {Ipl-1, Ipl-2, Ipl-4, Ipl-5}

By adopting subset numbers assigned by each discourse type to the subset of features allowable in its domain, discourse types may be characterized as follows:
Legend – Orn-2, 32232.334, Ipl-3
History – Orn-2, 35232.334, Ipl-9
Report – Orn-6, 57666.566, Ipl-9
Convers. – Orn-9, 99999.999, Ipl-9

Note with regard to constraints imposed by Legend discourse, that they are few beyond those imposed by History, these few being features of Tense and Interpolation. It is recognized, moreover, that in the case of Interpolation, these constraints represent only an ideal which could be suspended in spite of the fairly formal style of Legend narration.

1.2.2. Tabulation of feature subsets. In Table III, subsets of discourse features are listed in parallel columns, proceeding downward from those most restricted by discourse constraints. Names of discourse types, along with subset reference numbers, appear in the left-hand margin above a line whose extension forms the lower boundary for features allowable within that discourse type.

1.2.3. Tagmemic definition of discourse types. Finally, from the tabular representation of discourse features, tagmemic formulae are derived for each discourse type.

TABLE III

TABULATION OF DISCOURSE FEATURES

	Aspect	Tense	Person	Mode	Illoc.	Reaction			Ipl-9
	90000	9000	900	90	9	.9	.09	.009	
Legend	00000	0000	000	00	0		.00	.000	
Orn-2 32232.334 Ipl-3	10000	1000	100	10	1		.01	.001	Ipl-1
				20		.2	.02	.002	Ipl-2
History Orn-2 35232.334 Ipl-9		3000	300		3		.03	.003	
Report Orn-6 57666.566 Ipl-9	40000	4000	400	40	4	.4	.04		Ipl-4
			500				.05	.005	Ipl-5
Convers. Orn-9 99999.999 Ipl-9	60000	6000				.6			
			700	70	7	.7	.07	.007	
		8000		80			.08		

Linear order of functions in the formulae is free, but it is suggestive of the order in which features normally appear in sentences.

Legend = +SCENE:Orientation {Orn-2} +TIME:Tense {2000}
+ROLE:Person {200} +ACTION-TYPE:Mode {30033}
+FOCUS:Reaction {.334} ±INTERLUDE:Interpolation {Ipl-3}

History = +SCENE:Orientation {Orn-2} +TIME:Tense {5000}
+ROLE:Person {200} +ACTION-TYPE:Mode {30032}
±FOCUS:Reaction {.334} ±INTERLUDE:Interpolation {Ipl-9}

Report = +SCENE:Orientation {Orn-6} +TIME:Tense {7000}
+ROLE:Person {600} +ACTION-TYPE:Mode {50066}
±FOCUS:Reaction {566} ±INTERLUDE:Interpolation {Ipl-9}

Conv. = +SCENE:Orientation {Orn-9} +TIME:Tense {9000}
+ROLE:Person {900} +ACTION-TYPE:Mode {90099}
±FOCUS:Reaction {.999} ±INTERLUDE:Interpolation {Ipl-9}

1.3. **Discourse constraints mapped onto Sentence.** Functions of predicated Sentence are: ±INTRODUCTORY ±SETTING ±SUBJECT ±PREDICATION +PREDICATION-TYPE ±REPETITION. Manifestations of these sentence functions are marked explicitly in relation to discourse constraints. Although such marking might theoretically be omitted in Conversation discourse, where maximum manifestation potential is enjoyed, it is still desirable for marking concord and for succinct specification of tense-mode.

PREDICATION-TYPE, manifested by a complex of tense-mode markers, yields to constraints from Discourse TIME, ROLE, ACTION-TYPE, and FOCUS, and its manifestations are so marked (see 1.3.1). All other sentence functions are subject to constraints from Discourse SCENE and ROLE (see 1.3.2). Lexico-syntactic mapping is shown in 1.3.3. Discourse INTERLUDE, manifested by Interpolation, is imposed onto Sentence rather than being mapped onto a sentence function; this matter is also discussed in Section 1.3.3.

1.3.1. **Constraints on PREDICATION-TYPE.** PREDICATION-TYPE, manifested by tense-mode, is sensitive to discourse features Tense 9000 (manifestation of TIME), Mode 90099 (manifestation of ACTION-TYPE), Person 900 (manifestation of ROLE), and Reaction .999 (manifestation of FOCUS).

Context-sensitivity of PREDICATION-TYPE is mapped directly into terminal manifestations by numerical designation coded to signify domination by these numbered features. That is, tense-mode is a construction composed of markers numbered according to the above-described numbering system for discourse features. Sequential order of markers in construction is partially specified by order of numbers in the decimal system, specification of co-occurrence restrictions appears in Chapter 2, and surface re-ordering

is accomplished by morphophonemic rules (Chapter 4).

Thus, for Legend discourse, Tense, Mode, Person-Voice, and Reaction are mapped onto PREDICATION-TYPE as follows: +PREDICATION-TYPE:32232.334. The method is illustrated in connection with the mapping rule, Section 1.3.3.

1.3.2. **Constraints on other Sentence functions.** PREDICATION, manifested by Clause, is informed by discourse in two principal respects: first, Orientation of directionals in Clause is prescribed by SCENE in discourse; and, secondly, Person in Clause is restricted by ROLE in Discourse. Similarly, any Sentence or Gerund which manifests SETTING yields to the same constraints. The Substantive manifestation of SUBJECT is restricted in Person by ROLE and in some instances, pointed out below, it is even restricted by ORIENTATION.

Orientation must be mapped into any function which potentially includes indication of the directional dichotomy (see 1.1) in its manifestation. Since this dichotomy is apparent in Auca verbs, directionals, locationals, demonstratives, and derived nouns, there is scarcely a function that is exempt from Orientation constraints. In addition to specification of direction for optional Location and Direction modifiers in motion clauses, each motion verb in Auca is either obligatorily unmarked for 'toward' or obligatorily marked by the suffix -i 'away from (on incline)' or by the suffix -o 'away from (horizontally)'.

Orientation must also be marked in restive and in stative clauses, where such locationals as ĩpæ̃- 'this side...' versus æ̃pæ̃- 'that side...' are common. And even clauses with no primary relationship to motion or place may include locationals or such restricted nouns as ĩĩbæka 'this land' versus wabæka 'another land', ĩdõbẽdãdi 'the people here' versus tadõbẽdãdi 'people over there' or æ̃dõbẽdãdi 'people down there'. These latter may function as SUBJECT or as Object, as head of Noun Phrase, or as Axis of Relation-Axis Phrase.

Because every Sentence, every Clause, and every Substantive potentially includes this directional dichotomy, the subclass of Orientation features allowable in a given discourse type must be specified for each such manifestation. Similarly, since the parameter of Person is relevant to every Subject, every Object, every Possessor, and the like, the subclass of permissible Person features must be mapped into every clause type, as well as into every manifestation of SUBJECT.

Note, in this connection, that features which manifest SCENE (see 1.1.1) have exact parallels in the subset of Definite Person features which may manifest ROLE (see 1.1.5). That is, Orn-1 'scene' allows for scene of third-person 100 action only, Orn-4 'speaker' allows for scene of first-person 400 action as well, and Orn-7 'listener' allows for scene of second-person 700 action as well as for third and first. Examination of SCENE and ROLE under 1.2.1 also reveals an isomorphic distribution pattern.

Thus constraints on Orn-9 may conveniently be transmitted simultaneously with those on subsets of Person 900, as ⊣[200]⊢, ⊣[600]⊢, and ⊣[900]⊢.

In Legend discourse, for example, Person and Orientation are marked as follows: ±SETTING:-{Subordinate Sentence, Gerund -{200}} +SUBJECT:Substantive -{200} +PREDICATION:Clause -{200}. This allows for Orn-2 'scene' in Clause, and for third person 100 or neutral person 000 in both Substantive and Clause. (See application, 1.3.3.)

1.3.3. **Lexico-syntactic mapping rule.** Although functions of Sentence are said to be context-sensitive (1.3, above), no syntactic context can be specified for Sentence within this model, for Sentence is the most inclusive construction in the syntactic hierarchy (cf. 0 and 1.0). The context of Sentence belongs, rather, to the semantic hierarchy, as "Discourse". But neither can a semantic context be specified for Sentence, since no function of discourse is manifested by Sentence. Discontinuity between semantic and syntactic hierarchies is thus emphasized by the disjoint nature of Discourse (1.2.3) and Sentence 1.3) formulae. It is here that mapping rules are both efficient and necessary.

Accordingly, the following context-sensitive lexico-syntactic rule must be applied before appropriate sentences can be generated within the four types of discourse. In this rule, the formula for Sentence (indicated within parentheses) is rewritten as formula (a) in the context of Legend discourse, as (b) in the context of History, etc. Abbreviations are introduced in the rewrites.

Lexico-Syntactic Rule 1.
(Sentence = ±SETTING:Subordinate Sentence +SUBJECT:Substantive +PREDICATION:Clause +PREDICATION-TYPE:Tense-mode ±INTERLUDE: Interpolation) ⟶

a. (S = ± SET:Subord.S. -{200} +SUBJECT:Subst. -{200} +PREDN:Cl. -{200} +PREDN-T:-{32232.334} ±INTLD:-{Ipl-9}) / Legend

b. (S = ±SET:Subord.S.-{200} +SUBJECT:Subst.-{200} +PREDN:Cl.-{200} +PREDN-T:-{35232.334} ±INTLD:-{Ipl-9}) / History

c. (S = ±SET:Subord.S.-{600} +SUBJECT:Subst. -{600} +PREDN:Cl.-{600} +PREDN-T:-{57666.566} ±INTLD:-{Ipl-9}) / Report

d. (S = ±SET:Subord.S.-{900} +SUBJECT:Subst.-{900} +PREDN:Cl.-{900} +PREDN-T:-{99999.999} ±INTLD:-{Ipl-3}) / Conversation

Note that optional discourse function, INTERLUDE, is imposed directly onto Sentence by this rule, appearing alongside PREDICATION and PREDICATION-TYPE as if it were a sentence function. But indication of INTERLUDE is not a matter of mapping onto Sentence, since it need not appear within a sentence, but more often appears between sentences. As a Discourse function it is indicated here in order to allow for cases when syntactic Sentence is affected.

As an illustration of mapping from Discourse to Sentence, note Sentence (3), generated within the context of Legend discourse:

(3) godõbēke toõ gidõ, godõbēke giite, wãegakãpa. 'It pulled her farther in (to the water), and she, entering farther in, died.'

Sentence (3) occurs in Report discourse, which is represented as having the following functions and restrictions:

Report = +SCENE:Orientation -{Orn-6} +TIME:Tense -{7000}
+ROLE:Person -{600} +ACTION-TYPE:Mode -{50066}
±FOCUS:Reaction -{566} ±INTERLUDE:Interpolation -{Ipl-9}

In order to reflect constraints from Report discourse, Sentence (3) must be generated in conformity with the general sentence formula stipulated by mapping Rule (1.c), as follows:

Mapping Rule 1.c:

S = +SUBJECT:Subst. +PREDN:Cl
+PREDN-T:t-m markers ±INTLD:Ipl. ⟶

S = +SUBJECT:Subst.-{600} +PREDN:Cl.-{600}
+PREDN-T:-{57666.566} ±INTLD:-{Ipl-9} / Report

At this point the tagmemic formulation allows for choice of any Substantive and of any Clause whose Orientation and Person are specified by a number lower than 600 in the numerical representation of features (cf. 1.2.1). Choice of tense-mode markers is limited to those which manifest features marked by numbers lower than 50000, 7000, 600, 60, 6, .5, .06, .006. Interpolation, represented by the set -{Ipl-9}, is unrestricted.

Accordingly, Sentence (3), which is a simple Assertive Sentence, is generated within the bounds of these restrictions according to the following set of formulae:

Formula (1)

Assertive Sentence (in Report -{57666.566, Ipl-9}) =

+SUBJECT:131-s +PREDICATION:Intr. Cl. -{600}
+PREDICATION-TYPE:4101.003

Here shape of SUBJECT manifestation and of PREDICATION-TYPE manifestation are definitively specified, to be rewritten directly by selection rules, below.

PREDICATION is, on the other hand, manifested by Intransitive Clause which must allow for a subset of Orientation {Orn-1 'scene', Orn-4 'speaker'} and for subset of Person {000 'neutral', 100 'third Person', 300 'indefinite', 400 'first person', 500 'perfective'}. It is not possible to make the selection for the total clause, since embedded sentences may have Orientation and Person which are not the same as those selected for the matrix clause.

F (2)

Intr. Cl. {600} = ±Circumstance:Circumstantial Dep.S. {600}
±Manner:Gerund {600} +Pred:intr.v.stem

Intransitive verb stem is not sensitive to constraints from Discourse not to concord restrictions; it is therefore not marked. Any embedded sentence (including Gerund) is subject to the same constraints as its embedding clause and is therefore marked the same as the clause– in this case, {600}; embedded sentences are not, however, subject to further discourse constraints such as those imposed on principal sentences.

F (3)

Circumstantial Dep.S.{600} = +SUBJECT:31-s
+PREDN:Causal Motion Cl. {600} +PREDN-T:100.001

F (4)

Gerund{600} = +PREDN:Motion Cl. {600} +PREDN-T:.201

While there are restrictions on the types of clauses which may occur as manifestation of PREDICATION in a Gerund (cf. Matrix I), such restrictions are not described until Chapter 3.

F (5)

Causal Motion Cl. {600} = **±Manner:adverb 400**
+Pred:Causal Mot.V.Collocation

F (6)

Motion Cl. {600} = ±Manner:adverb 400 +Pred:mot.v.stem 400

In Formulae (5) and (6), Orientation is specified for adverbs and verb stem by the number 400, which represents Orn-4 'speaker'. Thus direction of any motion expressed by adverb or by motion verb must take speaker's present location as the point of reference. On the other hand, Causal Motion Verb Collocation is not marked because the opposition of 'away'/'toward', to which Orientation is applicable, does not exist for this construction.

F (7)

Causal Mot.V.Collocation = +Motion:Mot.V.Colloc.
+cause:causal marker

F (8)

Mot.V.Colloc. = +manner:mot.particle +mot:mot.v.stem

F (9)

mot.v.stem 400 = +mot:mot-v.stem +direction:dir.marker

Selection rules must also bear numerically-represented restrictions on Orientation and, where not yet determined, on Person. Selection rules follow:

Selection Rule (a)

mot.v.stem ⟶ gi 'enter'

R (b)

intr.v.stem ⟶ wãe 'die'

R (c)

adverb 400 ⟶ godõbẽke 'farther away [from speaker].'

Nothing in the shape of the adverb, godõbẽke, expresses Orientation; rather, Orientation from speaker viewpoint determines that godõbẽke 'farther away' is chosen in this context instead of põdõbẽke 'farther toward', since the actor was pulling inward, away from the speaker's location.

R (d)

mot.particle ⟶ toõ 'straight'

R (e)

4101.003 ⟶ -ga 1-pa. 'far past, third person, assertive, final'

R (f)

100.001 ⟶ 1-, 'third person, medial'

R (g)

.201 ⟶ -te, 'gerundial, medial'

R (h)

131-s ⟶ kã-s 'she'

R (i)

31-s ⟶ ∅-s 'it'

R (j)

causal marker ⟶ -dõ 'cause'

R (k)

dir. marker ⟶ -i 'away [on incline]'

Presence of -i 'away' in the gerund giite 'entering' is determined by the fact that primary location assumed is that of the speaker; since this is the Orientation assigned to the sentence, the unmarked form gite 'entering' would mean that the speaker had to be inside the water into which the girl was entering, which was not the case.

Figure III presents the branching diagram of Sentence (3).

Here double application of Permutation Rule a must be made, with special attention to the proviso that "Y may not include A-s", in order that permutation of subject marker in the subordinate sentence may precede permutation in the principal sentence. Thus, on first application:

kã-s ∅-s godõbẽke toõ gidõ 1-, godõbẽke giite, wæ̃ga 1-pa. ⟶
kã-s godõbẽke toõ gidõ, godõbẽke giite, wæ̃gà 1-pa.

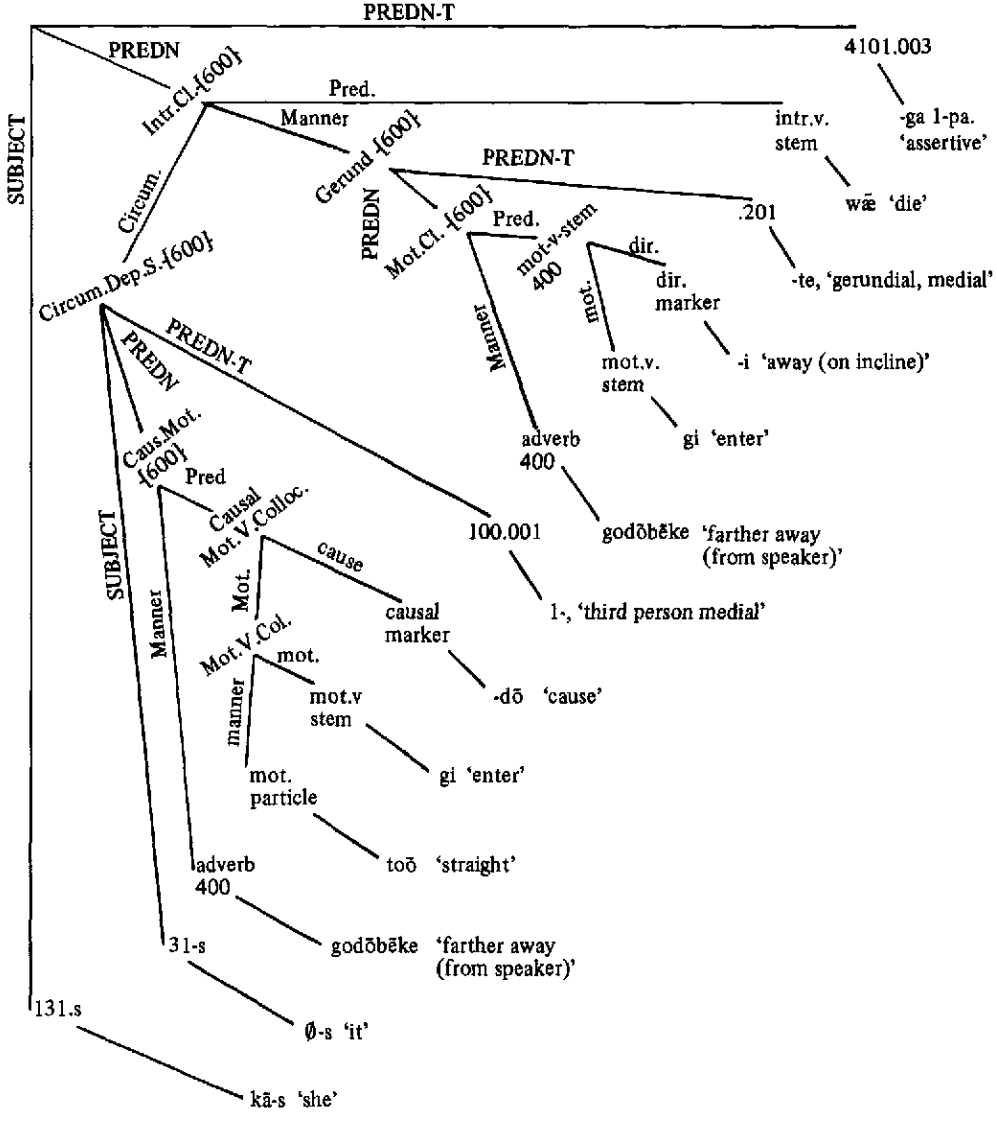
Upon second application, the principal clause is rewritten, thus:

kã-s godõbẽke toõ gidõ, godõbẽke giite, wæ̃ga 1-pa. ⟶
godõbẽke toõ gidõ, godõbẽke giite, wæ̃gakãpa.

FIGURE III

BRANCHING DIAGRAM OF SENTENCE 3

Assertive Sentence
(in Report)



CHAPTER 2

SENTENCE CLASSIFICATION

Consonant with initial assumptions regarding Sentence as the prime construction whose functionally-defined sets are manifested by included constructions, the aim of this chapter is identification of predicated constructions which may be called "Sentence". The task is complicated by the fact that a number of included constructions are also sentences, obviously of different structure and of different rank. Section 2.0 is dedicated to elaboration of assumptions regarding Sentence.

The classificatory system proposed in Section 2.3 relies primarily upon tense-mode features (Section 2.2), but priority for application of features in the classificatory system reflects rank of dependency (Section 2.1). Optional expansions of tense-mode sequences are treated in Section 2.4.

2.0. Assumptions regarding Sentence. The initial proposal made in the Introduction to this grammar (Section 0) is that predicated Sentence involves primarily the syntagmatic relationship between PREDICATION:Clause and PREDICATION-TYPE: tense-mode markers. Such a dichotomy distinguishes between the internally-oriented string relationship of unmarked Clause and the axis-relator relationship imposed on Sentence by tense-mode markers. Tense-mode markers thus constitute a classificatory calculus of features which determines both paradigmatic and syntagmatic sentence relationships, as well as functioning as relational markers for the string-like axis which is Clause.

PREDICATION asserts that one and only one clause must be present in a predicated sentence, that Clause being a comparatively loose syntagmatic string of traditionally recognized function. PREDICATION-TYPE attaches to Clause the 'calculus' of context-sensitive tense-mode features necessary to continuity in discourse. These features are sensitive to constraints both from discourse and from distribution within syntactic strings of sentences; they are at the same time diagnostic for distributional classification of sentences.

Tense-Mode, as complex manifestation of PREDICATION-TYPE, is actualized in Auca as a string of verb suffixes and unbound minor morphemes; verb stem, on the other hand, is head (Predicate) of an axis-like construction identified as 'Clause', which manifests PREDICATION. Thus the morphological effect of selecting PREDICATION-TYPE as classificatory calculus of features in Sentence is, for Auca, to split morphological verbs into stem (relevant to Clause) and suffix string (relevant to Sentence).

The one-to-one ratio induced above between predicated Sentence and Clause (as manifestation of PREDICATION in each sentence) relies on the recognized fact that Clause is equivalent to simple Sentence. But equivalence is not total, for some functions such as optional VOCATIVE, optional CONNECTOR, optional INTERJECTION, optional

SETTING and other context-sensitive functions (see Section 2.1), relate syntagmatically to Sentence, whether Sentence be simple or compound, while others, being clearly subordinated to clause Predicate, are clause functions. This argument in itself would not be convincing, were the dichotomy not otherwise fruitful, for the relationship described is comparable to, and could be treated as, the kind of nuclear-marginal relationship occurring in certain phrase types, where complexity appears in head as well as in modifier (cf. Longacre 1964a.9, for this kind of treatment). Or a parallel might be drawn with the relationship between stem and affix string, where both may be independently complex constructions, the one a nesting construction[1] and the other a string construction, but where relationship of Head-Modifier or Axis-Relator obtains between the two constructions.

In the very independence of PREDICATION complexities from PREDICATION-TYPE complexities lies the chief value of retaining the traditional distinction between Clause and Sentence. When stripped of verb affixation, as it is in this model, Clause is, like a simple verb stem, essentially independent of context. Parameters of sentence classification are irrelevant to Clause, and, conversely, transitivity, the only parameter relevant to clause classification, is independent of discourse and sentence constraints.[2]

Such a context-independent clause has virtually the same shape whether it manifests PREDICATION in principal or in subordinate sentence, in indicative or in conditional. Thus the practically uniform clause requires a minimum of transformation for embedding operations or for showing the relationships between sentence types.[3]

---

[1]Longacre (forthcoming p. 26): "The recursive nesting of sentence type within sentence type is broadly parallel to the recursive nesting of phrase type within phrase type...In languages with relative orders of inflectional affixes, word and clause are broadly similar in that both are STRINGS rather than nests..."

[2]Cf. Pike (1962.223) where he examines the same phenomenon and draws conclusions opposite from *mine*: "The transitive-intransitive components of the horizontal dimension were carried by the verb root or stem, whereas the modal components of imperative, stative, active, and equative of the vertical dimension were signalled by the verb margin...Classes of related constructions from one level may have dimensions coordinate with the dimensions of the classes of some of their members from lower structural levels..."

See also Ham (1965) for an explicit demonstration of this kind of approach, in which she (p. 31) cites the same quotation from Pike. My present position constitutes a radical departure from that of Ham's article, to which I contributed.

[3]Cf. Householder (1971, Chapter VI, pp. 11,12) who points out the utility of even sharper cutting in treatment of embedding:

"1. U $\longrightarrow$ S + Ill <+Q>

I.e., an utterance may be questioned or not, but must be given an illocutionary mark. Possibly Excl belongs here as an alternative to Ill +Q

2. S $\longrightarrow$ S' <+Mod>

The predicational heart of an utterance may have some modality.

It is important to the understanding of this description to recognize that elements of compound sentences are simple sentences comprising PREDICATION (and hence, Clause) and PREDICATION-TYPE as obligatory functions. The same is true of nominalizations and subordinate "clauses" (cf. Chapter 3); these are, in fact, simple sentences ("nominalized sentence" and "subordinate sentence," respectively) which comprise obligatory sentence functions PREDICATION and PREDICATION-TYPE. It should be pointed out, however, that PREDICATION-TYPE in the latter cases is not generally subject to discourse constraints.

2.1. Dependency. According to assumptions outlined in Section 2.0, above, and utilizing tense-mode features as marked in Section 2.2, unique specification may be derived in the classificatory system (see Section 2.3). Thus an inventory may be specified for those sentence types whch are paradigmatically substitutable in equivalent syntagmatic relationships. But for those sentence types whose syntagmatic relationships reflect different rank of dependency and distribution, the question of paradigmatic substitution is eliminated. Maximum generalization is therefore served by assigning priority in the classificatory matrix (Section 2.3) to those features reflecting information which is significant on dependency and distributional grounds, even as distributionally-oriented cuts via Consonantal[1] Vocalic and Syllabic/Non-syllabic dichotomies are generally assumed to be primary in phonology.

An approximation of dependency (and hence, distributional) restrictions reflected in the classificatory system is graphically portrayed in Matrix I.

Identity of sentence types and grouping according to rank, as displayed in Matrix I, could not be justified on the basis of information provided by the matrix itself. Rather, they presuppose knowledge of functional relationships as described in Chapter 3 and of features in the classificatory system, presented subsequently in the present chapter.

Numbers on the horizontal axis of Matrix I refer to sentence types listed according to corresponding numbers on the vertical axis. Numbers are pertinent to this chart only.

Left-to-right marking in the matrix reflects normal physical direction of dependency relationships. That is, sentence types listed along the vertical axis are dependent with

---

3. S[1] ⟶ Snu <+Neg> The sentence nucleus may be negative.

4. Ill ⟶ **Assn, Will**

5. Mod ⟶ **Poss, Nec.**

Variations on the values of **Will, Poss,** and **Nec** will be established differently in different languages by later rules. The complete U will be imbedded then as the complement with performative verbs like *ask, tell, learn, hear, request, demand* and the like; S will be used, for instance, in many conditions and result clauses; S[1] for purely abstract infinitival and gerundial complements; Snu in a few such sentences where negation is excluded."

MATRIX I

DEPENDENCY OF SENTENCE TYPES

	Non-Perf. Gerunds			Perf. Ger.		Sub. Sent.		Dep. Sent.		Coord. Sent.			Ind. Sent.
	1	2	3	4	5	6	7	8	9	10	11	12	13
Non-Perfect Gerunds													
1. Prior		+	+	+	+	+	+	+	+	+	+	+	+
2. Circumstantial	+		+	+	+	+	+	+	+	+	+	+	+
3. Intentive	+	+		+	+	+	+	+	+	+	+	+	+
Perfect Gerunds													
4. Prior							+	+	+				+
5. Circumstantial		+	+				+	+	+				+
Subordinate Sentences													
6. Prior		+	+		+	+	+	+	+				+
7. Circumstantial					+	+	+	+	+				+
Dependent Sentences													
8. Simultaneous								+	+	+	+		+
9. Circumstantial												+	+
Coordinate Sentences													
10. Protasis Gerund												+	
11. Protasis S.												+	
12. Apodosis S.										+	+		
Independent Sentence													
13. Independent													

respect to those represented by number along the horizontal axis, only where intersecting vectors are marked "+". Otherwise, dependency is negative, even in cases where the two sentence types may be found in sequence.

While each sentence type represented is distinct from all others in dependency relationships, some generalizations may be noted in favor of groupings mapped onto the table.

Non-perfect Gerunds are subordinate to all other sentence types, excluding the identical Gerund in each case; conversely, only other Non-perfect Gerund, Circumstantial Perfect Gerund, and Prior Subordinate Sentence may be dependent on them. It is assumed that semantic and not functional reasons prevent occurrence of Prior Gerund in dependent relationship with the latter two; compare Prior Subordinate Sentence for an apparently similar incompatibility with Circumstantial Subordinate Sentence, whereas the latter may dominate Perfect Gerunds.

Perfect Gerunds are subordinate to Circumstantial Subordinate Sentence (as indicated above), to Dependent Sentences, and to Independent Sentence. In addition, Circumstantial Perfect Gerund may be subordinate to two Non-perfect Gerunds. Non-perfect Gerunds may be subordinated to Perfect Gerunds, but disparity is again apparent in that Circumstantial Perfect Gerund but not Prior Perfect Gerund may dominate the two Subordinate Sentences.

Subordinate Sentences are dependent on Circumstantial Perfect Gerund, on other Subordinate Sentences, on Dependent Sentences, and on Independent Sentence. They may dominate all Non-perfect Gerunds, Subordinate Sentences, and Simultaneous Dependent Sentence. And Circumstantial Subordinate Sentence may, along with Dependent Sentences, dominate Perfect Gerunds.

Dependent Sentences are subordinate to Independent Sentence; Simultaneous Dependent Sentence may, in addition, be subordinate to both Dependent Sentences and to both Coordinate Protases; and Circumstantial Dependent Sentence may be subordinate to Apodosis Sentence.

Apodosis (both in Sentence form and in Gerund form) and **Protasis** are mutually dependent. Non-perfect Gerunds and Simultaneous Dependent Sentence may be subordinate to Protasis, while Non-perfect Gerunds and Circumstantial Dependent Sentence may be subordinate to Apodosis. Both Protasis and Apodosis are obligatory in the Independent **Coordinate Sentence.**

Independent Sentence is unique in that it is dependent only within the context of discourse and that all else save Coordinate Sentence, itself Independent, are dependent on it.

Nominalizations and other sentence types which manifest only certain tagmemes of clause are omitted from the matrix. All necessary information regarding their distributional and dependency relationships appears in Sections 2.3 and in Chapter 3.

2.2. **Tense-mode markers.** Tense-mode markers are primarily verb suffixes, but some are minor morphemes not phonologically bound to the verb; some of these minor morphemes, both bound and free, may also occur with other word classes; others are auxiliary verb stems cognate with true verb stems; and still others comprise paradigmatic sets of person, number, or noun-classifiers which do not strictly belong to the tense-mode aggregate but which must be accounted for in description of its composition. A listing of all such paradigms appears in succeeding pages of this section. Numbers utilized in paradigms of tense-mode markers correspond to discourse features which they reflect (cf. 1.3.3). For ready reference, however, and in order to indicate subsets relevant to the classificatory system, the entire set of verb suffixes bearing tense-mode features is presented in Table IV.

Unspecified sets in the 9th row intersected by each column comprise all tense-mode markers listed in the respective columns; an exception to this is .009 -{}, the set of all junctures excluding .000 'word juncture'. Although subsets of tense-mode markers specified by certain numbers in Table IV are coterminous with domains of discourse constraints indicated above, in Table III (Section 1.2.2), such discourse constraints are to be disregarded in present global classification of sentences according to PREDICATION-TYPE. Illustrations in this section are chosen and derivation is suggested without reference to context restrictions.

Subset .1 -{ncl}, which may be defined as -{x| xϵ-{noun classifier}} is independent of discourse constraints. Noun classifier .1 includes a list (see Chapter 5) of approximately fifty suffixes which function as incorporated object in this linear position; in other constructions their function varies.

The set of person-gender-number markers is likewise a subset of Person 900, as 800 -{pgn-88}, and of Reaction .999 as .8 -{pgn-88}. No distinction is intended, but listing is multiple simply in order to facilitate representation of minor-morpheme strings without multiplying morphophonemic rules. In no case is distinction in number relevant to the classificatory system, and in only a few cases is person distinction of interest. Thus in all other cases, and except in cases where discourse constraints dictate otherwise, it suffices to indicate presence of person as subject marker in the verb suffix minor-morpheme string. Membership of the set pgn-88 is displayed in Matrix II.

Also displayed in Matrix II is membership of the set gn-8 'gender-number', represented in the Tense-Mode system (Table IV) as .008, but including also 'imperative intonation', -!.

Numeration for person-gender-number 88, being isomorphic with that of the abstraction PGN 88 (cf. 1.1.5), allows for combination of person with gender-number to be designated at intersection of rows and columns in the matrix. Simultaneously, each value in this application now has an assigned underlying shape, such that where rows dominated by values of person intersect with columns dominated by values of number, surface shape of person-gender-number markers is specified. Some morphophonemic adjustment is assumed in predicting the shape of person-gender-number markers, since

TABLE IV

TENSE-MODE MARKERS

00000 -∅ 'neutral'	0000 -∅ 'real'	000 -∅ 'neutral'	00 -∅ 'active'	0 -∅ 'narrative'	.0 -∅ 'neutral'	.00 -∅ 'neutral'	.000 -∅ 'word junct.'
10000 -yõ 'simultaneous'	1000 -ta 'past'	100 {pgn-38}	10 -teĭ 'resultative'	1 -pa 'assertive'	.1 {ncl}	.01 -ke 'limitative'	.001 -, 'medial juncture'
	2000 {0000,1000}	200 {100,400}	20 -dābāĭ 'negative'	2 {0,1}	.2 -te 'gerundial'	.02 -baĭ 'similative'	.002 -; 'semifinal juncture'
	3000 -dõ	300 -da 'indefinite person'		3 -wæ 'cognitive'		.03 -dõ 'subjective'	.003 -. 'final junct.'
40000 -kæ 'inceptive'	4000 -ga 'far past'	400 {pgn-18}	40 -ĭ 'inferential'	4 -wo 'dubitative'	.4 -aa 'frustrative'	.04 {xpl}	.004 {.002,.003}
	5000 {{2000}, 3000,4000}	500 -dẽ 'perfective'	50 {10,540}	5 {{2},4}		.05 -V́ 'emphasis'	.005 -? 'interrogative'
60000 -kẽ 'admonitive'	6000 -baĭ 'ideal'	600 {000,{200}}			.6 -wẽ 'remonstrative'		.006 {{.004,.005}
70000 {40000,60000}	7000 {{5000}, 6000}	700 {pgn-28}	70 -bẽ 'speculative'	7 -i 'imperative'	.7 -we 'command'	.07 -æ̃ 'pejorative'	.007 -! 'exclamatory'
	8000 -kĭ 'future'	800 {pgn-88}	80 -bã 'urgency'	8 {loc}	.8 {pgn-88}	.08 -o 'calling'	.008 {gn-8}! 'number, imperative'
90000 { }	9000 { }	900 { }	90 { }	9{ }	.9 {‖}	.09 { }	.009 { }

MATRIX II

PERSON-GENDER-NUMBER MARKERS
{pgn-88}

number 8	{gender-number 1, [-nasal] 'singular'	gender-number 2, -da 'dual, male affinal'	gender-number 3, -dãdi 'plural female affinal'	gender-number 4}, -dã 'honorific'
person 80				
{person 10 -bõ 'first',	pgn-11 -bo 'I'	pgn-12 -bõda 'we two'	pgn-13 -bõdi 'we (exclusive)'	pgn-14 -bõ 'we (inclusive)'
person 20 -bĩ 'second',	pgn-21 -bi 'thou'	pgn-22 -bĩda 'ye two, thou [male affinal]'	pgn-23 -bĩdi 'ye, thou [female affinal]'	pgn-24 -bĩ 'thou [mother]
person 30 -∅ 'third'	pgn-31 -∅ 'he, she, it'	pgn-32 -da 'they two, he [male affinal]'	pgn-33 -dãdi 'they, she [female affinal]'	pgn-34 -dã 'she [mother]'
	pgn-131 -kã 'he, she, it'	animate-100 -kã 'flesh, animate'		

underlying shapes are assigned with other paradigms also in view. Matrix presentation thus obviates the need for process rules in these instances.

A word of explanation is due concerning semantic categories represented in the parameter of gender-number: 'honorific' includes dual or plural exclusive in first person; in second and third persons, 'honorific' is the form used in speaking to or about anyone (singular) who, in the kinship system, is called badã 'classificatory mother' or yæyæ 'grandmother'. All forms of the category 'dual, male affinal' correspond to dual in the respective persons or to anyone (singular) who is, in the kinship system, called bæ(da) '(potential) father-in-law', bæti(da) '(potential) mother-in-law', bæke '(potential) brother-in-law (to male)', or biyõda '(potential) son-in-law'. Not all of these are male relationships, but 'male' was chosen as a convenient label to distinguish this category from 'plural, female affinal'. The term 'potential', in each case, is based on relationships of categories described in a system where cross-cousin marriage is preferred; direct indication of relationships would be much more complicated. All forms of the 'plural, female affinal' category correspond to plural in the respective persons or to any one person who is in fact called yaa 'mother to child's spouse'.

Underlying shape of gender-number 1 'singular' is the feature of nasalization in its minus value, -[-nas].

There exists an asymmetry in the pronominal system, apparently imbalance due to diachronic shift, in that the full set of person-gender-number markers, pgn-88, actually includes pgn-animate 131 -kã 'he, she, it', in addition to pgn-31, which is the normal class product of person 30 X gender-number 1. Although the zero form, pgn-31 -∅, is fairly common, especially in referring to non-human third person or in ridicule, the asymmetric form is the normally expected form.

Clearly the statistically most common form of third person could have been chosen as marking the feature of 'third person' in Matrix II. Morphophonemic considerations combine with information from other person-number paradigms and from the semantic hierarchy to make the present choice more tenable. Semantically, the same morpheme, -kã, appears in compounding and in noun classifier functions with the meaning of 'flesh, animate, person' (cf. Section 5.1); thus distribution of this morpheme is slightly different from that of other person-gender-number markers of Matrix II.

Function of the morpheme -kã as noun-classifier is illustrated in the following:

bẽkã, bẽkã, bẽkã, bẽkã, bẽkã, bãdõbaĩ ĩkãdãdiĩpa. 'Two-flesh, two-flesh, two-flesh, two-flesh, two-flesh, thus they-flesh-were.' (bẽ- 'two', -kã 'flesh, animate', bãdõbaĩ 'thus', ĩ 'to be', -kã 'flesh, animate', -dãdi pgn-33 'they', -ĩ 40 'inferential', -pa 1 'assertive'). Freely translated, the sentence is: 'There were 10 animals.' Reference is to young jaguars.

Also relevant to tense-mode marking as manifestation of PREDICATION-TYPE (cf. Sections 2.3.2 and 2.3.3) are auxiliary verb stems; these are generally identical in shape to verb stems bearing the same or similar gloss, but they are here used syntactically.

In some cases semantic resemblance is also apparent between members of this set and certain tense-mode markers. Whether or not these could be considered as 'same morpheme', their syntactic function is ordinarily different and they are therefore assigned a different set of reference numbers, each number being followed by 'x' to indicate membership in the set of verb auxiliaries. The set of all auxiliaries is designated by the reference number 9x, and includes the following membership:

{1x ta- 'monitory', 2x a- 'to see, notice', 3x wæ- 'to react', 4x kæ- 'to do', 5x ĩ- 'to be', 6x ã- 'to say, to want', 7x kẽ- 'to live'}. For a description of {xpl} 'expletive' and {sp-tem} 'spatio-temporal' markers, see Sections 2.4 and 2.3.4 respectively.

2.3. **Classificatory system.** PREDICATION-TYPE in Auca sentences is manifested by context-sensitive tense-mode markers, combinations of which determine distribution of sentences and mark paradigmatically contrastive sentence types. Thus the obvious sequel to specification of tense-mode markers in the immediately preceding section is development of a classificatory system for sentence types, based on syntactic features of tense-mode. Rationale for invocation of such simplistic criteria (as opposed to a "dual structual criterion") in sentence classification appears in Section 2.3.0, to follow immediately.

Primary sentence classification is presented in Section 2.3.1, followed by four distributionally-oriented subsections of sentence classification, as follows: Independent Sentence in 2.3.2; Subordinate, Dependent, and Gerundial Sentences in 2.3.3; and Nominalizations in 2.3.4. A further subsection, Section 2.3.5, describes derived sentence types which are dependent upon conjoining of two tense-mode sequences.

2.3.0 Single structural criterion for classification. Obvious allusion is here made to Longacre's "dual structural criterion"[4] to which I herewith take exception. Pike (1962.231) welcomes this, Longacre's "crucial theoretical contribution", as providing the grammatical analogue to the phonemic concept of "minimal pair"; but the analogue breaks down in Pike's next statement that, while "a pair of phonemes minimally contrastive may differ by only one component, a pair of constructions must differ by two formal components".

The analogue is further violated when Pike (1962.232) allows "distribution in higher-layered constructions" to "count as one of two required differences" when "paralleled by a substantial difference in structural meaning". If analogy to phonemics were carried out in this context, the situation would closely resemble "complementary distribution" with its obvious implications.

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[4] Longacre (1960.75) states that, "A criterion may be framed as follows: two strings on the same level are hypertagmemically distinct if (1) they exhibit at least two structural differences relative to each other, and (2) if these differences are relevant either to both obligatory and optional tagmemes in the two strings, or to more than one obligatory tagmeme."

While preservation of the phonemic analogy is not crucial, especially when identification of contrastive units is held to be secondary in importance to productive potential, yet specification of subset membership is necessary in any model. And members of distribution subsets are patently just those strings or units which "contrast within a slot". To the question of what constitutes contrast among subset members of the same construction type, my contention is that for each construction type (and by "type" I refer to a set of constructions having comparable internal composition and identical or near-identical external distribution; cf. Section 0) there exist a set or sets of classificatory features (Pike's "components") which are reflected at one or more points, indifferently, in each contrasting construction. Specification of classificatory features derives from application of the model with the aim of producing constructions in a given language; hence, evidence for presence of a given feature is to be sought by testing generative capacity of the model rather than by unstructured examination of empirical data.

Determination of features relevant to a classificatory system thus becomes the dominant "discovery" problem, and enumeration of constructions is the output of whatever solution is found. At this point, criteria of relevance must be supplied. I submit that for each construction type there exists a nuclear element, one for which a calculus of features must be specified if every construction of that type is to be generated accurately within its appropriate context. For some construction types (roughly, the kind which Longacre in his forthcoming article calls "string"), features relate to internal structure; for others (Longacre's "nests"), features relate to external distribution. To the former type belong Clause and head-modifier Phrase, to the latter, Sentence and relator-axis Pharse, according to this present model (not necessarily according to Longacre's– certainly not in the same way that he would suggest).

Accordingly, our primary concern in describing each construction type is to specify its nuclear element and the classificatory features pertaining to it. For most construction types there is general agreement as to the nuclear element; for Sentence as I have defined it, PREDICATION-TYPE is bearer of contrastive features– features which in this case relate to external distribution and are directly subject to constraints from the semantic hierarchy. Because more than one parameter of features is involved in manifestation of PREDICATION-TYPE (cf. 2.2), each manifestation is a class-product of ordered n-tuples, according to the number of parameters involved in the classificatory system. Primary relationship among sentences is thus a function of the classificatory system rather than a derivational relationship. In this respect analogy with a classificatory system of phonemes is starkly apparent and my initial claim of relevant "intermediate units" takes form.

Such initial classification of all sentences is recognizedly incompatible with basic premises of transformational–generative grammar.[5] But the fact that this maneuver

[5]Cf. Chomsky (1965.117) where he affirms that "the base of the syntactic component does not, in itself, explicitly characterize the full range of sentences, but only a highly restricted set of elementary structures from which actual sentences are constructed by transformational rules."

broadens the base of strings on which transformations operate does not, in principle, affect the question as to whether the resulting grammar does, in fact, enumerate sentences of the language. Furthermore, given the reduced nature of the feature calculus on which this phase of sentence classification is based, there is no motivation for positing an order of derivation.

Relatedness among sentence types is displayed by shared features, and particularly by branching from a common node, in the classificatory system.

2.3.1. **Primary sentence classification.** The classificatory system for Auca sentences relies on features of tense-mode to specify both distributionally-distinct and paradigmatically-substitutable sentence types. Primary cuts shown in Figure IV determine major distributional categories, for the most part, leaving most substitutional categories for Figures V-VII, in Sections 2.3.2-4.

Primary sentence classification in Figure IV is indicated both by a branching tree diagram, in the upper portion of the figure, and by a classificatory matrix in the lower portion of the figure. Sentence types or sets of sentence types are related to distinctive features in the matrix by arrows with broken lines.

Features of the classificatory matrix are tense-mode features which have their manifestation in tense-mode markers or sets of tense-mode markers (cf. Section 2.2, especially Table IV). Six features here distinguish, but do not specify composition of, nine sentence types or sets of sentence types– a low yield, indicating remote relationships which are essentially non-binary although they are represented as being binary.

Feature 1[6] is {.009} 'juncture'/.000 'no juncture'. That is, no juncture relevant to syntax, but only word boundary, exists in connection with sentence types which lack this feature. This is the case with those sentence types which manifest clause or phrase functions, being thus embedded in the clause or phrase in a way that subordinate or dependent sentences are not. Such are Purpose Sentence, embedded in Verb Phrase; Manner Gerund, a minimum gerund which also pertains to Verb Phrase; Negative, which manifests Complement or Manner; and Nominalizations, which manifest a variety of clause functions, according to the particular Nominalization (cf. Figure VII, Section 2.3.4).

On the positive side, the {.009} 'juncture' feature applies to Independent, Coordinate (Protasis and Apodosis), and Dependent Sentences, the latter including Subordinate Sentence and Gerund as specified above in connection with Dependency (Section 2.1).

Feature 2 is, similarly, a junctural feature: {{.006}, .007, .008} 'non-medial juncture'/.001 'medial juncture'. Independent Sentence is distinguished by this feature from those sentences which may never occur with final or semifinal juncture. Independent Sentence types are further distinguished in Section 2.3.2; Dependent and Subordinate

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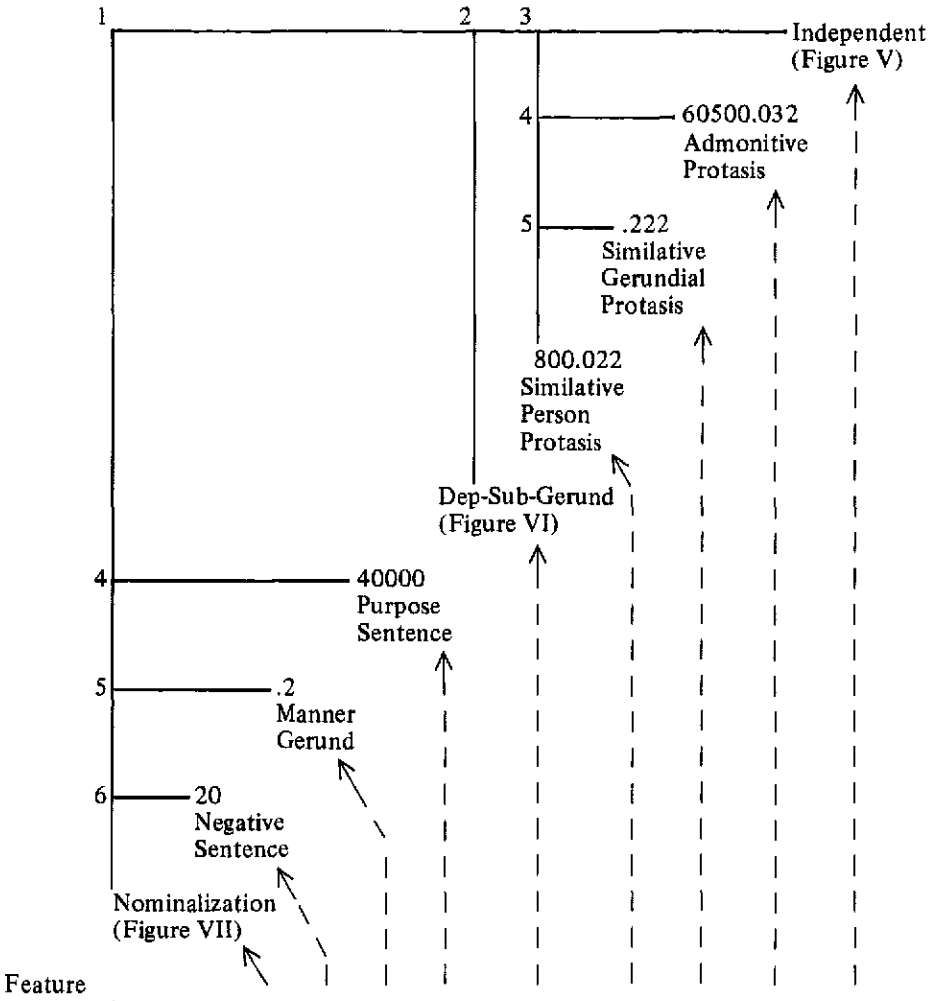
[6]Serial numbers assigned to features in the classificatory system only represent order of introduction, to facilitate cross-reference.

FIGURE IV
PRIMARY SENTENCE CLASSIFICATION



Feature									
1. {.009} 'juncture'	–	–	–	–	+	+	+	+	+
2. {{.006}, .007, .008} 'nonmedial'					–	+	+	+	+
3. {.003, .005, .007, .008} 'final'						–	–	–	+
4. {70000} 'subjunctive'	–	–	–	+		–	–	+	
5. .2 'gerundial'	–	–	+			–	+		
6. 20 'negative'	–	+							

Sentence types and Gerund types are described in Section 2.3.3.

Feature 3 ⟨.003, .005, .007, .008⟩ 'final juncture'/.002 'semifinal', by its minus quantity, separates from Independent Sentence those few Coordinate Sentences which may only manifest Protasis. This does not specify all manifestations of Protasis, for Independent Sentence types which manifest either Protasis or Apodosis are marked [+ final juncture],

Not because specification of different Protasis Sentences is considered to be primary, but only for convenience, such specification is included in the Primary Classificatory matrix.

Feature 4 ⟨70000⟩ 'subjunctive'/'non-subjunctive' is manifest in two tense-mode markers: 40000 -kæ 'inceptive' and 60000 -kē 'admonitive'. Feature 4 distinguishes Purpose from Manner Gerund and Nominalizations at the left, Admonitive Protasis from Similative Protases (.02 -baĭ 'similative') at the right of Figure I.

Feature 5 .2 -te 'gerundial'/'non-gerundial' identifies Manner Gerund on the left of the figure. On the right, Protasis Gerund is distinguished from Protasis Sentence by this feature. In both cases, this is terminal identification, to be more closely defined and illustrated subsequently in this section.

Feature 6 20 -dābāĭ 'negative'/'non-negative Nominalizations' distinguishes Negative, whose distribution differs from that of Nominalizations, the latter to be further described in Section 2.3.4.

All features in the primary classificatory system either relate directly to, or parallel, distribution, in at least one application of the feature. Junctural features (1, 2, and 3) reflect distribution directly and, in cases treated in the primary classificatory system, there is no overlap in distribution among the types identified. Thus other sets of features would be isomorphic with junctural features in classificatory power, but specification would be more complicated.

Beyond the convenient domain of juncture, other features are utilized to produce cuts which parallel distribution, viz., Features 4, 5, and 6. Two of these, 4 and 5, have application elsewhere in this and in subsequent subdivisions of the classificatory system; their application here uniquely specifies membership of distributional classes Purpose, Manner Gerund, and Negative Nominalization.

Six sentence types are definitively dpecified in the primary classificatory system. These are described and illustrated in ensuing paragraphs; however, their place in sentence structure is only roughly indicated here since that is the subject matter of Chapter 3.

Purpose Sentence, marked by 40000 -kæ 'inceptive', is embedded in the Verb Phrase, particularly of motion verbs. To illustrate: akæ go 'go look' (a 'look', -kæ 40000 'inceptive', go 'go'); that is 'go, in order to look'.

Manner Gerund, marked by .2 -te 'gerundial', is embedded as modifier in Verb

Phrase to indicate action closely associated with that of the verb. The most commonly-occurring illustration is ãte põ 'bring' (ãe 'carry'; -te .2 'gerundial', põ 'come').

Negative Sentence, marked by 20 -dãbãĩ 'negative', manifests Complement in stative clause or Manner in active clause. The more common use is the former, as in godãbãĩ ĩbo. 'I am not going'. (go 'go', -dãbãĩ 20 'negative', ĩ 'be', -bo pgn-11 'I', -. .003 'final juncture'); literally, 'Not-goer I-am.'

Admonitive Protasis, marked by 60500.032 -kẽdẽdõ; 'perfective admonitive subjective', manifests Protasis in Contrary-to-Fact Condition. Illustration appears below, under Similative Person Protasis.

Similative Gerundial Protasis, marked by .222 -tebaĩ; 'gerundial similative', manifests Protasis in Contrary-to-Fact Condition when the subject of Protasis and Apodosis are the same, or if, when subjects are different, both are overtly marked in Subject slot.

wika wodi wĩdõtebaĩ; ayãe kẽwẽkædõdẽĩpa. 'If the late Wika had fled, she would still be living.' (wike 'Wika {proper name}', wodi 'dead', wĩdõ 'flee', -tebaĩ; .222 'similative gerundial protasis', ayãe 'still', kẽwẽ 'live', -kædõdẽĩpa. 43541.003 'perfective conditional, final').

Similative Person Protasis, marked by 800.022 {pgn-88} 'person', -baĩ 'similative', -; 'semifinal', manifests Protasis in Contrary-to-Fact Condition when there is change of subject. The following illustration includes both Admonitive and Equative Person Protases:

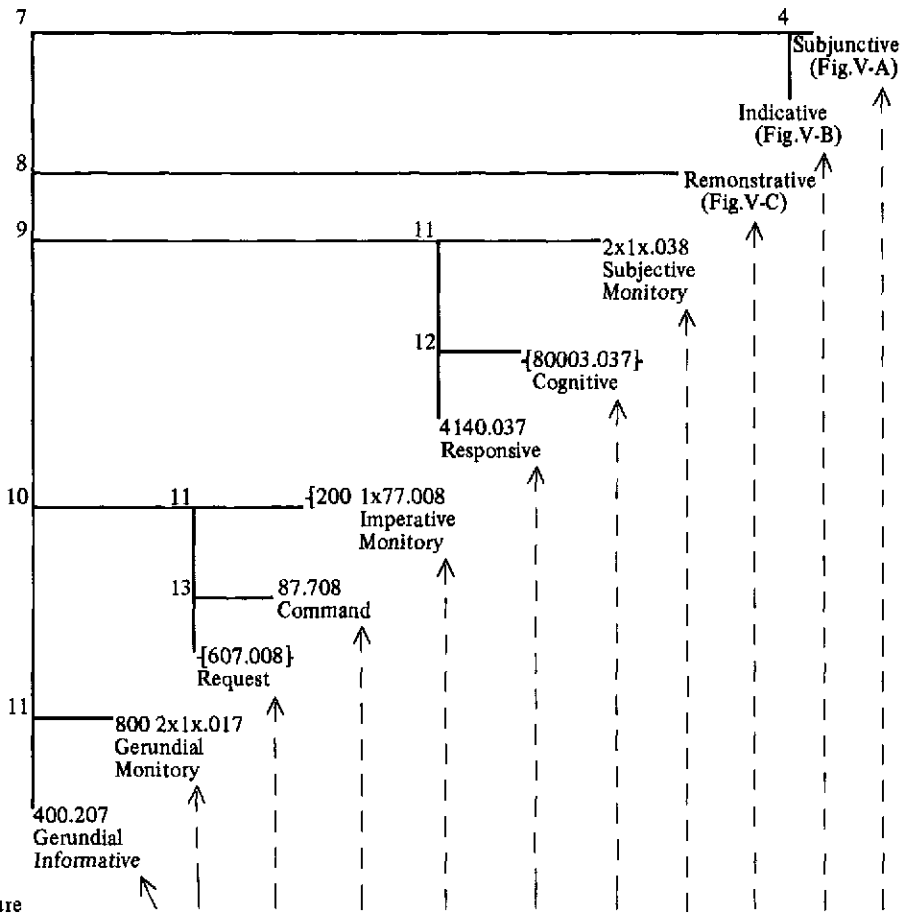
tãbãya wĩ ãeibaĩ; adokãke ... õyõkẽdẽdõ; ... doo wãkædõdẽĩpa. 'If Tamaya hadn't gone up, and if he had ... lain there alone, ... he would already have died.' (tãbãya 'Tamaya [proper name, female]', wĩ 'not', ãei 'go up', -baĩ; 100.022 'similative third person protasis', adokãke 'he alone', õyõ 'lie down', -kẽdẽdõ; 60500.032 'perfective admonitive subjective, semifinal', doo 'already', wãe 'die', -kædõdẽĩpa. 43541.003 'perfective conditional, final'). Although the two Protases receive equivalent translations in the illustration, the Admonitive Subjective indicates speaker's regret that the stated condition is "contrary-to-fact"; in other words, he wishes the facts had been different to produce a different outcome.

2.3.2 **Independent Sentence.** Independent Sentence appears at the right of Figure IV as distinguished by a series of three junctural features in the primary classificatory matrix. Figure V Independent Sentence is, then, properly an extension of the rightmost branch of Figure IV.

The classificatory matrix of Independent Sentence comprises eight features, one of which (Feature 4 {70000} 'subjunctive') appears first in the primary classificatory matrix of Section 2.3.1.

Feature 7 {.006} 'declarative-interrogative' is manifest in a subset of junctural markers: {.002 -; 'semifinal', .003 -. 'final', .005 -? 'interrogative'}. Distinguished by

FIGURE V
INDEPENDENT SENTENCE



Feature											
7. {.006} 'declar. interrog.'	–	–	–	–	–	–	–	–	–	+	+
4. {70000} 'subjunct.'										–	+
8. .6 'remonstr.'	–	–	–	–	–	–	–	–	+		
9. .03 'subjective'	–	–	–	–	–	+	+	+			
10. 7 'imperative.	–	–	+	+	+						
11 1x 'monitory'	–	+	–	–	+	–	–	+			
12. 3 'cognitive'						–	+				
13. 80.7 'command'			–	+							

this feature are sentence types which may occur with declarative and interrogative juncture versus those which may occur with exclamatory or imperative final intonation. The latter, which are marked [-{.006}], share a semantic component of performative-informative nature, although this fact is not made apparent by the classificatory matrix.

Sentences which may occur with declarative-interrogative juncture are subdivided by Feature 4 {70000} 'subjunctive' (see 2.3.1) into Subjunctive and Indicative Sentences (see Sections 2.3.2.1 and 2.3.2.2). These two sets share several features and are, in general, paradigmatically contrastive. Presentation in two separate figures (Figures V-A and V-B) is made necessary only because of lack of space in a single figure.

Feature 8 is .6 -wẽ 'remonstrative'. Remonstrative Sentences which are marked by this feature are of such complex nature as to demand separate presentation, following the presentation of Indicative Sentences, a number of which are included in the composition of Remonstrative Sentences (see Section 2.3.2.3, especially Figure V-C).

Feature 9, which is .03 -dõ 'subjective', dominates Subjective Sentences, a group which display the speaker's or actor's own feelings with reference to action or situation.

Feature 10 is 7 -i 'imperative', dominating Imperative Sentences; expression of command or request is not, however, limited to these sentences.

Feature 11, which is 1x a- 'monitory', applies to Subjective, dominated by Feature 8, to Imperative, dominated by Feature 9, and to Gerundial Sentences, dominated by Feature 9 in its minus quantity. In none of these cases is the listener necessarily the actor in the sentence; rather, he is aroused to respond to the action.

Feature 12 is 3 -wæ 'cognitive', distinguishing Cognitive Sentence which expresses speaker reaction, exclusively; person and number are not marked. Negatively-marked sentence types distinguished are Responsive, expressing reaction by any person, with only gender, number, or animate being marked.

Feature 13 is 80.7 -bãwe 'command', the two markers 80 -bã 'command' and .7 -we 'urgency' being mutually obligatory; distinction in gloss between the two is only postulated, perhaps wrongly so. Feature 13 distinguishes a fairly brusque command from simple request.

The classificatory matrix of Figure V distinguishes all Subjective, Imperative, and Gerundial Monitory and Informative Sentences.

Subjective Monitory Sentence, marked by 2x1x.038 atadõ + {gn-8}! 'notice, monitory, subjective, number, imperative', manifests a function in discourse, as do all Independent Sentences. Such distribution is not specified in this grammar. To illustrate:

põ atadõdãdi! '(He) is coming; look out, you-all!' (põ 'come', atadõdãdi 2x1x.038 'subjective monitory').

Cognitive Sentence is marked by {80003.037}, a set defined as x | x∈{{00000 -ø 'neutral', 40000 -kæ 'inceptive', 8000 -kĩ 'future', 4040 -gaĩ 'far past inferential', 500 -dẽ 'perfective', 6000 -baĩ 'ideal'} + 3.037 wædõ! 'cognitive, subjective,

exclamatory'}. Cognitive Sentence informs of speaker reaction (usually negative) to action or state of any person expressed in the clause. The set of possible tenses or modes indicate time or condition of the reaction, not necessarily of the action, except for 500 -dē 'perfective', which indicates completed action to which the speaker is presently reacting. As an illustration of Cognitive Sentence, note:

gǣwǣte wǣkīwædō! 'I feel that I shall die of thirst! ' (gǣwǣ 'thirst', -te .2 'participial', wǣ 'die', -kīwædō! 8003.037 'future cognitive').

Responsive Sentence is marked by {4140.037}, which is a set of markers defined as x | xε{100.037 + {100.037 + {0000, 4000} + {00, 40}}; that is, optional -ga 'far past', obligatory {pgn-38} 'third person', optional -ī 'inferential', obligatory -dō 'subjective', obligatory -! 'exclamatory'. Third person markers may represent any person, including speaker or listener; they mark only gender-number or animate with respect to the person who is responding.

wīdōte wæte togadaīdō! 'When we two realized that they had fled, we rejoiced! ' (wīdō 'flee', -te .2 'gerundial', wæ 'realize', to 'laugh', -gadaīdō! 'far past, dual, responsive'); or, more literally, 'Fleeing, realizing, pleased (us) two.'

Imperative Monitory Sentence is marked by {200 1x77.008}, which is a set of markers defined as x | x ε {{100, 400} + { 1x07.008, 1x77.008}}; that is, {pgn-38 'third person' or {pgn-18} 'first person', -ta 'monitory', optional -bē 'speculative', -i 'imperative', {gn-8}! 'number, imperative'. 'Person' here refers to person of actor, while 'number' is that of person or persons being aroused to respond.

itæka itai! 'Itaeka is coming downstream; beware!' (itæka 'Itaeka [proper name], i 'come downstream', -tai! 'imperative monitory').

Comand Sentence is marked 87.708 -bāiwe + {gn-8}! 'command, imperative, urgency, number, imperative'. Number is that of person or persons commanded.

kǣbāiwedādi! 'Eat ye! ' (kǣ 'eat', -bāiwedādi 87.708 'plural command').

Request Sentence is marked by {607.008}, which is a set of markers defined as x | xε{{000, 100, 400} + 7.008}; that is -∅ 'neutral person', {pgn-38} 'third person', or {pgn-18} 'first person', -i 'imperative', and {gn-8} 'number'. Request is for permission for first-person action where first person is indicated, for permission or causation of third-person action where third person is indicated, or for second-person action where no person is indicated (i.e., -∅ 'neutral person'). In the latter case only, contrast is created with Command sentence, above, which also invokes listener action. 'Number' always specifies number of listeners to whom request is made.

gobōdaida! 'Let us two take our leave of you two! ' 'go 'go', -bōdaida! 407.008 'first person [dual], dual request').

põi! 'Come (thou)! ' (põ 'come', -i! 7.008 'singular request').

Gerundial Monitory Sentence is marked 800 2x1x.017 or ⟨pgn-88⟩ 'person' + atake! 'notice, monitory, limitative, exclamatory'. Person is that of any actor, but listener is called to alarm, or to reaction.

ayebæ, ade kæ̈bõ atake! 'ayebae, [you] had better watch out! We're eating it all up! '(ayebæ 'Ayebae [proper name]', -, .001 'medial', ade 'up [in sense of "to eat up"]', kæ 'eat', -bõ atake! 400 2x1x.017 'first person [inclusive], gerundial monitory').

Gerundial Informative Sentence is marked 400.207 or ⟨pgn-18⟩ 'first person' + -te! 'gerundial, exclamatory'. It is possible that this construction is limited to pgn-11, 'first person singular', since that is the only manifestation so far observed, and because of the semantic component of speaker intent, addressed to no one in particular. In the following illustration, the speaker is alone with a new-born baby:

ãadẽte ææ̈bote. 'Let me get water to bathe him! ' (ãadẽ 'bathe', -te .2'gerundial', æã 'carry', -bote! 400.207 'first person [singular], gerundial informative'); literally, 'In-order-to-bathe, let-me-bring!' ãadẽte is a Manner Gerund having, in this case, the semantic function of purpose, a usage which is not uncommon.

2.3.2.1. **Subjunctive Sentence.** Subjunctive and Indicative Sentences are distinguished in Figure V by the junctural Feature 7, ⟨.006⟩ 'declarative-interrogative', from informative and performative sentences enumerated above. Subjunctive, marked by ⟨70000⟩ 'subjunctive' is presented in Figure V-A, properly an extension of Figure V, just as Figure V is an extension of Figure IV.

Six features, three of which are shared by Indicative (Figure V-B), here distinguish ten Subjunctive sentence types.

Feature 14 60000 -kẽ 'admonitive' dominates three Admonitive Sentences, adding the semantic component of warning, reproof, or obligation.

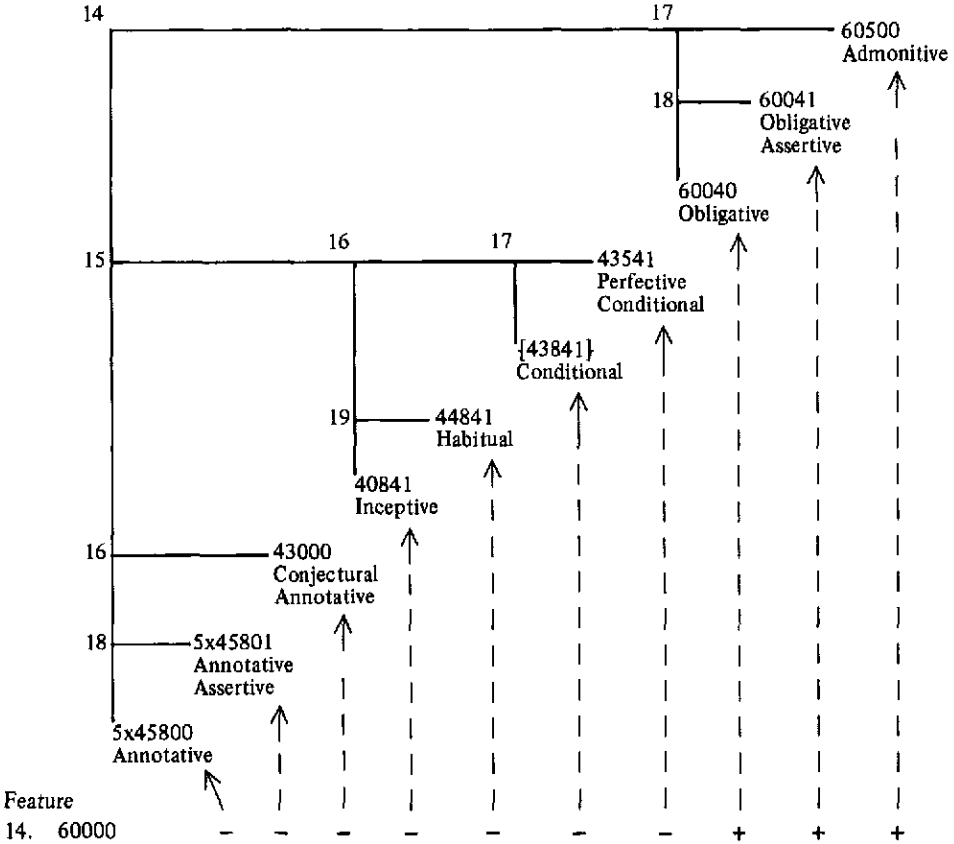
Feature 15 40 -ĩ 'inferential' applies here and elsewhere in the classificatory system to mark lack of authentication because the speaker did not (or does not yet) observe the action.

Feature 16 43000 -kaedõ 'conjectural' marks Conjectural Annotative Sentence and two Conditional Sentences; the latter two may manifest Protasis or Apodosis of Contrary-to-Fact Condition. Tense-mode markers which manifest this feature are 40000 -kae 'inceptive' + 3000 -dõ 'contingent past'.

Feature 17 ⟨50⟩ 'perfective' is manifest in the subset of features 10 -teĩ 'resultative' and 500 -dẽ 'perfective'; only the latter manifestation is applicable to Subjunctive. Feature 17 here distinguishes 'Admonitive Sentence' from 'Obligative Sentences', as well as 'Perfective Conditional Sentence' from non-perfective 'Conditional Sentence'.

Feature 18, which is 1 -pa 'assertive', applies throughout Subjunctive and Indicative

FIGURE V-A
SUBJUNCTIVE SENTENCE



Feature											
14.	60000 'admonitive'	–	–	–	–	–	–	–	+	+	+
15.	40 'inferential'	–	–	–	+	+	+	+			
16.	43000 'conjectural'	–	–	+	–	–	+	+			
17.	{50} 'perfective'						–	+	–	–	+
18.	1 'assertive'	–	+						–	+	
19.	44000 'habitual'				–	+					

to distinguish Assertive from non-assertive, often narrative, sentences.

Feature 19, which is 44000 'habitual', is manifest in an obligatory sequence of tense-mode markers 40000 -kae 'inceptive' + 4000 -dõ 'contingent past'. Habitual Sentence is distinguished from Inceptive Sentence by this feature.

The classificatory matrix of Figure V-A distinguishes all Subjunctive Sentence types. In the following specification of sentence types, junctural features are not indicated since no further distinctions are necessary to specification. At this level, where a given sentence type may have distributionally-determined difference in intonation, such differences are considered to be non-diagnostic. Accordingly, specification of potential junctural features with Subjunctive Sentences is deferred to be displayed in Matrix III, along with the more complicated specification of such information for Indicative Sentences.

Admonitive Sentence, marked by 60500 -kẽdẽ 'admonitive, perfective' expresses reproof for failure to perform stated action.

wodi wĩdõkẽdẽ diyæ! '[You] ought to have fled, stupid!' (wodi wĩdõ 'flee', -kẽdẽ 60500 'admonitive', diyæ! 'expletive, exclamatory').

Obligative Assertive Sentence is marked by 60041 -kẽĩpa 'admonitive, inferential, assertive' to denote admonition toward future obligation or necessity. That is, the action may be necessary from the speaker's standpoint, or it may be necessary because inevitable. There is no essential difference between Assertive and non-assertive Obligative Sentences except in distribution and intonation potential (cf. Matrix III), so that a single illustration may suffice for both.

dãtadẽĩke dãyii wæ̃kẽĩpa. 'Suffering, [you] will surely lie down and die.' (dãta 'suffer', -dẽĩke 'perfect gerund, medial', dãyii 'lie down and [only with wæ̃]', wæ̃ 'die', -kẽĩpa. 60041.003 'obligative assertive, final').

Obligative Sentence is marked by 60040 -kẽĩ 'admonitive, inferential'.

Perfective Conditional Sentence is marked by 43541 -kædõdẽĩpa 'inceptive, contingent past, perfective, inferential, assertive'. Perfective Conditional manifests Apodosis of Contrary-to-Fact condition where person is clearly third person and action would have been completed at the time of the utterance.

tæ̃dõbĩdibaĩ ; e akædõdẽĩpa. 'If you all had speared, [he] would have left [you] alone.' (tæ̃dõ 'to spear', -bĩdibaĩ ; 700.022 'similative, second person [plural], protasis', e a 'leave alone [not to harm]', -kædõdẽĩpa. 43541.003 'perfect conditional, final').

Conditional Sentence is marked by ⊣43841⊢, which is a set of markers defined as x ⌈ x ∉ ⊣43041 + ⊣300,800 ⊢⊢ ; that is, -kædõĩpa 'conjectural, inferential assertive' and either -da 'indefinite person' or ⊣pgn-88⊢ 'definite person'. Conditional Sentence manifests Protasis, rarely, but more often Apodosis in Contrary-to-Fact Condition. This is the form for non-third person, and also for third person where there is a change of

subject from that of the Protasis, and the subject is not otherwise made clear.

botõ tãdo wãte; waa ĩkædõboĩpa. 'If I had died first, I would have done well.' (botõ 'I', tãdo 'first', wã 'die', ´te 'gerundial', waa 'well', ĩ 'be', -kædõboĩpa. 43441.003 'first person, conditional, final'); literally, 'I first dying, well would-I-have-been.' The context is of grieving for a friend.

Habitual Sentence is marked by 44841 which is -kæga 'habitual' + {pgn-88} 'person' + ĩpa 'inferential, assertive'. It denotes customary action in the far past.

põdẽdãbãĩ kẽwẽkægadãdiĩpa. 'Thoughtlessly they-used-to-live.' (põdẽ 'think', -dãbãĩ 20 'negative', kẽwẽ 'live', -kægadãdiĩpa. 44141.003 'third-person [plural], habitual, final').

Inceptive Sentence is marked by 40841 -kæ 'inceptive' + {pgn-88} 'person' + -ĩpa 'inferential, assertive'. In first and third persons, Inceptive expresses action which is about to take place

gokækãĩpa. 'He is about to go.' (go 'go', -kækãĩpa. 40141.003 'third person, inceptive').

In second person, there is the added force of instruction, reinforced by .007 'exclamatory' intonation (cf. Matrix III).

gokæbiĩpa! 'You ought to get going! ' (go 'go', -kæbiĩpa! 40741.007 'second person, inceptive, exclamatory').

Conjectural Annotative Sentence, marked by 43000 'conjectural', is speaker's conjecture about details concerning people or events in History or Report.

ĩyãkã baĩ---yæye baĩ ĩkædõ. 'Like this person---no, she was probably like Yaeye.' (ĩyãkã 'this person', baĩ .02 'similative', --- 'interruption', yæye 'Yaeye [proper name]', ĩ 'be', -kædõ. 4300.001 'conjectural, final'); literally, 'This-person like---Yaeye like is probably'.

Annotative Assertive Sentence is marked by 5x45801, which is -ĩkæ 'be, inceptive' + {5000} a subset of 'real and all past tenses' + {pgn-88} 'person' + -pa 'assertive'. Annotative Assertive is used in commentary on and verification of history or report. One illustration will suffice for this and Annotative, to follow.

yãeyãegade baĩkætapa. 'Huge it-did-become.' (yãeyãegade 'huge', ba 'become', -ĩkætapa. 5x41101.003 'annotative assertive, third person [inanimate], past, final').

Annotative Sentence is marked by 5x45800, which is -ĩkæ 'be, inceptive' + {5000} 'real and all past tenses' + {pgn-88} 'person'.

2.3.2.2 **Indicative Sentence**. Indicative Sentences are presented in Figure V-B which is, like Figure V-A, an extension of Figure V. Six features are employed in the classificatory matrix of Indicative Sentence, three of these having already been introduced in the description of Subjunctive.

Feature 20 .4 -wo 'dubitative' specifies Dubitative Sentences, which are interrogatives in which two alternatives are present, the negative and the positive.

Feature 21 .4 -aa 'frustrative' distinguishes Frustrative Sentence and Dubitative Frustrative Sentence from their opposites. The frustrative feature has varied semantic consequences, depending upon person and intonational features (cf. Matrix III). With first person, denial is expressed; with questions, the implication is that the person is not really there to hear; in frustrative command, the implication is that the person is not paying attention; and in dubitative sentences, the negative alternative is implied.

Feature 22 .05 -V́ 'emphasis' specifies Emphatic Sentence by shift of normal penultimate stress to the final vowel.

The classificatory matrix of Figure V-B distinguishes all Indicative Sentence types. Here, as in specification of Subjunctive Sentence types, specification of distributionally-determined difference in intonation, together with correlated person and tense differences, is left for display in Matrix III.

Perfective Assertive Sentence is marked by 541 -dēĭpa 'perfective, inferential, assertive'. Perfective has the force of passive, with the added component of inference, implying that the speaker did not see the action. Perfective is not limited to transitive clauses.

doo wædēĭpa. 'Already he-has-died.' (doo 'already', wæ 'die', -dēĭpa. 'perfective assertive, final').

Perfective Sentence is marked by 540 -dēĭ 'perfective, inferential'. There is no essential difference, except in distributional potential, between this and Perfective Assertive Sentence, above.

dōō dōō wædēĭ? 'Truly, truly, has-he-died?' (dōō 'truly', wæ 'die', -dēĭ? 'perfective, interrogative'). This is the question to which the preceding illustration gives the reply.

Resultative Assertive Sentence is marked by 11 -teĭpa 'resultative, assertive'. Resultative also has the force of passive, without implying inference. In this case, as in that of Perfective, the construction is not limited to transitive clauses.

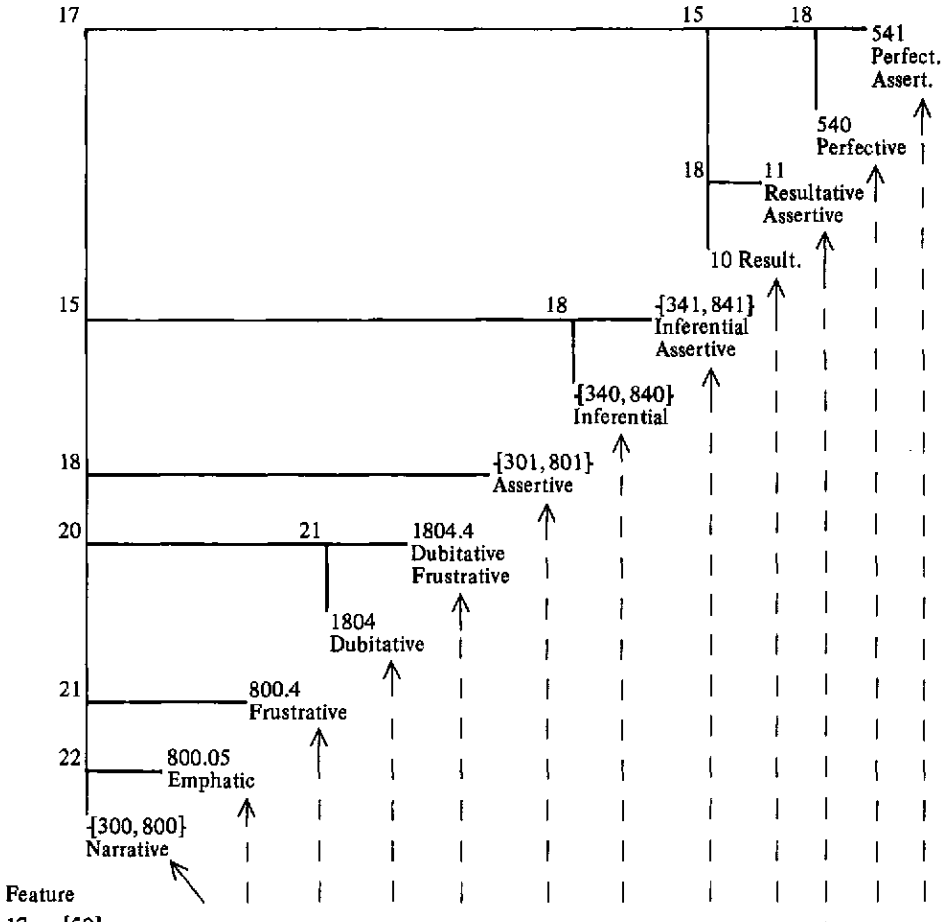
gogateĭpa. 'He had gone.' (go 'go', -gateĭpa 4011.003 'resultative assertive, far past, final').

Resultative Sentence marked by 10 -teĭ 'resultative', is essentially the same as Resultative, except in distributional potential.

Inferential Assertive Sentence is marked by 841 {pgn-88} 'definite person' + -ĭpa 'inferential, assertive'. The assertion is not completely verified, since the speaker did not see it (or has not yet seen it) take place. This means that first person inferential is restricted to present or future tense and, conversely, that assertion regarding future action in any person must be inferential, thus:

FIGURE V-B

INDICATIVE SENTENCE



gokĩboĩpa. 'I shall go.' (go 'go', -kĩboĩpa. 8441.003 'future, first person [singular], inferential, assertive, final').

In third person the construction may be interrogative, with .005 'interrogative' intonation, although statement is more common.

wabãdõ idõdãdiĩpa? 'What-if they-have-come-downstream?' (wabãdõ 'what if', i 'come downstream', -dõdãdiĩpa? 3141.005 'contingent past, third person [plural], inferential, assertive, interrogative').

In second person, the construction carries the force of instruction, with .007 'exclamatory' intonation.

giikĩbĩdiĩpa! 'You all are to go in! ' (gii 'go in', -kĩbĩdiĩpa. 8741.007 'future, second person, inferential assertive, final'.)

Inferential Sentence is marked by ⊣{340, 840}, which is a set of markers defined as x | x ∈ ⊣{300, 800} + 40}; that is, either -da 'indefinite person' or ⊣{pgn-88} 'definite person' + -ĩ 'inferential'. In indefinite and second persons, the construction is interrogative, with .005 'interrogative' intonation; this is optionally true of the other persons, which are normally statements with .002 or .003.

æækãdõ põdaĩ? 'Who is coming?' (æækãdõ 'who', põ 'come', -daĩ? 340.005 'inferential, indefinite person, interrogative').

As an illustration of inferential statement, note:

bãdõbaĩ go adãdiĩ. 'Thus they [probably] are gone to see'. (bãdõbaĩ 'thus', go 'go', a 'see', -dãdiĩ. 141.003 'third person [plural], inferential, final').

Assertive Sentence is marked by a set of markers defined as x | x ∈ ⊣{300,800} + 1}; that is, either -da 'indefinite person' or ⊣{pgn-88} 'defininte person' + -pa 'assertive'. This is the normal active indicative manifestation of non-narrative statement, as well as of a large percentage of statements in narration.

ayãæ aa petadãdipa. 'Then they called out.' (ayãæ 'then', aa pe 'call out', -tadãdipa. 1101.003 'past, third person, assertive, final').

Dubitative Frustrative Sentence is marked by 1804.4, which is -ta 'past', ⊣{pgn-88} 'person', -woaa 'dubitative frustrative'. As is mentioned above, under Feature 21, Dubitative Frustrative implies the negative of two alternatives.

æãætabiwoaa! 'You didn't bring [any], did you?' (æãæ 'carry', -tabiwoaa 1704.407 'dubitative frustrative, past, second person, exclamatory').

Dubitative Sentence is marked by 1804, which is -ta 'past', ⊣{pgn-88} 'person', -wo 'dubitative'. A past alternative is presented by Dubitative Sentence, although it may not be semantically past.

bitõ waobi ĩtabiwo? 'Are you a human being or aren't you?' (bitõ 'you', wao 'human being', -bi PGN 21 'you', ĩ 'be', -tabiwo? 1804.005 'past, second person, dubitative, interrogative'); literally, 'You, human-being-you were-you-or-not?'

Frustrative Sentence is marked by 800.4, which is ⟨pgn-88⟩ 'person', -aa 'frustrative'. Semantic variations are indicated above, in the explication of Feature 21; specific restrictions are presented in Matrix III. Frustrative instruction is illustrated as follows:

bæ̃kãbõ, bebiaa! 'maenkamo, pay-attention-and-drink! ' (bæ̃kãbõ 'Maenkamo [proper name]', -, 'medial juncture', be 'drink', -biaa! 700.407 'privative, second person, exclamatory').

First person frustrative denies implications of involvement, as follows:

ãtaboaa. 'I didn't say [any such thing].' (ã 'say', -taboaa 1400.403 'past, first person, frustrative, final').

The use of frustrative in second person question involves also occurrence of the frustrative affix -aa on the name of the person addressed, as follows:

wãgĩaa, æædõdõ gobiaa? 'O Wangi, which-way have-you-gone?' (implying that Wangi is out of hearing distance) (wãgĩ 'Wangi [proper name]', -aa .4 'frustrative, medial', æædõdõ 'which way', go 'go', -biaa? 700.405 'second person, frustrative interrogative').

Emphatic Sentence is marked by 800.05, which is ⟨pgn-88⟩ 'person', -V́ 'emphatic'. Emphatic Sentence is normally accompanied by .005 'interrogative' intonation. kĩdõ ãbõdá? 'What shall-we-two-say?' (ã 'say', bõdá? 400.055 'emphatic interrogative, first person').

Narrative Sentence, marked by 300 -da 'indefinite person' or 800 ⟨pgn-88⟩ 'person', is the normal active indicative manifestation of narrative statements. It also commonly occurs with interrogative intonation, especially in second person and indefinite person for questions. It may also carry exclamatory intonation to express instruction with second person.

botõ kõwa abo. 'I look[ed] carefully.' (botõ 'I', kõwa 'carefully [only with the verb, a]', a 'look', -bo. 400.003 'first person, narrative, final').

Specification of tense, person, and junctural co-occurrence restrictions is made in Matrix III, in two sections, as follows: Matrix III-a, which displays the simpler combinations where all definite persons have the same distribution; and Matrix III-b, which displays constructions where distribution has further restrictions according to person.

Cells in Matrix III represent intersection of sentence types with junctural features and, in the case of the final four columns of Matrix III-b, with person features as well. Numbers in the cells represent tense-mode features for which sentence types are marked; ideally, junctural feature numbers from intersecting columns should be added to each

number, but for conservation of space, they are omitted.

Beginning with Conditional, in Matrix III-a, more than one number appears in a single cell. This is due, in this case and in some cells of Matrix III-b, to differentiation between 800 {pgn-88} 'definite person' and 300 -da 'indefinite person'. Other distinctions within a given cell are due to potential substitution of 3000 -dõ 'contingent past', 4000 -ga 'far past', or 8000 -kĩ 'future', for real tense.

Paradigmatic substitution of tense is represented in a condensed manner where substitution coincides with subsets which have already been assigned, as subset 5000, in Annotative, which comprises {0000 -∅ 'real tense', 1000 -ta 'past', 3000 -dõ 'contingent past', 4000 -ga 'far past'}; or as subset 7000, in Assertive, which comprises {{5000}, 6000 -baĩ 'unreal'}; or as 9000, in Deductive Assertive and in Narrative, which is the set of all tenses.

Sentence types displayed in Matrix III-b are those in which there is a distinction between distribution of 400 {pgn-18}'first person', 100 {pgn-38}, and/or 700 {pgn-28} 'second person'. Columns are added at the right to take care of most of these distinctions, but 700 also appears in an extra row in Inferential and Narrative.

Matrix III does not specify new sentence types; rather, the necessity for accounting for such distributional differences is taken as confirmation that sentence types already distinguished are, in fact, impossible to join.

2.3.2.3. **Remonstrative Sentences.** Remonstrative Sentences are distinguished in Figure V by Feature 8, which is .6 -wẽ 'remonstrative'. Figure V-C, Remonstrative is, then, an extension of Figure V. Two features distinguish four types of Remonstrative Sentence; one of these, Feature 17 {50} 'perfective', is introduced above, in Section 2.3.2.1.

Feature 23 2x a- 'notice' distinguishes two Attention Remonstratives from action Remonstratives. That is, the rebuke in these cases is for not paying attention.

The Classificatory matrix of Figure V-C distinguishes the following four sentence types:

Perfective Attention Remonstrative Sentence is marked by {2.2 2x1 6x500.608}, which is defined as x | x ε {{0 -∅ 'narrative', 1 -pa 'assertive', .2 -te 'gerundial'} + 2x1 6x500.608 apa ãdẽwẽ {gn-8}! 'notice, assertive; say, perfective, remonstrative, number, exclamatory'}. The speaker remonstrates with the listener for not having paid attention to what is happening, no matter how many times he may have been told.

kãkĩbĩdi! ãpa apa ãdẽwẽda! '"You-plural-shall-eat! " she-says; why don't you two pay attention to what you are told?' (kã 'eat', -kĩbĩdi! 8700.007 'future, second person [plural], narrative, exclamatory [i.e., instruction]', ã 'say', -pa apa ãdẽwẽda 1 2x1 6x500.608 'assertive, perfective attention remonstrative'). Perhaps a literal translation would be, '"You-plural-shall-eat," she-says; one-sees are-told-uselessly-dual! '

MATRIX III-a

CO-OCCURRENCE OF TENSE, PERSON, AND JUNCTURE IN SUBJUNCTIVE AND INDICATIVE

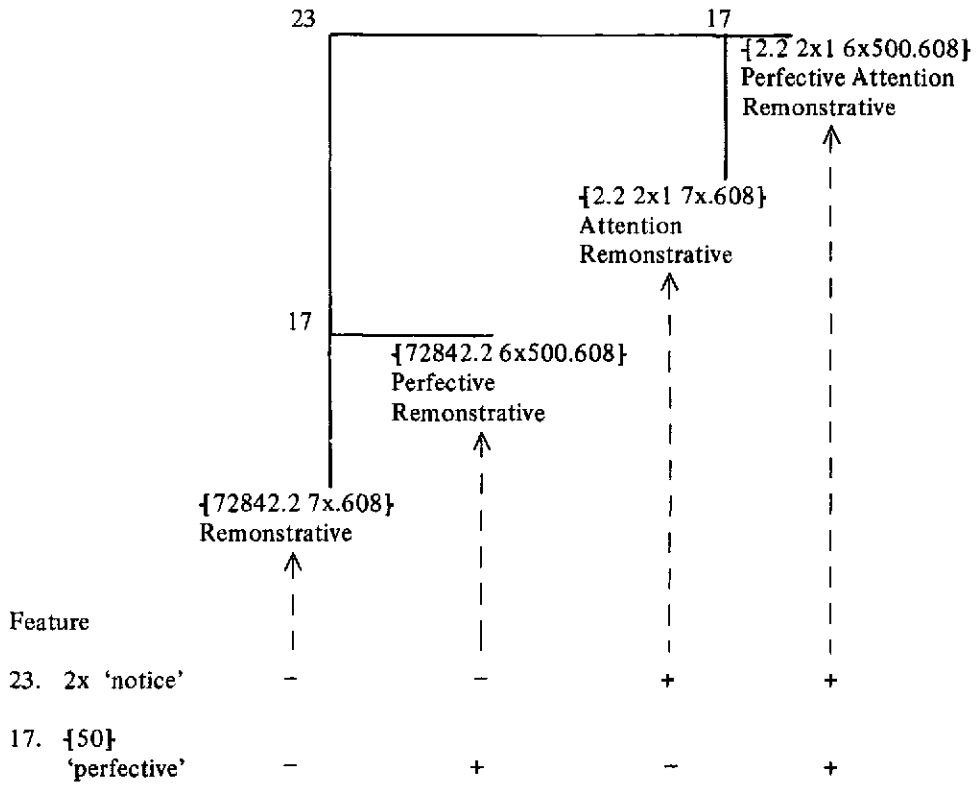
	With .002 Semifinal	With .003 Final	With .005 Interrog.
Admonitive	60500	60500	
Obligative Assertive	60041	60041	
Obligative	60040	60040	60040
Perfective Conditional	43541	43541	
Conditional	43841 43341	43841	43841 43341
Habitual		44841	
Annotative Assertive		5x45801	
Annotative	5x45800	5x45800	
Perfective Assertive	541 3541	541 3541	
Perfective	540 3540	540 3540	
Resultative Assertive	11 4011	11 4011	
Resultative	10	10	10
Dubitative Frustrative		1804.4	
Dubitative			1804
Emphatic		800.05	800.05

MATRIX III-b

(Continuation of Matrix III-a)

	.002 Semi-final	.003 Final	.005 Interr.	100.002 3 pers. Semi-final	100.003 3 pers. Final	100.005 3 pers. Interr.	700.007 2 pers. Exclam.
Incept.	40841	40841					40741
Infer.	441	441		9141	9141		741
Assertive	8441	8441					8741
Infer.			340				
	440	440	440	140	140	140	
	8440	8440	8440	8140	8140	8140	
			740				
Assertive	2301		2301				
	7801	7801				2101	
Frustr.		400.4	700.4			100.4	700.4
Narrative		300	300				
		8300	8300				
	700	700	700				700
	9400	9400	400	9100	9100	100	
			8400			8100	8700

FIGURE V-C
REMONSTRATIVE



Attention Remonstrative Sentence is marked by ⊣2.2 2x1 7x.608⊢, which is defined as x | x ∈ ⊣{0 -∅ 'narrative', 1 -pa 'assertive', .2 -te 'gerundial'} + 2x1 7x.608 apa kẽwẽ ⊣gn-8⊢! 'notice, assertive; live, remonstrative, number, exclamatory'} Here remonstration is against 'just living' without noticing what has transpired or is transpiring.

dãtateĩ apa kẽwẽ! 'That hurts; pay attention to what you are doing! (dãta 'hurt', -teĩ apa kẽwẽ! 10 2x1 7x.608 'resultative, attention remonstrative'). An approximate literal rendering would be, 'Is-hurt one-sees live-detrimentally-singular! ' Context is behavioral: application of medication to a wound.

Perfective Remonstrative Sentence is marked by ⊣72842.2 6x500.608⊢, which is defined as x | x ∈ ⊣{40841 'inceptive', 60500 'admonitive', 2101 'present or past assertive', 10 'resultative', 800 'narrative', .2 'gerundial'} + 6x500.608 ãdẽwẽ ⊣gn-8⊢! 'say, perfective, remonstrative, number exclamatory'}. In this case, rebuke is for action or ignorance in spite of one's having been told.

wakãdõ wẽdæ wẽdæ kækã ãdẽwẽ! 'How could she misbehave so badly after being told!' (wakãdõ 'how could she', wẽdæ wẽdæ 'badly', kæ 'do', -kã ãdẽwẽ 100 6x500.608 'third person narrative, perfective remonstrative'). This quotation is a mother's response to finding her toddler happily sliding down the bank toward the river.

Remonstrative Sentence is marked by ⊣72842.2 7x.608⊢ which is defined as x | x ∈ ⊣{40841 'inceptive', 60500 'admonitive', 2101 'present or past assertive', 10 'resultative', 800 'narrative', .2 'gerundial'} + 7x.608 kẽwẽ ⊣gn-8⊢! 'live, remonstrative, number, exclamatory'}. In this construction, rebuke is for action or lack of action in the face of circumstances or obligation.

gaõ godãdipa kẽwẽda! 'Get out of the way; don't just stand there! ' (gaõ 'out of the way', go 'go', -dãdipa kẽwẽda! 101 7x.608 'third person [plural] assertive, remonstrative, dual'). Addressed to a dog, this quotation displays customary distortion of number to produce the effect of irony; literally, 'Out-of-the-way they-go live-uselessly-dual!'

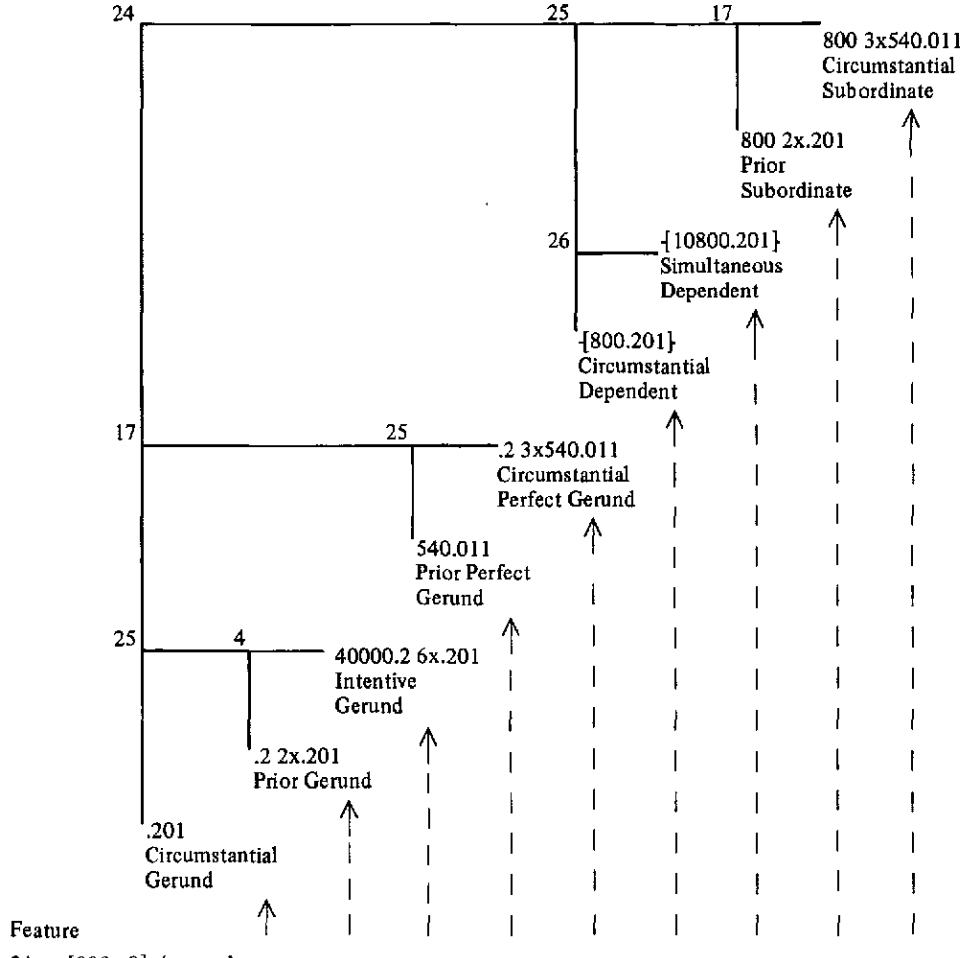
2.3.3. **Subordinate, Dependent, and Gerundial Sentences.** The set of Subordinate, Dependent, and Gerundial Sentences is distinguished from Independent Sentences in the primary classificatory matrix (Section 2.3.1, Figure IV) by the junctural feature, Feature 2:

⊣{.006}, .007, .008⊢ 'non- medial juncture'/.001 'medial juncture'. Figure VI, an extension of the left branch of this node in Figure IV, subclassifies Subordinate, Dependent, and Gerundial Sentences. It is in connection with this classification that dependency information (Section 2.1, especially Matrix I) is paralleled.

Five features, two of which appear in previous classificatory matrices, distinguish two Dependent, two Subordinate, and five Gerundial Sentences, in harmony with Matrix I, Dependency of Sentence Types (Section 2.1).

FIGURE VI

SUBORDINATE, DEPENDENT, and GERUNDIAL SENTENCES



Feature 24 which is ⊣800, .8⊢ is manifest as ⊣pgn-88⊢ 'person' in two different physical orders: viz., that position marked as 800 and that marked as .8. Only the former is relevant here. Feature 24 dominates Dependent and Subordinate Sentences, as opposed to Gerunds. This feature is doubly relevant, in that Gerunds have no Subject function, whereas Dependent and Subordinate sentences have a Subject function (cf. Section 3.3). Perfect Gerunds are distinguished from non-perfect Gerunds by Feature 17 ⊣50⊢ 'perfective', as is Circumstantial from Prior Subordinate Sentence.

Feature 25 is ⊣x.21⊢ 'gerundial auxiliary' manifest in a subset of tense-mode markers: ⊣x540.01 x-dēīke 'auxiliary, perfective, inferential, limitative', x.2 x-te gerundial'⊢. Feature 25 dominates Subordinate Sentences as opposed to Dependent Sentences, Circumstantial as opposed to Prior Perfect Gerund, and two Non-Perfect Gerunds with auxiliary as opposed to simple Gerund. The former two Gerunds are distinguished by Feature 4 ⊣70000⊢ 'subjunctive', to specify Intentive Gerund versus Prior Gerund.

Feature 26 10000 -yõ 'simultaneous' distinguishes Dependent Simultaneous from Dependent Circumstantial Sentence.

The classificatory matrix of Figure VI distinguishes all Subordinate, Dependent, and Gerundial Sentence types.

Circumstantial Subordinate Sentence is marked by 800 3x540.011, or ⊣pgn-88⊢ 'person' + wædēīke, 'react, perfective, inferential, limitative, medial'. 'Person' is that of Subject in the Sentence under discussion, but the one who reacts is the person who is Subject of the Subordinate, Dependent, or Independent clause to which this Sentence is subordinated (cf. Matrix I for dependency potential). In case Circumstantial Subordinate Sentence is dependent upon a Gerund, which has no Subject, then both the one who reacts in Subordinate Sentence and actor in the Gerund are the same person as that of Subject in the sentence upon which the Gerund is ultimately dependent. The following sentence illustrates the latter situation:

bõipa wewã wodi īkãte bão tædõ wædēīke, æwokækate, bãdõbaī wīdõdõdãīpa. 'Upon realizing that Moipa had taken [spears] and speared the late Wewa, and carrying [the baby], thus she had fled.' (bõipa 'Moipa [proper name]', wewã 'Wewa [proper name]', wodi 'now deceased', īkãte 5x100.2 'affective marker', bão 'take', tædõ 'spear', -Ø wædēīke 100 3x540.011 'third person, circumstantial subordinate', æwokæka 'carry [a child]', -te .2 'gerundial', bãdõbaī 'thus', wīdõ 'flee', -dõdãīpa. 4141.001 'contingent past, third person [honorific], inferential assertive, final').

Prior Subordinate Sentence is marked by 800. 2x.201; that is, ⊣pgn-88⊢ 'person' + ate, 'see, gerundial medial'. Person is that of Subject in the Prior Subordinate Sentence. No person is intended as the one who 'sees'; rather, the total construction is a syntactic marker having the semantic value of 'after'.

bãdõbaī kækã ate, pegõka wī põdētakãpa. 'After he had done thus, Pegonka didn't

remember.' (bãdõbaĩ 'thus', kæ 'do', -kã ate, 100 2x.201 'prior subordinate, third person, medial' [or, 'after he had'], pegõka 'Pegonka [proper name]', wĩ 'not', põdẽ 'remember', -takãpa. 1101.003 'past, third person, assertive, final'); or literally, 'Thus do-he seeing, Pegonka not did-he-remember.'

Simultaneous Dependent Sentence is marked by ⊣10800.201⊢, which is a set of markers defined as x | x ε ⊣10800 + ⊣.201, .001⊢⊢; that is, -yõ 'simultaneous' + ⊣pgn-88⊢ 'person' + either -te, 'gerundial, medial' or -, 'medial'. Subject of Simultaneous Dependent Sentence, marked as 800 and possibly also as a free Subject, is always different from that of the Dependent or Independent Sentence to which it is subordinated.

wããdẽ giiyõdã, bẽye pogodo põ. 'As she went inside, the jaguar came running.' (wããdẽ 'inside', gii- 'go in', -yõdã, 10100.001 'simultaneous, third person [mother], medial', bẽye 'jaguar', pogodo 'running', põ 'come', -. 100.003 'third person [inanimate], narrative, final'); or literally, 'Inside as-she-goes-in, jaguar running comes.'

Circumstantial Dependent Sentence is marked by ⊣800.201⊢, which is a set of markers defined as x | x ε ⊣800 + ⊣.201, .001⊢⊢; that is, ⊣pgn-88⊢ 'person' + either -te 'gerundial, medial' or -, 'medial'. Here too, there is a change of Subject between this Sentence and that Independent Sentence to which it is subordinated.

The question may legitimately be raised as to the difference between this and Narrative Sentence, as presented above, in Section 2.3.2. From the viewpoint of feature analysis there exists the primary junctural distinction marking Feature 2 ⊣⊣.006⊢, .007, .008⊢ 'non-medial juncture'/.001 'medial juncture' (cf. Section 2.3.1). However, part of the justification sought above for utilization of junctural features is the fact (see under Feature 6, Section 2.3.1) that they "reflect distribution directly" with "no overlap in distribution". The reader is referred for specification of difference to Matrix III-b (Section 2.3.2.2), where tense and person of Narrative Sentence are found in a variety of combinations. On the other hand, Circumstantial Dependent Sentence, specified in the present section, is simply marked for 'definite person', with no tense potential. The only other argument which may be advanced is intuition of the writer, who proposes a derivational relationship with Simultaneous Dependent (based partially on potential for occurrence with .2 -te 'gerundial'), rather than with Narrative.

ete bãbõ, ete bãbõ, ete bãbõ kækã, ãbãwo badã. 'Catching and fetching, catching and fetching, catching and fetching he does, and so she finally becomes [grown]'. (e 'catch [with claws]', -te .2 'Manner Gerund', bãbõ 'fetch', -, .001 'medial', kæ 'do', -kã, 100.001 'third person, medial', ãbãwo 'finally', ba 'become', -dã. 100.003 'third person [mother], narrative, final').

Circumstantial Perfect Gerund is marked by .2 3x540.011 -te wædẽĩke, 'gerundial, react, perfective, inferential, limitative, medial'. No Subject is of course present in the Gerund, and identification of the performer of the action is dependent upon other factors within the Verb Phrase. However, just as in Circumstantial Subordinate Sentence, the person who reacts is the same as Subject of the Sentence to which this Gerund is

subordinated, whether to Subordinate, Dependent, or Independent (cf. Matrix I, Section 2.1).

õyõdã ate wædẽĩke, gĩyẽte wægaĩwædõ! 'When I observed her lying there, I was frightened to tears.' (õyõ 'lie', -dã pgn-34 'she [mother]', a 'see', -te wædẽĩke, 'circumstantial perfect gerund, medial! , gĩyẽ 'fear', -te .2 'Manner gerund', wæ 'cry, react', -gaĩwædõ! ' far past, cognitive'); more literally, 'She-lies seeing upon-reacting, fearing, I-felt-like-crying! '

Prior Perfect Gerund is marked by 540.011 -dẽĩke, 'perfective, inferential, limitative, medial'. Here, with certain definable exceptions, the unexpressed actor is the same as Subject of the Subordinate, Dependent, or Independent Sentence to which Prior Perfect Gerund is subordinate (cf. Matrix I).

wædãke apãdedẽĩke, bõ yõbõdipa. 'Having talked a little, we lay down and went to sleep.' (wædãke 'little', apãde 'talk', -dẽĩke, 540.011 'perfective, inferential, limitative, medial', bõ 'sleep, yõ 'lie down', -bõdipa. 401.003 'first person [plural], assertive, final'); more literally, 'A-little upon-talking, sleep lay-we- down.'

Intentive Gerund is marked by 40000.2 6x.201 -kæte ãte, 'inceptive, gerundial, want, gerundial, medial'. Actor in Intentive Gerund is the same as the Subject of the Gerund or Sentence (any other than itself, cf. Matrix IV) to which it is subordinated.

epã gokã ate, gokæte ãte, wæpa. 'Seeing Epa go, wanting to go, it [the dog] cries.' (epã 'Epa [proper name], go 'go', -kã 'pgn-31 third person', a 'see', -te, .201 'Gerund', go 'go', -kæte ãte 40000.2 6x.201 'intentive gerund, medial', wæ 'cry', -pa. 1.003 'assertive final'). 'Note that the first Gerund in this illustration is not interpreted as 800 2x.201 -kã ate, 'prior subordinate', for here the Auca form, ate, is the verb 'to see'.)

Prior Gerund is marked .2 2x.201 -te ate, 'gerundial, see, gerundial, medial'. In this Gerund, which is parallel to Prior Subordinate Sentence, the semantic value of 'see' is not intended, but rather the function of a syntactic marker, 'after'. No stipulation may be made as to agreement between actor in Prior Gerund and Subject of the other Gerund or Sentence (cf. Matrix I) to which it is subordinated.

odãe tãdõte ate, gawadikãe ate ate, põ. 'after having speared a peccary, after evening had come, he comes.' (odãe 'peccary', tãdõ 'spear', -te ate, .2 2x201 'prior gerund, medial', gawadikãe 'evening', a 'see', -te ate, .2 2x201 'prior gerund, medial', põ. 100.003 'third person, narrative, final').

Circumstantial Gerund is marked .201 -te, 'gerundial, medial'. With certain definable exceptions, the actor in Circumstantial Gerund is the same as the Subject of the other Gerund or Sentence (cf. Matrix I) to which it is subordinated.

bãdĩ kæte, õõbẽda tækæ yigapa. 'This doing, he was in the midst of carving a blowgun.' 'bãdĩ 'this', kæ 'do', -te, .201 'gerundial, medial', õõbẽda 'blowgun', tækæ 'midst,

half-way', yi 'carve', -gapa. 4101.003 'far past, third person, assertive, final').

2.3.4. Nominalizations. The set of Nominalizations is specified in Figure IV (Section 2.3.1) as minus Feature 1, which is {.009} 'juncture'/.000 'no juncture'. Nominalization is further negatively identified at the left of Figure IV as minus Feature 4 {70000} 'subjunctive', Feature 5, which is .2 'gerundial', and Feature 6, which is 20 'negative'. Figure VII is an extension of this left-most branch of Figure IV.

Seven features, three of which appear in other areas of the classificatory system, distinguish eight types of Nominalizations. Lack of shared features by these eight types is significant, deriving from the fact that classification of Nominalizations is oriented primarily toward distribution.

The first two features utilized are Feature 9 'subjective focus', here identifying two Subjective Nominalizations with Complement function, and Feature 5 'gerundial', which distinguishes subjective Person-in-Action from subjective Characterization. Feature 24, also introduced previously, is {800, .8} 'person', used here to distinguish Person Nominalization. It may be pointed out that there exists in this set an unmarked third person, such that contrast with unmarked Action Nominalization is occasionally neutralized.

Feature 27 is 8 {loc} 'locationals', a set for which feference numbers have not been designated: {-yedẽ 'time', -yõbõ 'place', -dõ 'direction'}. Three Nominalizations identified according to these features are specified as {3508}, indicating an identical potential for tense-mode occurrence. The set marked {3508} is {0000 -∅ 'real', 500 -dẽ 'perfective', 3000 -dõ 'contingent past'}.

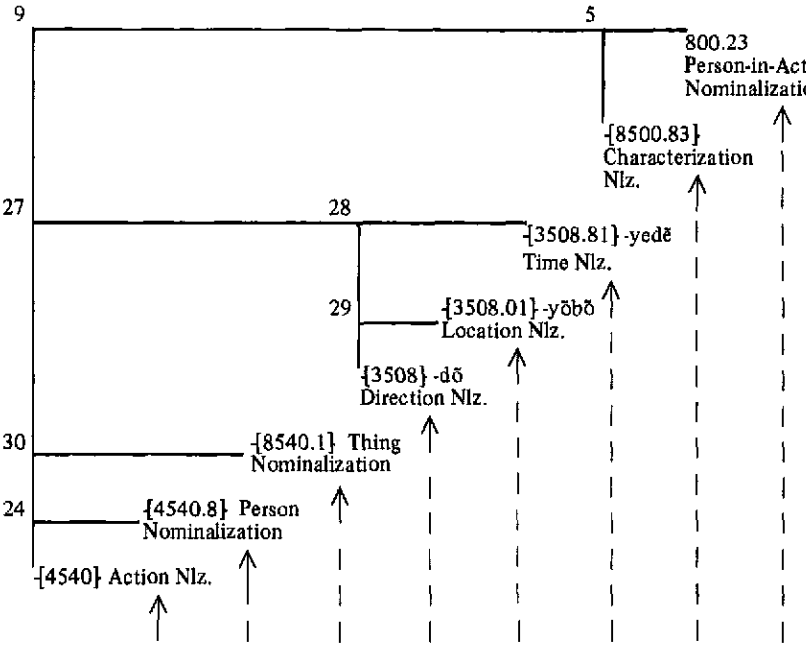
Feature 28 is -yedẽ 'time', which dominates Time Nominalization.

Feature 29, -yõbõ 'location'/-dõ 'direction', identifies Location Nominalization versus Direction Nominalization.

Feature 30 is .1 {ncl} 'noun classifiers', a set which includes approximately fifty suffixes (cf. 2.2.1 and the list in Section 5.1). Nominalization of Thing is identified by Feature 30, although here, again, as in the case of Person Nominalization, an unmarked member of the set helps to create potential ambiguity among the three types of Nominalization: Thing, Person, and Action.

Ambiguity is minimized, however, by three supporting factors. First, the list of potential tense-mode markers for Thing Nominalization differs from that pertaining to the other two. Second, for Person Nominalization, there exists a choice of SUBJECT and RELATOR manifestations. The normal manifestations of these two functions, compatible with Person, Thing, Action, and Locational Nominalizations, are Noun Phrase or pronoun manifesting SUBJECT, and relative-possessive pronoun manifesting RELATOR. These manifestations indicate that goal, location, or time, of the embedded sentence is referent in the matrix sentence. To indicate that actor of the embedded sentence is referent in the matrix sentence, Person Nominalization has demonstrative pronoun tõbẽ 'that person' as

FIGURE VII
NOMINALIZATIONS



Feature									
9.	.03 'subjective'	–	–	–	–	–	–	+	+
5.	.2 'gerundial'							–	+
27.	8 'locationals'	–	–	–	+	+	+		
28.	-yĕdĕ 'time'				–	–	+		
29.	-yŏbŏ 'place'				–	+			
30.	.1 'noun-classifiers'	–	–	+					
24.	-{800, .8} 'person'	–	+						

SUBJECT, and/or a non-personal relative pronoun dẽẽ 'which, who' as RELATOR. The different paradigms of pronouns are listed and illustrated in other constructions below, Section 5.2.

A third line of justification for recognizing these three Nominalizations, as well as the three Locational Nominalizations, is a close parallel between these six, the set of interrogative words,[7] and the set of demonstratives. Markers of these six Nominalizations are not those of case, although case may be marked on Thing, Person, and Action Nominalizations.

Nominalization markers are listed below in a column parallel to relevant interrogative words and demonstratives.

Nominalization Marker	**Interrogative Word**	**Demonstrative**
-yedẽ 'time'	ææyõdẽdõ 'when'	ĩyedẽ 'at this/that time' bãdĩyedẽ 'right now, then'
-yõbõ 'loca-	ææyõbõdõ 'where	ĩyõbõ 'here' bãdĩyõbõ 'right here'
-dõ 'direction'	æædõdõ 'which way'	ĩdõ 'this way' bãdĩdõ 'right this way'
.1 {ncl} marks things by class	kĩ-{ncl}-dõ 'what', with optional indication of noun class	bãdĩ-{ncl} 'this', with optional [rare] indication of noun class
.8 {pgn-88} 'person'	ææ-{pgn-88}-dõ 'who' [usually third person]	ĩ-{pgn-88} 'this or these person(s)' [usually third]
-ø 'action'	kĩdõ (kæte) 'what (doing)' [note absence of marker]	bãdĩ (kæte) '(doing) this' [note absence of marker]

The classificatory matrix of Figure VII distinguishes eight Nominalization types, as follows:

Person-in-Action Nominalization, marked as 800.23 {pgn-88} 'person' + -tedõ 'gerundial, subjective', functions as Complement in Sight Clause. Nouns which function as subject in this Nominalization are marked by .03 -dõ 'subjective'.

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[7]Cf. Hatcher (1956) for an exposition of the syntactic relevance of underlying question.

tokãtedõ abi! 'Watch him laugh!' (to 'laugh', kãtedõ 100.23 'third person, gerundial, subjective', a 'see', -bi! 700.007 'second person narrative, exclamatory' which is 'instruction').

Characterization Nominalization is marked as ⊣8500.83⊢, which may be defined as x | x ε ⊣⊣⊣0000.Ø 'real tense', 8000 -kĩ 'future'⊢ + .8 ⊣pgn-88⊢ 'person'⊢, 500 -dẽ 'perfective'⊢ + .03 -dõ 'subjunctive'⊢.

Characterization Nominalization functions as Complement in Speech Clause, only in Admonitive Sentence. It takes regular pronoun as pronominal subject. Nominal subject is marked by 70 -bẽ 'speculative'.

ĩbaĩ badodõ ãkẽdẽ. 'I might as well admit that I've become this way [old].' (ĩbaĩ 'thus', ba 'become', -bodõ 0000.83 'real, person [first]', subjective', ã 'say', -kẽdẽ. 60500.003 'admonitive, perfective, final'); or, more literally, '"Thus me-to-become" ought-to-be-said.'

Time Nominalization is marked as ⊣3508.81⊢-yedẽ, which may be defined as x | x ε ⊣⊣500 -dẽ 'perfective', 0000 -Ø 'real tense', 3000 -dõ 'contingent past' .8 ⊣ pgn-88⊢ 'person 'person'⊢ + -yedẽ 'time' + ⊣.00 'neutral', .01 -ke 'limitative'⊢⊢. Time Nominalization functions as Time in any Clause or as Complement in Stative Clause.

ĩyẽyedẽ ĩgateĩpa. 'It had been the time to listen.' (ĩyẽ 'listen', yedẽ 0000-yedẽ 'real tense, time', ĩ 'be', -gateĩpa. 4011.003 'resultative, assertive, far past, final'); literally 'Listening-time it-had-been.'

Location Nominalization is marked as ⊣3508.01⊢-yõbõ, which is defined as x | x ε ⊣⊣500 -dẽ 'perfective', 0000 -Ø 'real tense', 3000 -dõ 'contingent past'⊢ + -yõbõ 'place' + ⊣.00 -Ø 'neutral', .01 -ke 'limitative'⊢⊢. Location Nominalization functions as Time in any Clause or as Complement in Stative Clause.

bitõ õgõyõbõ bãæ õgõtapa. 'It was standing right where you sit.' (bitõ PGN-21 'you', õgõ 'sit, stand', -yõbõ 0000-yõbõ 'real tense, place', bãæ 'there [only in Verb Phrase of Rest]', õgõ 'sit, stand', -tapa. 1801.003 'past, third person [inanimate], assertive, final'); literally, 'Your sitting-place there it-stood.'

Direction Nominalization is marked as ⊣3508⊢-dõ, which is defined as x | x ε ⊣⊣500 -dẽ 'perfective', 0000 -Ø 'real tense', 3000 -dõ 'contingent past'⊢ + -dõ 'direction'⊢ Direction Nominalization functions as Direction in Motion or Rest Clause, as Modifier in Noun Phrase, or as Complement in Stative Clause.

botõ tadõ dãda godõ kẽwẽ bedæ gotadãpa. 'Along my path in the direction that they two went, she has gone to drink manioc [drink].' (botõ PGN-11 'I, my', tadõ 'path', dãda PGN-32 'they two', go 'go', -dõ 0000-dõ 'real tense, direction', kẽwẽ 'manioc', be 'drink', -kæ 40000 'inceptive', go 'go', -tadãpa. 1101.003 'past, third person [mother], assertive, final'); literally, 'My path, their-two go-direction manioc in-order-to-drink she-went.'

Nominalization of Thing is marked as ⊣8540.1⊢, defined as x | x ε ⊣⊣40 -ĩ 'inferential',

500 -dē 'perfective', 3000 -dō 'contingent past', 8000 -kī 'future'} + {.0 'neutral, .1 {ncl} 'noun classifier'}. Nominalization of Thing functions as an inanimate noun.

dādi ōgōītaa wido kækā. 'He throws out their table.' (dādi PGN-33 'third person plural', ōgō 'to set, sit, stand', -ītaa 40.1 'inferential, {ncl} [surface]' wido kæ 'throw out', -kā. 100.003 'third person, final'); literally, 'Their setting-surface out throws-he.'

Nominalization of Person is marked as {4540.8}, and defined as x | x ε {{0000 -∅ 'real tense', 500 -dē 'perfective', 4040 -gaī 'far past, inferential, 8000 -kī 'future'} + .8 {pgn-88} 'person'}. Nominalization of Person functions as an animate noun.

wāādā tōbē ēyadēdā tayōdā, dæ. 'When the mother, that one who had given birth, came out, [the baby was] not there.' (wāādā 'mother', tōbē PGN-31 'third person demonstr.', ēya 'be born', -dēdā 500.8 'perfective, person [third, mother]', ta 'come out' -yōdā, 10100.001 'simultaneous, third person [mother], medial', dæ 'not there'). More literally, 'Mother, she-who gave-birth, when-comes-out, not there.'

Action Nominalization is marked as {4540}, or {0000 -∅ 'real', 500 -dē 'perfective', 4040 -gaī 'far past, inferential', 8000 -kī 'future'}. Action Nominalization functions as Complement, Modifier, or Object.

bīdi pō gobō ada. 'They two looked out and saw you all coming.' (bīdi PGN-23 'second person plural', pō 'come', gobō 'outward [only with "to look"]', a 'look', -da. 100.003 'third person, final'); or, literally, 'Your-plural come outward see-they-two.'

Action Nominalization may, like any other Substantive, take .01 -ke 'limitative' or .02 -baī 'similative'. Note the following illustrations:

wēīdē dādō īdēke pikæ pikæ pikæ pikæ bakīdā. 'Just like her former self, very very old she will become.' (wēīdē 'former', dādō PGN-31 'her', ī 'be', -dēke 500.01 'perfective, limitative', pikæ 'old', ba 'become', -kīdā. 8100.003 'future, third person [mother], final'), or, literally, 'Former her only-being old old old old she-will become.'

ayæ dādō kædēbaī pōpa. 'Then he comes just the way he used to do.' (ayæ 'then', dādō PGN-31 'third person singular', kæ 'do', -dēbaī 500.02 'perfective, equative', pō 'come', -pa. 101.003 'third person, assertive, final'); or, more literally, 'Then his former-doing-like he-comes.'

2.3.5. **Derived sentence types.** Based indirectly upon the classificatory system, derived sentence types depend on conjoining of tense-mode complexes which are identified above in Sections 2.3.1-4. Conjoining of tense-mode is accomplished in Auca by means of auxiliaries marked for any of a broad range of sentence types in conjunction with a constant factor of tense-mode for which the verb stem is marked.

This operation is not to be equated with the additive operation which is apparent in some complex tense-mode sequences within the classificatory system, such as, for example, 800 3x540.011 'circumstantial subordinate', which is {pgn-88} 'person' + wædēīke 'react,

perfective, inferential, limitative' (cf. 2.3.3). Here progression in number of sentence types is merely arithmetical. Even in cases where potential for various markings on the verb stem is great, as in ⸢72842.2 6x500.608⸣ 'perfective remonstrative', which is ⸢⸢40841, 60500, 2101, 10, .2⸣ + 6x500.608⸣ (cf. 2.3.2.3), the total number of sentence types added to the system is just one.

In contrast, derivations involving constant tense-mode with verb stem and variable tense-mode with auxiliary increase the number of sentence types according to geometric progression; that is, the number of some subset of setnence types is doubled by each conjoining operation.

Distribution of these derived sentences is, in each case, the same as that of the equivalent non-derived sentence, the constant factor of derivation being irrelevant to function of the total construction.

Preparatory Sentences are marked by ⸢40000 4x 9x29999.999⸣, which is a set defined as x | x ε ⸢(40000 -kæ 'inceptive' +kæ- 4x 'do') X ⸢9x29999.999 'any non-inceptive' tense-mode'⸣⸣. The range of 'any non-inceptive tense-mode' includes Independent, Dependent, Subordinate, Gerundial, Protasis, and embedded Sentences, with the exception of those which involve 40000 'intentive' without tense or person in their tense-mode complex; specifically, 40000.2 6x201 Intentive Gerund and 40000 Purpose Sentence are excluded.

Based on a sequence which may be translated literally as 'in-order-to-..., do', the semantic force of this construction is 'to prepare to'.

tõbẽda dãda ædæ̃bõ ææ̃kæ kædẽ ĩkæ, ...awãa õgõ gõ. 'Although they two themselves had [only] prepared to finish collecting, ...the plumes stood adorning the tree trunk.' (tõbẽda PGN-32 'they two', dãda PGN-32 'their (two); ædæ̃bõ 'fully, finished', ææ̃ 'take, collect', -kæ kæ- 40000 4x 'preparatory', -dẽ 500 'perfective action nominalization', 5x40000.001 ĩkæ 'although, medial', awãa 'tree trunk', õgõ 'stand', gõ 'adorn', -. 100.003 'third person [inanimate], narrative, final'). Literally, this illustration with its nominalized Preparatory Sentence would read something like this: 'They-two-themselves their-two fully in-order-to-take act-of-doing although, tree-trunk stand adorns.'

'The construction 5x40000.001 ĩkæ, 'although, medial', is a relator which occurs only with Substantives.)

Purposive Sentences are marked by ⸢40000 6x 9x29999.999⸣, which is a set defined as x | x ε ⸢(40000 -kæ 'inceptive' + 6 x ã- 'want') X ⸢9x29999.999 'any non-inceptive tense-mode'⸣⸣. The meaning of Purposive Sentence is 'to plan to', literally, 'in-order-to-. ..., want'.

bõdite ĩbõdite wæ̃dõkæ ãte põ, ... 'As he comes planning to kill us, ...' (bõdite ĩbõdite PGN-13 'us', wæ̃dõ 'kill', -kæ ã- 40000 6x 'purposive', -te .2 'gerundial [manner]', põ 'come', -, 100.001 'third person, medial'); literally, 'Us in-order-to-kill wanting comes-he,...'

Conative Sentences are marked ⊣40000.2 6x.2 4x 9x29999.999⊢, which is defined as x | x ε ⊣(40000.2 6x.2 -te ãte 'intentive' + 4x kæ- 'do') X ⊣9x29999.999 'any non-inceptive tense-mode'⊢. The construction has the semantic force of 'to try to', being based on a sequence which might be translated literally, 'doing, wanting, do'.

gõga tãdõkæte ãte kækõyõkã, ... 'As he sat trying to stoke the fire, ...' (gõga 'fire', tãdõ 'stoke', -kæte ãte kæ- 40000.2 6x.2 4x 'conative', -kõ 'sit', -yõkã, 10100.001 'simultaneous, dependent, medial'); or, literally, 'fire stoke-doing wanting do-sit-as-he,...'

Perceptive Sentences are marked by ⊣.2 3x 9x99999.599⊢, which is a set defined as x | x ε ⊣(.2 -te 'gerundial' + 3x wæ- 'react') X ⊣9x99999.599 'any non-gerundial tense-mode'⊢. The range of 'any non-gerundial tense-mode' includes Independent, Dependent, Subordinate, Protasis, and embedded Sentences.

Perceptive Sentence has the semantic force of 'to be aware, to consider, to suffer, to infer', depending on the verb to which it is affixed. Among these combinations, the most clearly functional and productive is the form translated as 'to perceive'.

bãdõbaĩ ate wækĩbiĩ! 'You are to perceive [the matter] thus! ' (bãdõbaĩ 'thus', a 'see', -te wæ- .2 3x 'perceptive', -kĩbiĩ! 8740.007 'future, second person, inferential, exclamatory [i.e., instruction]'); literally, 'Thus seeing you-shall-react!' This is from a quotation in which a man is telling his friend, 'I told you that's what was going on, and you didn't believe me.'

In constructions involving physical sensations and appetities, the semantic component of Perceptive is 'to suffer, to crave':

botõ dãgĩbõdi kægate wæbo. 'I am suffering greatly from a toothache.' (botõ PGN-11 'I', dãgĩbõdi 'very much', kæga 'tooth-hurt', -te wæ .2 3x 'perceptive', -bo. 100.003 'first person narrative, final'). This is in contrast with the simpler botõ ... kægabo. 'I have-a-toothache.'

Subject of the verb is the same as that of the auxiliary in this construction except when the verb is one of Motion or Initiation-of-Action, or in case of an intransitive verb whose meaning may preclude sameness of subject; in these cases sameness of subject is optional.

Dabo tĩyæbõdi põkãte, wæte wætakãpa. 'Dabo came quickly and perceived that she was dead.' (dabo 'Dabo [proper name]', tĩyæbõdi 'very fast', põ 'come', -kãte, 100.201 'third person, gerundial, medial = circumstantial subordinate', wæ 'die', -te wæ .2 3x 'perceptive', -takãpa. 1101.003 'past, third person, assertive, final'). Literally, this sentence is 'Dabo quickly come-he, dying he-reacted.'

Exhortative Sentences are marked by ⊣60500 4x5805.409⊢, which is a set defined as x | x ε ⊣(60500 -kẽdẽ 'admonitive' + 4x kæ- 'do' X ⊣5805.409 'any past or present a assertive active indicative, dubitative, frustrative, or narrative, tense-mode'⊢. This construction expresses strong exhortation, whether the opportunity is past, or not.

tædõkẽdẽ kætabĩdiwo ? 'Did you spear, as you certainly should have done?' (tædõ 'spear', -kẽdẽ kæ- 'exhortative', -tabĩdiwo? 1704.005 'past, second person [plural], dubitative, interrogative'); more literally, 'Ought-to-spear did-you-or-not?'

Present exhortation in second person is without imperative marker or second person marker:

gãdõdãbãĩ ĩkẽdẽ kæ! 'You shouldn't nurse [the baby]! ' (gãdõ 'nurse', -dãbãĩ 20 'negative', ĩ 'be', -kẽdẽ kæ 60500 4x 'exhortative', -! 100.007 'zero person [in this case, second], exclamatory'); or, literally, 'Not-a-nurser ought-to-be do!"

Posterior Sentences are marked by {8800 5x9802.009}, a set defined as x | x ∈ {{{0000 -∅ 'real', 6000 -baĩ 'unreal', 8000 -kĩ 'future'} + {800} 'person-number' + 5x ĩ- 'be'} X {9802.009 'any narrative or assertive tense-mode'}}. This construction allows for complex tense.

baa! wæ̃kĩkã ĩkãtapa. 'Ha! he was going to die.' (baa! 'ha!', wæ̃ 'die', -kĩkã ĩ- 8100 5x 'posterior', -takãpa. 'past, third person, assertive, final'); or, more literally, 'Ha! die-will-he was-he.'

2.4. Tense-mode expansions. Sentence types specified according to the classificatory-features system (Section 2.3) are subject to further optional expansion by addition of Reaction features. Such Reaction features, listed in Chapter 1 (see 1.1.7) and manifested in tense-mode markers of Section 2.2 (cf. Table IV), are not diagnostic and therefore do not pertain to the classificatory system. These are the following: .04 {xpl} 'expletives', .07 -æ̃ 'pejorative' and .08 'calling'.

.04 {xpl} 'expletives' is manifest in a subset of three expletives {toõ 'expletive, contempt', diyæ 'expletive, emphatic', edæ 'expletive, mild'}. These three, in contrast with other Auca expletives, may occur with the tense-mode complex, even to the point of being phonologically bound in some- but not in all- constructions. They ordinarily carry exclamatory intonation, .007, except where edæ 'expletive, mild' follows a gerundial. This supersedes the normal intonation of a sentence Compatibility of expletives with tense-mode sequences, as well as with non-PREDICATION functions, is presented in Table IV.

The most important of these expletives syntactically is edæ 'expletive, mild' in connection with the interrogative second-person Narrative construction, where its presence seems to be nearly obligatory, creating redundancy to reinforce distinction between imperative and interrogative intonation in the construction. Interrogative Narrative with the mild expletive is illustrated in the following sentence:

gikade ẽyẽbiedæ? 'Gikade, do-you-understand?' (gikade 'Gikade [proper name], ẽyẽ 'listen, understand',-bi? 700.005 'second-person, interrogative', edæ 'expletive, mild').

Compare Narrative as instruction as follows: ẽyẽbi! 'Listen! ' (ẽyẽ 'listen, understand', -bi 700.007 'second-person narrative, exclamatory').

The mild expletive edæ also frequently occurs bound to perfective gerunds, with -dẽĩke, 540.011 'perfective, inferential, limitative'. The semantic component of causality, which is weakly inherent in perfective gerunds, tends to be strengthened by the presence of the mild expletive, although this is not always clearly the case. Note the following illustration:

tæ̃dõte tadẽĩkeedæ, adobaĩ wæ̃tadapa. 'Because they speared and came out, they died in the same way.' OR 'When they speared and came out, they died in the same way.' (tæ̃dõ 'spear', -te .2 'manner gerundial', ta 'come out', -dẽĩke, 540.011 'perfective, inferential, limitative', edæ 'expletive, mild', adobaĩ 'in the same way', wæ̃ 'die', -tadapa. 1101.003 'past, third person [dual], assertive, final').

The strong expletive, diyæ, may also have some syntactic significance in connection with the Gerundial Informative sentence, marked by 400.207, thus:

abote diyæ! 'Just give me a chance to look at it, will you?' (a 'look', -bote! 400.207 'first person [singular], gerundial, exclamatory', diyæ 'expletive, emphatic'). A more literal approximation of the translation might be: 'Let-me-look, what-do-you-say?'

Elsewhere, diyæ 'expletive, emphatic' has the force of 'What do you say to that?', 'What about...?', or 'So there!' To illustrate the use, 'What about...?', a non-predicated sentence is presented:

tõyæ, wato diyæ? 'Toñæ, what about Wato?' (tõyæ 'Toñæ [proper name]', wato 'Wato [proper name]', diyæ 'expletive, emphatic', -? .005 'interrogative').

Following assertions and other predicated sentences, diyæ adds simple emphasis, tinged with the bit of ridicule.

ĩdõ gopa diyæ! 'There it-goes, so-there! ', or 'There it-goes, ha-ha!' (ĩdõ 'that way', go 'go', 1-pa 'assertive', diyæ 'expletive, strong', .007 -! 'exclamatory').

Finally, the third of the set of expletives, toõ adds just the semantic component of 'contempt' and has no apparent syntactic significance. It may be followed by diyæ 'expletive, emphatic'.

wæwẽbĩdipa toõ diyæ! 'You-all-are-forever-crying–how annoying! really!" (wæ 'cry' -wẽ 'forever', -bĩdipa 701 'second person [plural], assertive', toõ 'expletive, contempt', diyæ 'expletive, emphatic', -! .007 'exclamatory').

A common use of toõ 'expletive' is with Frustrative:

goboaa toõ! 'AS-if-I-were-going–don't-be-ridiculous! ' (go 'go', -boaa 800.4 'first person [singular], frustrative', toõ 'expletive, contempt', -! .007 'exclamatory').

.07 -æ̃ 'pejorative' occurs with the morphemes -pa and -bã, and possibly with others; data are uncertain at this point. It is always accompanied by exclamatory intonation, .007. The two known occurrences may be illustrated as follows:

wækãpaæ̃! 'Cry-baby! ' (wæ 'cry', -kãpa 101 'third person, assertive', -æ̃ .07 'pejorative'). Literally, the translation might be, 'He-cries-shamefully.'

kæ̃dãbãĩ ibãiæ̃wedãdi! 'You are not to eat that despicable food! ' (kæ̃ 'eat', -dãbãĩ 20 'negative', ĩ 'be', -bãĩwedãdi! 87.708 'urgency, imperative, command, {gn-8} gender-number, imperative intonation', -æ̃ .07 'pejorative'; more literally, 'Not-eaters be-ye-urgently-for-shame! '

.08 -o 'calling' occurs with the morpheme -pa 1 'assertive', in a calling situation.

dẽbõ ãpao. '[That's what] Nemo says.' (dẽbõ 'Nemo [proper name]', ã 'say', -pa. 1.003 'assertive final', -o 'calling').

The calling marker also occurs as a vocative with nouns of address in the same calling situation, but only with those nouns ending in [+compact] vowels.

dayõpæ̃o! æædõdõ gobii? 'Dayuma [proper name]', -o .08 'calling', æædõdõ 'which way', go 'go', -bii? 700.055 'second person, emphasis, interrogative.).

CHAPTER 3

SENTENCE STRUCTURE

Sentence, in this "neo-classical" tagmemic model, is held to be focal to syntax, and hence to all of grammar. Accordingly, the present chapter treats basic subject matter for which Chapter 1 provides the matrix of Discourse, Chapter 2, the classificatory system, Chapter 4, the morphophonemic output, and Chapter 5, a brief sample of lexical output.

The particular emphasis of this preliminary grammar is served by a brief but comprehensive summary of sentence and clause structure, with only a suggestion as to phrase structure. Generative power of the grammar is restricted to this extent, but only in the sense that a grammar consigns unanalyzed items to a lexicon. In effect, the kind of syntax which relates Phrase is treated, but the included structure of phrases is left to be treated subsequently as a complement to the present study. Certain aspects of syntax internal to phrases are necessarily treated when they relate to embedded sentences.

Section 3.0, to follow immediately, sets forth assumptions regarding relatedness among sentence types. Succeeding sections describe Simple Sentence (3.1), Compound Sentences (3.2), Clause (3.3), and embedded constructions such as Nominalizations, Purpose Sentence, Negative Sentence, and Manner Participle (3.4).

3.0. Assumptions regarding sentence relationships. Relatedness among sentence types has various dimensions: the first of these, deriving from shared features and relative distance in the classificatory system, is described at length in Chapter 2; another dimension is that of sentence distribution, a factor which is noted above in Section 2.1, utilized in the classificatory system of Section 2.3, and explicitly characterized below in the formulae of Chapter 3; and finally, the dimension of relatedness among syntagmatic structures, the prime topic of Chapter 3.

The particular approach of this grammar, which is to regard syntagmatic relationships among functions defined on a set as constituting the elementary substance of structure, dictates that both function and set be made explicit. For thorough comparison of sentence types, both syntagmatic and paradigmatic components must be evident. This is accomplished here through tagmemic formulae, each construction being characterized by its own formula.

Nevertheless, sentence constructions are related to such an extent–and that relationship is assumed to be derivational– that actual specification of each formula is deemed unnecessary. Rather, relatedness is expressed via transformational rules which derive one formula from another.[1]

[1]Note the similarity between this approach and that proposed by Cook in his 1964 publication; cf. the following instruction (page 49): "The tagmemic analyst will examine his final list of formulae now, to see...which formulae are transforms of each other."

Due to incorporation of paradigmatic sets in specification of syntagmemic relationships, the tagmemic formula allows for derivation, not simply from a base formula (although that, too, would be feasible), but from a composite formula which is inclusively the formula for all derived constructions. Choice of one diagnostic manifestation, which, in the case of Sentence, is tense-mode, allows for specification of that manifestation as a defining context in terms of which the transformation is either obligatory or optional.[2]

That facet of the distributional relationship among sentences which involves embedding is made explicit in a tagmemic grammar by specification of sentence types that manifest individual functions in every type of matrix sentence.

3.1. **Simple Sentence.** A simple sentence in Auca is one which includes only one PREDICATION-TYPE, as opposed to compound sentences (described in Section 3.2) which comprise more than one PREDICATION-TYPE. This definition allows for any number of included Dependent, Subordinate, or Gerundial Sentences, as well as for embedded Sentences.

Generalized Formula (1) represents Sentence as generated within the least restricted type of discourse, which is Conversation. Entire sets of potential manifestations of each sentence function are listed within braces, the lists being greatly abbreviated through indication of subsets, some of which are enumerated above in the classificatory system (Chapter 2), and the remainder of which are specified in appropriate sections of the present chapter.

Inclusion of {900} alongside a paradigmatic set indicates applicability of discourse and concord restrictions to every member of the set, the particular significance of "900" being that no limitation is placed by discourse on Person or Orientation of set members. Both {900} and {9x 99999.999} must be replaced by restricted subsets in the context of other discourse types, in conformity with Lexico-Syntactic Rule (1), Section 1.3.3.

Generalized Formula (1)

Sentence (in Conversation {99999.999}) =

±INTRODUCTION:{ Address 700, Interjection, Relative Time, Demonstrative}	±SETTING[2]:{{{Dep.Sentence}, {Sub.Sentence}, {Gerund}}{900}}
+SUBJECT:{{Substantive}{900}}-s	+PREDICATION:{{Clause}{900}}

[2]The role of these transformational rules in the system is not unlike that of the first step in Chomsky's "transformational history" of embedding, the formulation of "obligatory transformations, whose applicability to a string is determined by the presence or absence of a certain marker in the string." (Chomsky 1965.132.)

+PREDICATION-TYPE:-{9x 99999.999} ±REPETITION: -{800 2x.201,
-{10800.201},
-{800.201},
.2 2x.201,
.201}-rep

Superscript "2" following SETTING in the formula allows for optional double manifestation of the function; possibly the exponent should be a higher number, but this number is the maximum so far encountered. Potential infinity of sentence expansion is not a function of this exponent, but rather of the recursive presence of SETTING function within each potential manifestation of itself (cf. Sections 3.1.2-6).

The suffix "-s" which appears with Substantive -{900}- is a dummy symbol attributable to Permutation Rule (1) (cf. Section 1.3.3, Sentence (3), and Morphophonemic Rule (h), Chapter 4) for reordering of the subject marker.

Manifestation of PREDICATION-TYPE is restricted by definition in Generalized Formula (1) to combinations of tense-mode and juncture which are set forth in the classificatory system (Sections 2.3 and 2.4). Address 700 is restricted to Conversation or Report.

REPETITION is a function which involves repetition of the verb stem, Verb Phrase, or Verb Collocation pertaining to PREDICATION, such that its presence necessitates an entailment marker for the manifestation of PREDICATION, as follows:

Rule (a) Tobl

X +PREDICATION:-{A}- +PREDICATION-TYPE -{Y}- ⟹

X +PREDN:-{A}- -rep +PREDN-T:-{Y}- / {800 2x.201,
{800.201}, {10800.201},
.2 2x.201, .201}-rep

That is, the clause which manifests PREDICATION must include a repetition of its Predicate function when REPETITION is present in the matrix sentence. Since this repetition pertains ultimately to the following sentence, a series of formulae and morphophonemic rules are necessary. We may illustrate only the final output here, to give an idea of the construction, without expressing either the structure or the morphophonemic permutation involved. These are made explicit as Clause is presented in Section 3.3, and in rules for permutation of REPETITION (Section 4.2.3).

õtoga pædæ godõdã, kõtatapa. kõta ate, ... 'She stretched a stick out toward it, and it sat upon it. After it had sat, ...' (õtoga 'stick', pædæ 'extend', godõ 'give over', -dã, 100.001 'third person [honorific], medial', kõta 'sit', -tapa. 1101.003 'past, third person, assertive, final', -ø ate, 100 2x.201 'third person, see, gerundial, medial').

3.1.1. **Declarative Sentence.** Independent Declarative Sentence may be generated from Generalized Formula (1) by choice of .003 'final juncture' with any compatible combination of tense-mode as manifestation of PREDICATION-TYPE.

As an illustration of Independent Declarative Sentence with INTRODUCTION: Address and SETTING:Circumstantial Dependent Sentence, note Sentence (4):

(4) dẽbõ, bõditõ õkõ põbĩdi! ãkã, bõipa ãwatakãpa. 'Nemo, "Come (you, plural) to our house! ", he said; and Moipa danced.!

The specific selection from Generalized Formula (1) which accounts for Sentence (4) is expressed in Formula (S4-1).

Formula (S4.1)

Assertive Sentence (in Report ⟨57666.566⟩) = +INTRO:Address 700 +SET:Circum.Dep. Sentence ⟨600⟩ +SUBJECT:Subst.PGN-131-s +PREDN:intr.v.stem +PREDN-T:1101.003

Whereas Generalized Formula (1) stipulates that PREDICATION is manifested by ⟨Clause⟩, the choice of PREDICATION manifestation in Sentence (4) is "intransitive-verb-stem." This is not a deviation from the norm since verb stem is, in fact a minimal clause, determinatiave for clause type (cf. 3.3). The same rationale allows for manifestation of PREDICATION by Verb Collocation (cf. Sentence 5) or by Verb Phrase.

Pending formulation of included constructions in this illustration (see under Circumstantial Dependent Sentence, Section 3.1.4), provisional selection rules identify illustrative material which manifests each function of the independent sentence, Sentence (4).

Selection Rule (S4.a)

Address 700 ⟶ dẽbõ, 'Nemo [proper name], medial' (addressed to listener)

R (S4.b)

Circum.Dep.Sentence ⟨600⟩ ⟶ bõditõ õkõ põbĩdi! ãkã, '"Come (you, plural) to our house! " he says;'

R (S4.c)

Subst.PGN-131-s ⟶ bõipa kã-s 'Moipa [proper name], third person singular, subject'

R (S4.d)

intr.v.stem ⟶ ãwa 'dance'

R (S4.e)

1101.003 ⟶ -ta 1-pa. 'past, third person, assertive, final'

3.1.2. **Interrogative Sentence.** Interrogative Sentence, based on choice of .005 'interrogative' with compatible tense-mode markers in the manifestation of PREDICATION-TYPE, entails two obligatory transformations, Rules (b) and (c), in addition to the restriction that .005 may not occur within the context of Legend or History.

Rule (b) Tobl

X A_j B_j Y ±REPETITION:{C}$_j$ ⟹

X A B Y / .001, .002, .005, .007, .008

Note that Rule (b) is applicable not only to choice of .005 'interrogative', but to all junctural markers with their compatible tense-mode sequences, with the exception of .003 'final'. Rule (c) applies only to Interrogative.

Rule (c) Tobl

W ±SETTING:{X} +SUBJECT: {Y} Z ⟹

W ±SETTING:{X} ±INTERROGATION:Interrogative word

+SUBJECT:{Y} Z / .005

That is, an optional INTERROGATION function is added to Generalized Formula (1) in the presence of .005 'interrogative'.

Generalized Formula (1) as now modified allows for generation of Sentence (5), a Narrative Sentence with interrogative SUBJECT.

(5) æækãdõ tao tao beda? 'Who is drinking in great gulps?'

The specific selection from modified Generalized Formula (1) which accounts for Sentence (5) is expressed in Formula (S5.1), as follows:

F (S5.1)

Interrog.Narrative Sentence (in Conversation {99999.999} =

+INTERROG:interrog.word +SUBJECT:demonstrative-PGN-131-s

+PREDN:Trans.V.Colloc. +PREDN-T:300.005

Selection rules follow:

R (S5.a)

interrog.word ⟶ æædõ 'which'

R (S5.b)

demonstrative-PGN-131-s ⟶ ĩ-D-kã kã́-s 'this person, third person singular, subject'

R (S5.c)

Trans.V.Colloc. ⟶ tao tao be 'drink, gulping'

R (S5.d)

300.005 ⟶ -da? 'indefinite person, narrative, interrogative'

Permutation rule (e) and Deletion rule (f) apply to this terminal string (see Chapter 4).

3.1.3. **Imperative and Exclamatory Sentences.** No further restriction on the Generalized Formula is needed beyond Rule (b) for the generation of the majority of Imperative or other exclamatory sentences. A special restriction pertains to Request, however.

Rule (d) Tobl

X +PREDN:{{Clause}{900}} Y ⟹

X +PREDN:{{Active Clause}{900}} Y / {607.008}

That is, Stative Clause is incompatible with Request. The real significance of this fact arises in consequence of the status of Negative Sentence as being embedded as Complement in Stative Clause, with the result that negative request must be expressed in some other way. This is normally accomplished through Instruction, the semantic component which runs thoughout various second-person Narrative and Assertive Sentence types (cf. Matrix III-b, Section 2.3.2.2). Sentence (6) illustrates negative instruction in a Narrative Sentence.

(6) gĩyẽdãbãĩ̃ ĩbĩdi! 'You (plural) are not to be afraid! '

F (S6.1)

Narrative (Instruction) Sentence (in Convers. {99999.999} =

+SUBJECT:pgn-23-s +PREDN:Stative Cl. +PREDN-T:700.007

R (S6.a)

pgn-23-s ⟶ bīdi-s 'second person plural, subject'

R (S6.b)

Stative Cl. ⟶ gĭyĕdābāĭ ĭ 'not to be afraid'

R (S6.c)

700.007 ⟶ 7-! 'second person, exclamatory'; i.e., 'instruction'

Choice of .008 'imperative' is exemplified in Sentence (7), a positive request.

(7) bæda tædõda, bitõ tædõi! 'Uncle spears, and you too, spear! '

F (S7.1)

Request Sentence (in Convers. {99999.999}) =

+SET:Circum.Dep.Sentence {600} +SUBJECT:Subst.PGN-21-s

+PREDN:trans.v.stem +PREDN-T:007.008

R (S7.a)

Circum.Dep.Sentence{600} ⟶ bæda tædõda, 'Uncle spears,'

R (S7.b)

Subst.PGN-21-s ⟶ bitõ ∅-s 'thou, singular, subject'

R (S7.c)

trans.v.stem ⟶ tædõ 'spear'

R (S7.d)

007.008 ⟶ -∅-i 8-! 'neutral person, imperative, gender-number imperative intonation'; i.e., 'request'

3.1.4. **Dependent Sentences.** Definite subordinate relationships characterize Dependent, Subordinate, and Gerundial Sentences, both among themselves, and in relationship with other sentence types (cf. Section 2.1). Thus, choice of any tense-mode sequence in combination with .001 'medial' as manifestation of PREDICATION-TYPE entails modifications of Generalized Formula (1) to account for subordinating potential. For all of these sentence types, Transformational Rule (e) is applicable to the output of Rule (b).

Rule (e) Tobl

±INTRODUCTION:{A} ±SETTING^2: {{{Dep.Sentence}, {Sub.Sentence}, {Gerund}} {900}}

X ⟹

±SETTING^2: {{Sim.Dep.Sentence, {Sub.Sentence}, {Gerund}} {900}} X / .001

INTRODUCTION is deleted from included sentences by this rule, and manifestation of SETTING is limited by exclusion of Circumstantial Dependent Sentence. Thus the manifestation of SETTING found in Sentence (4), above, would be impossible in an included sentence. Choice of PREDICATION-TYPE is limited to those listed under 2.3.3 as being compatible with .001 'medial'.

Generalized Formula (1) is now modified to allow for the generation of any Dependent Sentence. Two such Dependent Sentences appear as manifestation of SETTING in Sentences (4) and (7), respectively. Circumstantial Dependent Sentence in Sentence (4) corresponds to the following formula:

F (S4.2)

Circum.Dep.Sentence {600} = +SUBJECT:pgn-131-s
+PREDN:Speech Cl. +PREDN-T:100.001

R (S4.f)

pgn-131-s ⟶ kã-s 'third person singular, subject'

R (S4.g)

Speech Cl. ⟶ bõditõ õkõ põbĩdi! ã 'says, "Come to our house!"'

R (S4.h)

100.001 ⟶ l-, 'third person, medial', i.e., 'circumstantial dependent'

Likewise, the Circumstantial Dependent Sentence which manifests SETTING in Sentence (7) is generated by Formula (S7.2).

F (S7.2)

Circum.Dep.Sentence {600} = +SUBJECT:Subst.PGN-32-s
+PREDN:trans.v.stem +PREDN-T:100.001

R (S7.e)

Subst.PGN-32-s ⟶ bæda da-s 'uncle, third person affinal, subject'

R (S7.f)

trans.v.stem ⟶ tædõ 'spear'

R (S7.g)

100.001 ⟶ 1-, 'third person, medial'; i.e., circumstantial dependent

To illustrate manifestation of SETTING in Circumstantial Dependent Sentence and in Simultaneous Dependent Sentence, Sentence (8) is provided.

(8) tei tei wiĭyæ ate, æpi tõdõ bõdatõ pãta woyõbõda, wækĭdaaa põkĭda! ãdãdi, wĭdõte, wææte togadaĭdõ! 'After he was chopping, while AEpi and I were swimming, they called out, "They two will die, they will come!"' but when they fled, on the other hand, it seemed funny to us two.'

Formulae for the independent matrix sentence, which is responsive, and for the two embedded Dependent Sentences, are as follows:

F (S8.1)

Responsive Sentence (in Report ⟨57666.566⟩) =

+SET:Circum.Dep.Sentence⟨600⟩ +SUBJECT:gn-2-s

+PREDN:Intrans.Cl. +PREDN-T:4140.037

F (S8.2)

Circum.Dep.Sentence⟨600⟩ = +SET:Sim.Dep.Sentence ⟨600⟩

+SUBJECT:pgn-33-s +PREDN:Speech Cl. +PREDN-T:100.001

F (S8.3)

Sim.Dep.Sentence⟨600⟩ = +SET:Prior Sub.Sentence⟨600⟩

+SUBJECT:Subst.PGN-13-s +PREDN:Intrans.V.Colloc.

+PREDN-T:10400.001

Note that SETTING in the two Dependent Sentences is manifested by included sentences other than Circumstantial Dependent. Provisional selection rules follow, beginning with rewrites of manifestations from F (S8.3):

R (S8.a)

Prior Sub.Sentence⟨600⟩ ⟶ tei tei wiĭyæ ate, 'after he was chopping,'

R (S8.b)

Subst.PGN-13-s ⟶ æpi tõdõ bõdatõ, 'AEpi [proper name] and I'

R (S8.c)

Intrans.V.Colloc. ⟶ pāta wo 'swim, floating'

R (S8.d)

10400.001 ⟶ -yō 4-, 'simultaneous, first person, medial'; i.e., 'simultaneous dependent'

R (S8.e)

pgn-33-s ⟶ dãdi-s 'third person plural, subject'

R (S8.f)

Speech Cl. ⟶ wæ̃kĭdaaa; põkĭda! ã 'say, "They two will die; they will come!"'

R (S8.g)

100.001 ⟶ 1-, 'third person, medial'; i.e., 'circumstantial dependent'

R (S8.h)

gn-2-s ⟶ da-s 'dual, subject'

R (S8.i)

Intrans.Cl. ⟶ wīdõte, wæ̃te to 'fleeing, on the other hand, seems funny'

R (S8.j)

4140.037 ⟶ -ga 1-ĭdõ! 'far past, third person, inferential, subjective, exclamatory'; i.e., 'responsive'

3.1.5. **Subordinate Sentences.** Subordinate Sentences are characterized by lower rank of dependency than that of Dependent Sentences. Thus, choice of Circumstantial Subordinate Sentence entails restrictions imposed by Rule (f), applicable to the output of Rule (e).

Rule (f) Tobl

X ±SETTING:{{Sim.Dep.Sentence, {Sub.Sentence}, {Gerund}} {900}} Y ⟹

X ±SETTING:{{{Sub.Sentence}, {Gerund}} {900}} Y / 800 3x540.011

Circumstantial Subordinate Sentence may thus not have SETTING manifested by Dependent Sentences such as those exemplified in Sentence (8). Manifestation is

limited to Gerunds or to Subordinate Sentences; Sentence (9) illustrates Circumstantial Subordinate Sentence in this function, as well as in the manifestation of SETTING in the matrix sentence.

(9) tækæ tawẽ tãdõkæ kæ wædẽĩke, wækã wædẽĩke, tãdõbo. 'I speared because I observed that he was crying out upon realizing that he [another party] was about to spear him right in the chest.'

F (S9.1)

Narrative Sentence (in Report ⊣57666.566⊢) =

+SET:Circum.Sub.Sentence⊣600⊢ +SUBJECT:pgn-11-s

+PREDN:trans.v.stem +PREDN-T:400.003

F (S9.2)

Circum.Sub.Sentence⊣600⊢ =

+SET:Preparatory Circum.Sub.Sentence⊣600⊢ +SUBJECT:pgn-131-s

+PREDN:intr.v.stem +PREDN-T:100 3x540.011

The particular Circumstantial Subordinate Sentence which manifests SETTING in this included sentence is Preparatory, a derived sentence type. Derivation based on conjoining of tense-mode does not affect rank of dependency (cf. 2.3.5).

F (S9.3)

Preparatory Circum.Sub.Sentence⊣600⊢ = +SUBJECT:pgn-31-s

+PREDN:Trans.Cl. +PREDN-T:40000 4x100 3x540.011

From this point forward, selection rules are not provided for material which has been unambiguously rewritten in previous examples, except in cases where new relationships are involved.

R (S9.a)

Trans.Cl. ⟶ tækæ tawẽ tãdõ 'spear right in the chest'

R (S9.b)

40000 4x100 3x540.011 ⟶ -kæ kæ 1 wædẽĩke, 'inceptive, do, third person, react, perfective, inferential, limitative, medial'; i.e., 'preparatory circumstantial subordinate'

R (S9.c)

intr.v.stem ⟶ wæ 'cry'

R (S9.d)

100 3x540.011 ⟶ 1 wædēĩke 'third person, react, perfective, inferential, limitative'; i.e., 'circumstantial subordinate'

R (S9.e)

pgn-11-s ⟶ bo-s 'first person singular, subject'

R (S9.f)

trans.v.stem ⟶ tãedõ 'spear'

R (S9.g)

400.003 ⟶ 4-. 'first person, final'; i.e., 'narrative'

Choice of Prior Subordinate Sentence 800 2x.201, or of Circumstantial Perfect Gerund .2 3x540.011, entails a further restriction, as imposed by Transformational Rule (g), which is applicable to the output of Rule (e).

Rule (g) Tobl

$\pm SETTING^2$:{{Sim.Dep.Sentence, X ⟹
{Sub.Sentence},
{Gerund}{900}}

± SETTING:{{{Sub.Sentence}, X / 800 2x.201, .2 3x540.011
{Non-Perf.Ger.}}{900}}

A Prior Subordinate Sentence appears as manifestation of SETTING in Simultaneous Dependent Sentence, Sentence (8).

F (S8.4)

Prior Sub.Sentence{600} = +SUBJECT:pgn-31-s
+PREDN:Intr.V.Colloc. +PREDN-T:100 2x.201

R (S8.k)

Intr.V.Colloc ⟶ tei tei wiĩyæ 'chop-chop clear'

R (S8.m)

100 2x.201 ⟶ 1 ate 'third person singular, see, gerundial'; i.e., 'prior subordinate'

3.1.6. Gerunds. For choice of any Gerund, a further deletion rule is necessary to exclude SUBJECT function from the construction. Transformational Rule (h) is applicable to Generalized Formula (1).

Rule (h) Tobl

X +SUBJECT:{A} Y ⟹ X Y / .2 3x540.011, 540.011, 40000.2 6x.201, .2 2x.201, .201

Any Perfect Gerund may now be generated, following Rules (g) and (h); Non-Perfect Gerunds, however, require an additional rule, applicable to the output of Rule (e), to specify further restrictions on the manifestation of SETTING.

Rule (i) Tobl

±SETTING²:{{Sim.Dep.Sentence, X ⟹
−{Sub.Sentence},
{Gerund}}{900}}

±SETTING: {{Prior Sub.Sentence, X /
Circum.Perf.Gerund, (40000.2 6x.201
{Non-Perf.Gerund}$_j$}{900}} .2 2x.201, .201)$_k$

Subscripts "j" and "k" specify that Non-Perfect Gerund which manifests SETTING must be different from the Non-Perfect Gerund which constitutes the environment.

Choice of Circumstantial Gerund, marked by .201, entails a further restriction, applicable to the output of Rule (i).

Rule (j) Tobl

±SETTING:{{Prior Sub.Sentence, X ⟹
Circum.Perf.Gerund,
{Non-Perf.Gerund}}{900}}

±SETTING:{{Prior Gerund, X / .201
Intentive Gerund}{900}}

Sentence (10) illustrates Simultaneous Dependent Sentence, Circumstantial Gerund, Intentive Gerund, and Circumstantial Perfect Gerund as manifestations of SETTING in successive layers of embedding.

(10) kæwate wædẽĩke, wẽya wẽya wãi õpadi kõyei bawakæte ãte, wawæ pegõpæ õõte bãwãkã kaa kãgõte, õpadikæ wãi tãe kõtate, æbõga akõyõda, tãedõdãdi ĩdẽĩke, godõbẽke wĩdõ. 'Suffering with a sore foot, wanting to go down the path and soften her foot in the stream, Wawae having shot a [small variety of] toucan and brought it down and she having cooked and they two sitting there eating it, sitting down at the stream, as they two sat looking upward, the ones who had speared were fleeing farther away.'

F (S10.1)

Narrative Sentence (in Report ⌊57666.566⌋) =
+SETTING:Sim.Dep.Sentence⌊600⌋ +SUBJECT:pgn-31-s
+PREDN:Mot.Cl.⌊600⌋ +PREDN-T:100.003

F (S10.2)

Sim.Dep.Sentence⌊600⌋ = +SETTING:Intent.Ger.⌊600⌋
+SETTING:Circum.Ger.⌊600⌋ +SUBJECT:pgn-32-s
+PREDN:Sight Cl. ⌊600⌋ +PREDN-T:10100.001

F (S10.3)

Intent.Ger.⌊600⌋ = +SETTING:Circum.Perf.Ger.⌊600⌋
+PREDN:Intr.Cl.⌊600⌋ +PREDN-T:40000.2 6x.201

F (S10.4)

Circum.Ger.⌊600⌋ = +PREDN:Ditr.Cl.⌊600⌋ +PREDN-T:.201

F (S10.5)

Circum.Perf.Ger. ⌊600⌋ = +PREDN:intr.v.stem
+PREDN-T:.2 3x540.011

Other sentences are embedded within clauses of this sentence; provisional rewrite rules will serve until these are formulated in connection with clause description (Section 3.3).

R (S10.a)

intr.v.stem ⟶ kæwa 'to have pain in the foot'

R (S10.b)

.2 3x540.011 ⟶ -te wædẽĩke 'gerundial, react, perfective, inferential, limitative'; i.e., 'circumstantial perfective gerund'

R (S10.c)

Ditr.Cl. ⌊600⌋ ⟶ wawæ pegõpæ õõte bãwãkã kaa kãgõ 'Wawae having shot a toucan and brought it down and [she] having cooked, [they two] sit there eating it'

R (S10.d)

.201 ⟶ -te, 'gerundial, medial'; i.e., 'circumstantial gerund'

R (S10.e)

Intr.Cl.{600} ⟶ wẽya wẽya wãi õpadi kõyei bawa 'wanting to go down the path and soften her foot in the stream,'

R (S10.f)

40000.2 6x.201 ⟶ -kæte ãte 'inceptive, gerundial, want, gerundial, medial', i.e., 'intentive gerund'

R (S10.g)

pgn-32-s ⟶ -da-s 'third person dual, subject'

R (S10.h)

Sight Cl.{600} õpadikæ wãi tæ̃ kõtate, æ̃bõga akõyõda, 'sitting down at the stream, as they two sat looking upward,'

R (S10.i)

10100.001 ⟶ -yõ l-, 'simultaneous, third person, medial'; i.e., 'simultaneous dependent'

R (S10.j)

Mot.Cl.{600} ⟶ tæ̃dõdãdi ĩdẽĩke, godõbẽke wĩdõ 'the ones who had speared were fleeing farther away'

R (S10.k)

100.003 ⟶ l-. 'third person, final'; i.e., 'narrative'

3.2. **Compound Sentences.** Compound sentences are of four structural types: Parallel, Cumulative, Volitional Condition, and Contrary-to-Fact Condition. All four types involve conjoining of simple sentences in combinations of Semifinal Sentence, Nonfinal Sentence, and Final Sentence.

Rule (k), applicable to Generalized Formula (1), prescribes manifestation of PREDICATION-TYPE, as well as deletion of REPETITION, for any Semifinal Sentence.

Rule (k) Tobl

X +PREDN-T:{9x 99999.999} ±REP:{A} ⟹

X +PREDN-T:{x | x {any tense-mode specified for the matrix construction}} / Semifinal Sentence

Rule (m) Tobl

±INTRO:{Address 700, Interjection, Relative Time, Demonstrative} ±SET^2:{A} X

+PREDN-T:{9x 99999.999} Y ⟹ +INTRO:{Rel.Time,Demonstr.}

X +PREDN-T:{x | x {any tense-mode specified for the matrix construction}} / Final Sentence

Rule (n) Tobl

±INTRO:{Address 700, Interjection, Relative Time, Demonstrative} ±SET:{A} +SUBJECT:{B} +PREDN:{X}

+PREDN-T:{9x 99999.999} ±REP:{C} ⟹

±INTRO:{Rel.Time, Demonstr.} +PREDN:{X}

+PREDN-T:{x | x {any tense-mode specified for the matrix construction}} / Nonfinal Sentence

Nonfinal Sentence is subject to all the restrictions which apply to Semifinal and Final Sentences, as well as to deletion of SUBJECT. Subject-marker is ascribed to tense-mode by Permutation Rule (h), Chapter 4.

3.2.1. **Parallel Sentence.** Compound sentences of parallel structure involve concatenation of two simple Assertive or Narrative Sentences to serve a semantic or stylistic function of parallelism. They generally describe two related actions by one subject or the same action by two different subjects.

Parallel Sentence is characterized by Formula (2) which indicates the functional relationship between the two included sentences which are, in turn, derived from Generalized Formula (1) via Transformational Rules (k) and (m).

Formula (2)

Parallel Sentence (in Convers.{99999.999}) =

+ASSERTION:Semifinal Sentence 5801.002

+ASSERTION:Final Sentence {5841.003}

Tense-mode for PREDICATION-TYPE is specified for these two included sentences as follows: 5801.002 for Semifinal: and ⊰5841.003⊱, which is a set comprising ⊰5801.003, 800.003, 5841.003⊱, for Final Sentence. Logical subject of the two included sentences may be the same or different; action may be the same, but the total manifestation of PREDICATION is different. Sentence (11) is a Parallel Sentence in which subjects are different and action of the second sentence is additive.

(11) kõbẽ iwã õõtakãpa; ayãe, adoke adoke godõkã æætadãdipa. 'Kome shot a howler monkey; then one and another received [portions] from him.'

F (S11.1)

Parallel Sentence (in Conversation ⊰99999.999⊱) =

+ASSERT:Semif.Sentence 1101.002

+ASSERT:Fin.Sentence 1101.003

F (S11.2)

Semif.Sentence 1101.002 = +SUBJECT:Noun-name-PGN-131-s

+PREDN:Trans.Cl.⊰900⊱ +PREDN-T:1101.002

F (S11.3)

Fin.Sentence 1101.003 = +INTRO:Rel.Time +SUBJECT:pgn-33-s

+PREDN:Ditrans.Cl.⊰900⊱ +PREDN-T:1101.003

R (S11.a)

Noun-name-PGN-131-s ⟶ kõbẽ kã-s 'Kome [proper name], third person singular, subject'

R (S11.b)

Trans.Cl.⊰900⊱ ⟶ iwã õõ 'shoot howler monkey'

R (S11.c)

1101.002 ⟶ -ta 1-pa; 'past, third person, assertive, semifinal'; i.e., 'coordinate'

R (S11.d)

Relative time ⟶ æyãe, 'then,'

R (S11.e)

Ditrans.Cl.⊰900⊱ ⟶ adoke adoke godõkã æãe 'one and another received it from him'

3.2.2. Cumulative Sentence. Cumulative sentences are those in which one subject and one action persist throughout two or three conjoined sentences, the first of which is Assertive, the second (which is optional), Narrative, and the third, either Assertive or Narrative. Cumulative Sentence is stylistically Antithetic if one of the included sentences is negated, Synthetic if the second of three included sentences is negated.

Formula (3) characterizes the functional relationships of Cumulative Sentence.

Formula (3)

Cumulative Sentence (in Convers. {99999.999}) =

+ASSERT:Semif.Sentence {8841.002}

±QUALIFICATION:Nonfinal Sentence 800.002

+REASSERTION:Fin.Sentence {5801.003}

As an example of Cumulative Sentence which is Synthetic, note Sentence (12).

(12) bõditõ goobæ gobõdipa; wĩ iyekeĩ gobõdi; goobæ bæyetædõga gobõdi. 'We went far; we didn't go close by; we went far to Flint-River land.'

F (S12.1)

Cumulative Sentence(in Report {57666.566}) =

+ASSERT:Semif.Sentence 401.002 ±QUAL:Nonf.Sentence 400.002

+REASSERT:Fin.Sentence 400.003

F (S12.2)

Semif.Sentence 401.002 = +SUBJECT:Pronoun-PGN-13-s

+PREDN:Mot.Cl.{600} +PREDN-T:401.002

F (S12.3)

Nonf.Sentence 400.002 = +PREDN:Mot.Cl.{600} +PREDN-T:400.002

F (S12.4)

Fin.Sentence 400.003 = +SUBJECT:pgn-13-s +PREDN:Mot.Cl.{600}

+PREDN-T:400.003

R (S12.a)

Pronoun-PGN-13-s ⟶ bõditõ bõdi-s 'we, first person plural, subject'

R (S12.b)

Mot.Cl.{600} ⟶ goobæ go 'go far'; wĩ iyekeĩ go 'not go close by'; goobæ bæyetædõga go 'go far to Flint-River land'

R (S12.c)
401.002 ⟶ 4-pa; 'first person, assertive, semifinal'

R (S12.d)
400.002 ⟶ 4-; 'first person, semifinal'

R (S12.e)
pgn-13-s ⟶ bōdi-s 'first person plural, subject'

R (S12.f)
400.003 ⟶ 4-. 'first person, final'

3.2.3. **Volitional Condition.** Volitional Condition expresses wish, 'if only...,' and the condition may be potential or contrary-to-fact. Subject of Protasis and of Apodosis may be same or different.

Formula (4) characterizes functions and potential manifestation of Volitional Condition.

Formula (4)

Volitional Condition (in Convers.{99999.999}) =

+PROTASIS:Semifinal Sentence 801.002

+APODOSIS:Final Sentence{8840.003,
8800.003,
8800 6x60500.007,
6000.003,
{60042.003}}

Volitional Condition is illustrated in Sentence (13).

(13) abopa; gokībo. 'Would that I could see so that I could go!' (Context is behavioral: the speaker is feeling her way down the steps after having medication applied to the eyes.)

F (S13.1)

Volitional Condition (in Convers.{99999.999}) =

+PROT:Semif.Sentence 401.002 +APOD:Fin.Sentence 8400.003

F (13.2)

Semif.Sentence 401.002 = +SUBJECT:pgn-11-s +PREDN:sight-v.stem

+PREDN-T:401:002

F (S13.3)

Fin.Sentence 8400.003 = +SUBJECT:pgn-11-s +PREDN:mot.v.stem 400
+PREDN-T:8400.003

R (S13.a)

sight-v.stem ⟶ a 'see'

R (S13.b)

401.002 ⟶ 4-pa; 'first person, assertive, semifinal'

R (S13.c)

mot.v.stem 400 ⟶ go 'go' (from speaker viewpoint)

R (S13.d)

8400.003 ⟶ -kĩ 4-. 'future, first person, final'

3.2.4. **Contrary-to-Fact Condition.** The second type of condition is Contrary-to-Fact, with potential for various combinations to indicate same or different subject. Contrary-to-Fact Condition is characterized by Formula (5).

Formula (5)

Contrary-to-Fact Condition (in Convers.-{99999.999}) =

+PROTASIS:Semif.Sent.-{60500.032
800.022,
800.002,
.202,
.222}

±PROTASIS:Nonf.Sent.-{60500.032,
.222}

±APODOSIS:Nonf.Sent.60500.002

+APODOSIS:Fin.Sent. -{-{43841.003},
6800.003,
43541.003}

To illustrate, we return to the example given for Similative Person Protasis above, in Section 2.3.1.

(14) tãbãya wĩ æibaĩ; adokãke ... õyõkẽdẽdõ; ... doo wãkædõdẽĩpa. 'If Tamaya hadn't gone up, and if he had...lain there alone, ...he would already have died.'

F (S14.1)

Contrary-to-Fact Condition (in Report-{57666.566}) =

+PROTASIS:Semif.Sent. 100.022 +PROTASIS:Nonf.Sent. 60500.032
+APODOSIS:Fin.Sent. 43541.003

F (S14.2)

Semif.Sentence 100.022 = +SUBJECT:Noun-name-PGN-31-s
+PREDN:Mot.Cl.-{600}- +PREDN-T:100.022

F (S14.3)

Nonf.Sentence 60500.032 = +PREDN:Rest Cl. -{600}-
+PREDN-T:60500.032

F (S14.4)

Fin.Sentence 43541.003 = +SUBJECT:pgn-31-s
+PREDN:Intr.Cl.-{600}- +PREDN-T:43541.003

R (S14.a)

Noun-name-PGN-32-s ⟶ tãbãya ∅-s 'Tamaya [proper name, female], third person singular, subject'

R (S14.b)

Mot.Cl.-{600}- ⟶ wĩ ãei 'not go up' (from point of view of central action)

R (S14.c)

100.022 ⟶ 1-baĩ; 'third person, similative, semifinal'; i.e., 'similative person protasis'

R (S14.d)

Rest.Cl.-{600}- ⟶ adokãke...õyõ '...lie alone',

R (S14.e)

60500.032 ⟶ -kẽdẽdõ; 'admonitive, perfective, subjective, semifinal'; i.e., 'admonitive protasis'

R (S14.f)

Intr.Cl.-{600}- ⟶ ...doo wãe '...already die'

R (S14.g)

43541.003 ⟶ -kædõdẽĩpa. 'inceptive, perfective, inferential, assertive, final'; i.e., 'perfective conditional'

3.3. **Clause.** Clause, manifestation of PREDICATION-TYPE in Sentence, comprises syntagmatic functions which relate directly to Predicate as a nucleus. Clause types are distinguished according to features pertaining to verb classes or to Verb-Collocation classes which manifest Predicate.

Simple clauses may be conjoined in Auca through multiple manifestation of Predicate, such that features for two or more clause types may be present in a single clause. Since potential occurrence of some clause functions depends on presence of certain features, it follows that a conjoining of features in complex clauses allows for the co-occurrence of functions which would be incompatible in simple clauses. Derivation of complex clauses is described in Section 3.3.2, that of simple clauses in Section 3.3.1.

Surface ordering of clause functions is relatively free, but there is a general tendency toward the order reflected in the formulation below. Factors of comparative physical length of manifestations, relative weight of semantic significance in context, and precedence of matter which is to be emphasized, all have a bearing on surface ordering. The fact is that the whole question of order is of small import, since the majority of clauses have no more than two or three functions represented. The practice is, rather, to manifest one function heavily, to the extent of double manifestation, leaving subsidiary information for parallel or other included sentences.

Generalized Formula (6) is a composite representation of clause functions, such that indicated order is essentially non-significant.

Generalized Formula (6)

Clause {900} = ±Negation:neg.word ±Circumstance[2]:{{{Dep.Sent.}, {Sub.Sent.}, {Gerund}, {Subst-Advers}} {900}}

±TIME :{{Meteorolog.Time}, relative-time word, Time Nominalization, {Temporal NP}}

±Location[2] :{{{Geographical Loc.}, {Loc.Phrase}, Loc.Nominalization, {Loc.NP}} {900}}

±Direction:{{Dir.Nlz., {Dir.NP}, dir.adv.} {900}}

±Instrument:{{Affective-NP-inan., Instrumental NP}100}

±Object:{{{Subst.Affective}, NP-nonperson} {900}}

±Goal:{{Subst.Affective} {900}}

±Referent:{{Subst.Affect.} {900}}

±Complement:{{Convers.Disc. {999999.999}}, {{{Ind.Decl.Sent.}, {Substantive}, Negative Sent., Adjective} {900}}}

±Manner[2] :-{-{Action Nlz., ±Purpose:Purposive Sentence-{900}-
Neg.Sentence,
{Mot.VP},
restricted noun,
{Adverb Phrase,
adverb}-{900}}

+Predicate:{-{-{VP},
-{V.Colloc.},
-{v.stem}}-{900}}

3.3.1. **Simple Clause.** Simple clause types in Auca are Transitive, Intransitive, Speech, Sight, Motion, Rest, and Stative. Choice of manifesting class of verb or Verb Collocation for Predicate determines clause type and restricts functions in certain ways, as reflected in Transformational Rules which follow.

Transitive Clause formula is derived from Generalized Formula (6) by Rule (o).

Rule (o) Tobl

W ±Direction:{A} X ±Goal:{C} Y ±Complement:{E}

Z ⟹ W X Y Z Trans.V.Colloc., trans.v.stem

Returning to Sentence (9), we may now formulate the Transitive Clause which is provisionally rewritten in Rule (S9.a).

F (S9.4)

Transitive Clause = +Object:NP-nonperson +Pred:trans.v.stem

R (S9.i)

NP-nonperson ⟶ tækæ tawẽ 'right in the chest'

R (Sp.j)

trans.v.stem ⟶ tædõ 'spear'

Intransitive Clause formula is derived from Generalized Formula (6) by Rule (p), applicable to the output of Rule (o).

Rule (p) Tobl

X ±Instrument:{A} ±Object:{B}

Y ⟹ X Y / Intrans. V.Colloc., intr.v.stem

The Intransitive Clause which appears in Sentence (14), Rule (S14.f), may now be formulated.

F (S14.5)

Intr.Cl.{600} = +Time:relative-time-word +Pred:intr.v.st.

R (S14.h)

relative-time-word ⟶ doo 'already'

R (S14.i)

intr.v.st. ⟶ wãẽ 'die'

Rest Clause formula is derived by Rule (q), applicable to the output of Rule (p).

Rule (q) Tobl

X ±Referent:{A} Y ⟹ X Y / Rest V.Colloc. / rest.v.st.

Rest Clause, provisionally rewritten by Rule (S14.d), is now presented in full and formulated by Formula (S14.5).

adokãke kakawãeye boga gedõbẽbõ põyõkã, ãdẽĩke, õyõ 'having come up, to lie alone, face down on a surface of bixa tree roots, as she came'

F (S14.6)

Rest Cl. {600} = +Manner:restricted noun 100
+Manner:Adv.Phrase +Circum:Simul.Dep.S{600}
+Circum:Prior Perf.Ger.{600} +Pred:rest v.stem

F (S14.7)

Simul.Dep.S.{600} = +SUBJECT:pgn-131-s +PREDN:mot.v.stem{600}
+PREDN-T:10100.001

F (S14.8)

Prior Perf.Ger. {600} = +PREDN:mot.v.stem{600} +PREDN-T:540.011

R (S14.j)

restricted noun 100 ⟶ ado 1-ke 'alone, third person'

R (S14.k)

Adv.Phrase ⟶ kakawãeye boga gedõbẽbõ 'face down on a surface of bixa tree roots.

R (S14.m)

rest v.stem ⟶ õyõ 'to lie'

R (S14.o)

mot.v.stem-{600} ⟶ põ 'come'; æ̃ 'come up' (both from viewpoint of arrival)

R (S14.p)

540.011 ⟶ -dēĩke 'perfective, inferential, limitative, medial'; i.e., 'prior perfect gerund'

Motion Clause is derived from Generalized Formula (6) by Rule (r), as follows:

Rule (r) Tobl

X ±Instrument:-{A} ±Object:-{B}

±Goal:-{D} ±Referent:-{E} ±Complement:-{F} Y ⟹

X Y / Mot.V.Colloc., mot.v.stem

The motion clauses which appear in Sentence 12, R (S12.b), are generated by particular formulae as follows:

F (S12.5)

Mot.Cl.-{600} = +Loc:rel.loc.word 100 +Pred:mot.v.stem 100

F (S12.6)

Mot.Cl.-{600} = +Negation:neg.word +Loc:rel.loc.word 100
+Pred:mot.v.stem 100

F (S12.7)

Mot.Cl.-{600} = +Loc:rel.loc.word 100 +Loc.geogr.loc.word
+Pred:mot.v.stem 100

R (S12.g)

rel.loc.word 100 ⟶ goobæ 'far place'; iyekeĩ 'close by' (viewpoint of central action)

R (12.h)

mot.v.stem 100 ⟶ go 'go' (viewpoint of central action)

R (S12.i)

neg.word ⟶ wĩ 'not'

R (S12.j)

geogr.loc.word ⟶ bãeyetãedõga 'Flint-River land'

Speech Clause is derived from Generalized Formula (6) by Transformational Rule (s), as follows:

Rule (s) Tobl

X ±Direction:{A} ±Instrument:{C} ±Object:{D} Y

±Complement:{{ Convers.Disc.{99999.999}}, Z ⟹
{{{Ind.Decl.Sent.},
Neg.Sentence,
{Substantive},
Adjective} {900}}}

X Y ±Complement:{{Convers.Discourse{99999.999}},
Characterization Nlz{900}}

Z / Speech V.Colloc., speech v.stem

The Speech Clause which occurs in PREDICATION of the Circumstantial Dependent Sentence in Sentence (4) is generated according to Formula (S4.3), as follows:

F (S4.3)

Speech Cl. = +Complement:Convers.Disc.{99999.999}
+Pred:speech v.stem

R (S4.i)

speech v.stem ⟶ ã 'say'

Conversation Discourse, which manifests Complement, includes the potential for any utterance of any length, with no restrictions from Discourse. Although this discourse may be of more than one sentence in length, yet the speech clause in which it is embedded may be regarded as one clause, since it includes only one Predicate as a nuclear element.

Sight Clause formula is derived from Generalized formula (6) by Rule (t), as follows:

Rule (t) Tobl

X ±Direction:{A} ±Instrument:{B} Y ±Goal:{C}

±Referent:{D} ±Complement:{{Convers.Disc.{99999.999}},
{{{Ind.Decl.Sent.},
{Substantive},
Neg. Sentence,
Adjective} {900}}}

Z ⟹ X Y ±Complement:{{{Ind.Decl.Sentence}
{Action Nlz}
{Person-in-Action Nlz}} {900}}

Z / Sight V.Colloc., sight v.stem

Sight Clause which manifests PREDICATION in the Simultaneous Dependent Sentence of Sentence (10) is formulated as follows:

F (S10.6)
Sight Cl.{600} = +Circum:Circum.Ger.{600} +Dir:dir.adv.100
+Pred:sight v.stem

F (S10.7)
Circum.Ger.{600} = +Loc:geogr.loc.word +Manner:mot.v.stem 100
+Pred:intr.V.Colloc.

R (S10.m)
geogr.loc.word ⟶ õpadikæ 'stream'

R (S10.n)
mot.v.stem 100 ⟶ wãei 'go down' (from viewpoint of central action)

R (S10.o)
Intr.V.Colloc. ⟶ tãe kõta 'sit down'

R (S10.p)
dir.adv.100 ⟶ æbõga 'upward'

R (S10.q)
sight v.stem ⟶ a 'look'

Stative Clause is derived from Generalized Formula (6) by Rule (u), applicable to the output of Rule (s).

Rule (u) Tobl
X ±Goal:{A} ±Referent:{B}
±Compl:{{Convers.Disc.{99999.999}}, ±Manner^2:{C}
Characterization Nlz. {900}}

Y ⟹ X ±Complement: {{{Substantive}, Time Nlz., Neg.Sentence, Adjective} {900}}

Y / stative v.stem

A Stative Clause having Negative Sentence as Complement is illustrated in Sentence (6), above, and formulated as follows:

F (S6.2)
Stative Cl. = +Complement:Neg.Sentence +Pred:stative v.stem

R (S6.d)
Neg.Sentence ⟶ gĩyẽdãbãĩ 'not to be afraid'

R (S6.e)
stative v.stem ⟶ ĩ 'be'

3.3.2. **Complex Clause.** Simple clauses may be conjoined in Auca through composite manifestation of Predicate, such that two or more types of verbs may be present in the Predicate of a single clause. Since each verb type carries a single feature which is determinative for clause type, conjoining of verbs entails complexity in clause type, with consequent expansion of potential for occurrence of clause functions.

Complex Clauses result from three general varieties of Verb Phrase: (1) Motion multiplied by other clause types via Purpose-of-Motion Verb Phrase; (2) Motion multiplied by other clause types through a Concomitant-Motion Verb Phrase; and (3) Causation multiplied by other clause types through a Causal Verb Phrase, Causal being a subclass of Transitive Verb. The first two of these multiplications are subsumed by one process of derivation under the heading of Complex Motion Clauses.

Complex Motion Clauses are derived from particular clause formulae according to Rule (w), applicable to the output of Rules (o), (p), (q), (s), or (t). Purpose and Concomitant Motion are incompatible with Stative. Although Motion is compatible with Purpose and Concomitant Motion, Rule (w) is not applicable since it only adds functions which already pertain to Motion Clause.

Rule (w) Tobl

X ±Location:{Y} Z ⟹ X ±Location:{Y}
±Direction:{{Dir.Nlz., Dir.NP, dir.adv.} {900}}
Z / Purpose-of-Mot.VP, Concomitant-Mot.VP

A complex motion clause which is Transitive Motion, having Purpose-of-Motion Verb Phrase as manifestation of Predicate, is illustrated by Sentence (15).

(15) ayãe, adodõ bogãe dadõkæ gobopa. 'Then I'm going fishing in the same direction.'

F (S15.1)

Assertive Sentence (in Convers. {99999.999}) = +INTRO:Rel.Time
+SUBJECT:pgn-11-s +PREDN:Trans.Mot.Cl.{900}
+PREDN-T:401.003

F (S15.2)

Trans.Mot.Cl. {900} = +Dir.dir.adv. +Pred:Purp.Trans.Mot.VP 100

R (S15.a)

Rel.Time ⟶ ayãe, 'then,'

R (S15.b)

dir.adv. ⟶ adodõ 'in the same direction'

R (S15.c)

Purp.Trans.Mot.VP 100 ⟶ bogãe dadõkæ go 'go to fish'

To illustrate a Transitive Motion Clause with Concomitant-Motion Verb Phrase, we may take a clause which manifests Predicate in an embedded Negative Sentence, anticipating rules for the latter.

(16) õwẽkã æãte põdãbãĩ ĩbopa. 'I am not bringing meat.'

F (S16.1)

Assertive Sentence (in Convers. {99999.999}) = +SUBJECT:pgn-11-s
+PREDN:Stative Cl. {900} +PREDN-T:401.003

F (S16.2)

Stative Cl. {900} = +Complement:Neg.Sentence{900}
+Pred:stative v.stem

F (S16.3)

Neg.Sentence {900} = +PREDN:Trans.Mot.Cl.{900} +PREDN-T:20

F (S16.4)

Trans.Mot.Cl.{900} = +Object:noun-nonhuman
+Pred:Concom.Trans.Mot.VP

R (16.a)

stative v.stem ⟶ ĩ 'be'

R (S16.b)

20 ⟶ -dãbãĩ 'negative'

R (S16.c)

noun-nonhuman ⟶ ôwẽkã 'flesh'

R (S16.d)

Concom.Trans.Mot.VP ⟶ æãte põ 'bringing come'

Causal Clauses are derived from particular clause formulae according to Rule (x), applicable to Rules (o), (p), and (r).

Rule (x) Tobl

X ±Instrument:{A} X ±Referent:{B} Z ⟹

±Instrument:{{Affective-NP-inan., Instrumental NP}100} X ±Goal:{Subst.Affect.{900}}

±Agent:{Subst.Affect.{900}} Z / Causal VP

An illustration of Causal Motion Clause is to be seen in Sentence (3), above in Section 1.3.3.

Causal Clause with Intransitive is called Semitransitive; with Transitive, it is called Ditransitive. Ditransitive is illustrated in Sentence (10), where the further complication of a Concomitant Transitive-Motion Verb Phrase as manifestation of Manner gives a total of four verb stems in the clause.

(10) wawæ pegõpæ õõte bãwãkã kaa kãgõ 'Wawae having shot a toucan and brought it down and [she] having cooked, [they two] sit there eating it'

F (S10.8)

Ditr.Cl. {600} = +Agent:Noun name-PGN-131-s +Object:noun anim.
+Manner:Concom.Trans.Mot.VP 100 +Pred:Causal Trans.VP

R (S10.r)

Noun name-PGN-131-s ⟶ wawæ kã-s 'Wawae [proper name], third person singular, subject'

R (S10.s)

noun anim. ⟶ pegopæ '[small variety of] toucan'

R (S10.t)

Concom.Trans.Mot.VP 100 ⟶ õõte bãwãæ 1 'shooting [with blowgun] bring down, third person'

R (S10.u)

Causal Trans.VP ⟶ kaa kãgõ 'cook sit-eating'

3.4. Nominalizations and other embeddings. Sentences which, as a consequence of being embedded in Clause or Phrase, have remained inaccessible to this point in our description are Nominalizations, Negative Sentence, Purpose Sentence, and Manner Gerund. For each of these, with the exception of Person and Thing Nominalizations, the place of embedding is indicated above in the description of Clause (Section 3.4). Person and Thing Nominalizations, being members of the set {Substantive}, manifest Axis function in Substantive-Affective or in Substantive-Adversative, or Substantive function in Substantive-s.

A general derivational rule for embeddings, Rule (y), is applicable to Generalized Formula (1), the formula for simple Sentence.

Rule (y) Tobl

±INTRO:{A} ±SETTING²:{B} +SUBJECT:{{Substantive}{900}}-s

X ±REPETITION:{C} ⟹ ±SUBJECT:{{{NP}, pronoun}{PGN-88}}

±RELATOR:relative-possessive pronoun X / .000

Specific applications of this derivation are made in connection with description of constructions as follows: (3.4.1) Nominalizations, (3.4.2) Negative Sentence, (3.4.3) Purpose Sentence, and (3.4.4) Manner Gerund.

3.4.1. Nominalizations. Nominalizations, regardless of distribution, are derived from the generalized sentence formula by application of Rule (y), with the choice of appropriate tense-mode sequences as specified in the classificatory system for Nominalizations (Section 2.3.4). For Person Nominalizations, however, there is an additional option which indicates that actor in the embedded sentence is the referent in the matrix sentence. Optional Transformational Rule (z) is applicable to the output of Rule (y).

Rule (z) Topt

X ±SUBJECT:{{{NP}, pronoun}{PGN-88}} ±RELATOR:rel.poss.pron.

Y ⟹ X ±SUBJECT:{{{NP} demonstr.pron.}{PGN-88}}-s

±RELATOR:rel.pron. / {4540.8}

Person Nominalization with actor as referent is illustrated in Sentence (17).

(17) tõbẽ dẽẽ æãkã ãi, ta yãwadãdi wækĩkã. 'That person who catches [orioles] climbed up, and they cut loose the footholds so he would be sorry.'

F (S17.1)

Narrative Sentence (in Legend {32232.334}) =

+SET:Circum.Dep.Sentence{200} +SUBJECT:pgn-131-s

+PRED:Semitrans.Cl. +PREDN-T:8100.003

F (S17.2)

Circum.Dep.Sentence {200} = +SUBJECT:Person Nlz.PGN-31-s

+PREDN:mot.v.stem 100 +PREDN-T:100.001

F (S17.3)

Person Nlz.PGN-31-s = +SUBJECT:demonstr.pron.pgn-31-s

+RELATOR:rel.pron. +PREDN:trans.v.stem +PREDN-T:.800

F (S17.4)

Semitrans.Cl. = +Agent:pgn-131-s +Pred:Semitrans.VP

R (S17.a)

demonstr.pron.pgn-31-s ⟶ tõbẽ ∅-s 'that person, third person singular, subject'

R (S17.b)

rel.pron. ⟶ dẽẽ 'who'

R (S17.c)

trans.v.stem ⟶ æãæ 'catch'

R (S17.d)

.800 ⟶ 8 'person, no juncture'; i.e., 'person nominalization'

R (S17.e)

mot.v.stem 100 ⟶ ãei 'go up' (viewpoint of central action)

R (S17.f)

Semitrans.VP ⟶ ta yãẽwa 1 wæ 'cut loose footholds, be sorry'

R (S17.g)

8100.003 ⟶ -kĩ 1-. 'future, third person, narrative, final'

Sentence (18) illustrates Action Nominalization as manifestation of Manner.

(18) ayãẽ, wẽĩdẽ dãdõ kædẽbaĩ wayõbõ wayõbõ wayõbõ gotakãpa. 'Then, just the way he had formerly done, went farther and farther and farther.'

F (S18.1)

Assertive Sentence (in History {35232.334}) = +INTRO:Rel.Time
+SUBJECT:pgn-131-s +PREDN:Mot.Cl.100 +PREDN-T:1101.003

F (S18.2)

Mot.Cl.100 = +Manner:Action Nlz.100 +Loc:Loc.Reduplication 100
+Pred:mot.v.stem 100

F (S18.3)

Action Nlz.100 = +RELATOR:rel.poss.pron.PGN-31
+PREDN:Trans.Cl. +PREDN-T:500.020

F (S18.4)

Trans.Cl. = +Time:rel.time word +Pred:trans.v.stem

Note permutation of RELATOR and Time functions here. Morphophonemic Rule (a) is applicable (see Chapter 4).

R (S18.a)

rel.time word ⟶ wẽĩdẽ 'former'

R (S18.b)

trans.v.stem ⟶ kæ 'do'

R (S18.c)

rel.poss.pron.PGN-31 ⟶ dãdõ 'third person singular, relative possessive'

R (S18.d)

500.020 ⟶ -dẽbaĩ 'perfective similative, no juncture';
i.e., 'action nominalization'

R (S18.e)

Loc. Reduplication 100 ⟶ wayõbõ wayõbõ wayõbõ 'farther, farther, farther,'
'viewpoint of central action)

R (S18.f)

mot.v.stem 100 ⟶ go 'go' (viewpoint of central action)

R (S18.g)

Rel.Time ⟶ ayæ, 'then,'

3.4.2. **Negative Sentence.** Negative Sentence is derived from Generalized Formula (1) by Rule (aa), applicable to the output of Rule (z), as follows:

Rule (aa) Tobl

X SUBJECT:{A} ±RELATOR:{B} Y ⟹ X Y / 20

The Negative Sentence which manifests Complement in the Stative Clause of Sentence (6) is now formulated.

F (S6.3)

Neg.Sentence = +PREDN:intrans.v.stem +PREDN-T:20.000

R (S6.f)

intrans.v.stem ⟶ gīyẽ 'be afraid'

R (S6.g)

20.000 ⟶ -dãbãĩ 'negative, no juncture'

A Negative Sentence which manifests Manner function is presented as Sentence (19).

(19) botõ wædãbaĩ piyædẽ kæbopa. 'I am getting calm, not grieving.'

F (S19.1)

Assertive Sentence (in Report {57666.566}) =

+SUBJECT:Pron.PGN-11-s +PREDN:Intr.Cl. +PREDN-T:401.003

F (S19.2)

Intr.Cl. = +Manner:Neg.Sentence +Pred:Intr.V.Colloc.

F (S19.3)

Neg.Sentence = +PREDN:intr.v.stem +PREDN-T:20.000

R (S19.a)

intr.v.stem ⟶ wæ 'grieve'

R (S19.b)

20.000 ⟶ -dābāī 'negative, no juncture'

R (S19.c)

Intr.V.Colloc. ⟶ piyædē kæ 'get calm'

R (S19.d)

Pron.PGN-11-s ⟶ botõ bo-s 'I, first person singular subject'

3.4.3. Purpose Sentence. Purpose Sentence is derived from Generalized Formula (1) by Rule (bb), applicable to the output of Rule (aa).

Rule (bb) Tobl

X +PREDICATION:-[-{Clause}-{900}] Y ⟹ X

+PREDN:-{-{Trans.V.Colloc.},
-{Intr.V.Colloc.},
-{Sight V.Colloc.},
-{Speech V.Colloc.}} Y 40000, .2

Note that Manner Gerund, marked by .2, may be generated from the output of Rule (bb), as well as Purpose Sentence, which is marked by choice of 40000.

For an example of Purpose Sentence, we return to Sentence (15), formulating the Purpose Transitive Motion Verb Phrase.

F (S15.3)

Purp.Trans.Mot.VP 100 = +Purpose:Trans.Purp.Sentence
+Motion:mot.v.stem 100

F (S15.4)

Trans.Purp.Sentence = +PREDN:Trans.V.Colloc. +PREDN-T:40000.000

R (S15.d)

Trans.V.Colloc. ⟶ bogæ dadõ 'to fish with a hook'

R (S15.e)

40000.000 ⟶ -kæ 'inceptive, no juncture'; i.e., 'purpose'

R (S15.f)

mot.v.stem 100 ⟶ go 'go' (viewpoint of central action)

3.4.4. Manner Gerund. Manner Gerund is derived from Generalized Formula (1) by Rule (bb), in Section 3.4.3, by choice of .2 'gerundial'. An illustration appears in the Concomitant Transitive Motion Verb Phrase which manifests Predication of the Transitive Motion Clause in Sentence (16), above.

F (S16.5)

Concom.Trans.Mot.VP = +Concom.Action:Trans.Manner Ger.
+Motion:mot.v.stem

F (S16.6)

Trans.Manner Ger. = +PREDN:trans.v.stem +PREDN-T:.200

R (S16.e)

Trans.v.stem ⟶ aæ̃ 'catch, take, bring'

R (S16.f)

.200 ⟶ -te 'gerundial, no juncture'

CHAPTER 4

PERMUTATIONS

Permutations and other morphophonemic rules presented in this chapter are those which are the requisite complement of structural generalizations made in the preceding chapter. Although a complete description would include other rules, these are the most general in application.

Three general types of permutations are presented in this chapter. Surface permutations presented in the first section, being applicable to functions, and those in the final section, which are applicable to preterminal strings, have no derivational motivation. The second section treats secondary surface permutations which follow in consequence of interrogative derivation.

4.1. **Permutation of functions.** This section includes two optional permutations which may apply to sentence and clause functions without affecting the status of the sentence and/or clause involved. They are: in Section 4.1.1., permutation of SUBJECT or RELATOR; and, in Section 4.1.2, permutation to sentence-final position.

4.1.1. **Permutation of SUBJECT or RELATOR.** An optional permutation allows either SUBJECT or RELATOR (sentence functions) to appear within the clause string.

Perm. R (a) Topt

X	{+SUBJECT, ±RELATOR}	±Negation	±Circumstance	±Time	±Location
Y	⟹ X	±Negation	±Circumstance	±Time	±Location

{+SUBJECT, Y
±RELATOR}

This is not the only permutation possible, since the ordering is comparatively free within the Clause, but it is perhaps the most important, since it integrates sentence and clause formulae. An illustration is found in Sentence (18), Section 3.4.1, where the terminal string which reads, dãdõ wẽĩdẽ kæ 'he former do', must be transposed to read: wẽĩdẽ dãdõ kæ 'former he do'. The string of functions, with actual selections written into the manifestation, is transposed as:

+RELATOR:dãdõ +Time:wẽĩdẽ +Pred:kæ ⟹

+Time:wẽĩdẽ +RELATOR:dãdõ +Pred:kæ

4.1.2. **Permutation to sentence-final position.** Permutation of SUBJECT or of certain clause functions is effected by optional Permutation Rule (b).

Perm.R (b) Topt

X A Y +PREDICATION +PREDICATION-TYPE:Z.003 ±REPETITION

⟹ X Y +PREDICATION +PREDICATION-TYPE:Z.001

A-.003 ±REPETITION, where A represents SUBJECT or any clause function except Negation or Complement:{{{Substantive},
Time Nominalization,
Negative Sentence,
Adjective} {900}}

This permutation allows for the addition of an afterthought after the predicate. Sentence (19) illustrates the fairly common phenomenon.

kadæ bãe owotakãpa, oõdõga. 'Kadae was lying there (in a hammock) at the river.'

F (S19.1)

Assertive Sentence (in Report {57666.566}) =

+SUBJECT:noun-name-PGN-131-s +PREDN:Rest Cl.

+PREDN-TYPE:1101.003

F (S19.2)

Rest Cl. = +Loc:geogr.loc.word +Pred:Rest V.Colloc.

Before application of selection rules, the combined formulae of Sentence and Clause is subject to optional Permutation Rule (b), as follows:

+SUBJECT:noun-name-PGN-131-s +Loc:geogr.loc.word

+Pred:Rest V.Colloc. +PREDN-TYPE:1101.003 ⟹

+SUBJECT:noun-name-PGN-131-s +Pred:Rest V.Colloc.

+PREDN-TYPE:1101.001 +Loc:geogr.loc.word-.003

R (S19.a)

noun-name-PGN-131-s ⟶ kadæ kã-s 'Kadae [proper name], third person singular, subject'

R (S19.b)

Rest V.Colloc ⟶ bãe owo 'lie there (in hammock)'

R (S19.c)

1101.001 ⟶ -ta 1-pa, 'past, third person, assertive, medial'

R (S19.d)

geogr.loc.word-.003 ⟶ oõdõga. 'river place, final'

4.2. Permutation of Interrogative. The function INTERROGATION is assigned to Interrogative Sentence by derivational Rule (c), Section 3.1.2. INTERROGATION is assigned to SUBJECT or to clause function by conjoining a permuted interrogative word to a demonstrative which (included in such subsets as {Substantive}, {Adverb Phrase}, or {Location Noun Phrase}}, already manifests the function in question. As was pointed out above, in Section 2.3.4, the set of demonstratives is closely parallel to the set of interrogatives, such that markers which determine referent or distribution for the one can serve equally well for the other. Optional Permutation Rules (c) and (d) are applicable to the preterminal string before selection of {ncl} 'noun classifier'.

Perm.R (c) Topt

X ææDÕ Y ĩ-D-baĩ Z ⟹ X {ææbãdõ, wabãdõ, wadõ kĩbãe} Y Z

The demonstrative represented by ĩ-D-baĩ 'thus' manifests Manner or Complement. The interrogative words substituted by this optional rule all have variant semantic components of 'how', as follows: ææbãdõ 'how', wabãdõ 'how would it be if; perhaps', wadõ 'how can it be that (with incredulity)', and kĩbãe 'how could (in a pejorative sense)'. The final three are commonly exclamatory, rather than interrogative, in usage. Sentence (20) illustrates the final selection, kĩbãe.

(20) kĩbãe õkõdẽ owo! 'How can she be lying at home (in her hammock)!' (The contextual sequel is threat of punishment.)

F (S20.1)

Narrative Sentence (in Convers. {99999.999}) =

+INTERROG:interrog.word +SUBJECT:pgn-3 l-s +PREDN:Rest Cl.
+PREDN-T:100.007

F (20.2)

Rest Cl. = +Loc:loc.noun +Manner:demonstr.adv.
+Pred:rest v.stem

R (S20.a)

loc.noun ⟶ õkõdẽ 'house-in'

R (S20.b)

demonstr.adv. ⟶ ĩ-D-baĩ 'thus, demonstrative'

R (S20.c)

rest v.stem ⟶ owo 'lie (swinging in hammock)'

R (S20.d)

interrog.word ⟶ ææDÕ 'which'

R (S20.e)

100.007 ⟶ 1-! 'third person, exclamatory'

Optional Permutation Rule (c) is applied to select kĩbãẽ 'how can, why ever', to give a pejorative connotation.

Permutation Rule (d) allows for optional selection in the case of -kã pgn-13 1 'third person singular'.

Perm.R (d) Topt

X ææDÕ Y ĩ-D-kã Z ⟹ X {wakãdõ, kĩkãdõ} Y Z

An illustration of this is presented above, Section 2.3.2.3; we repeat only the terminal string and the gloss without analysis.

wakãdõ wẽdæ wẽdæ kækã ãdẽwẽ! 'How could she misbehave so badly after being told! ' The function of the rewritten æædõ + ĩ-D-kã is that of SUBJECT; thus wakãdõ might be translated as 'what an unbelievable person, who'.

Permutation Rule (e), also applicable to the preterminal string, assigns the remainder of interrogative words to functions manifested by demonstratives, including those demonstrative adverbs not rewritten in the optional permutation.

Perm.R. (e) Tobl

X ææDÕ Y [ĩ-D / ĩ-D-{ncl} / ĩ-D-ĩ / ĩ-D-yedẽ / ĩ-D-A] Z ⟹ X [kĩDÕ / kĩ-{ncl}-DÕ / kĩDÕĩ / ææyõdẽdõ / ææADÕ] Y Z

This composite rule is internally ordered, such that the cover symbol "A" must include only such affixes as remain after specified possibilities have been rewritten.

An illustration of the final demonstrative, represented by the cover symbol "A" appears in Sentence (5), rewritten above, in Section 3.1.2. The terminal string as rewritten there is:

æædõ 'which'; ĩ-D-kã kã-s 'this person, demonstrative, third person singular, subject'; tao tao be 'drink, gulping'; -da? 'indefinite person, narrative, interrogative'. By Permutation Rule (e), this string must be rewritten as follows:

æædÕ ĩ-D-kã kã-s tao tao be -da? ⟹ æækãDÕ kã-s tao tao be -da? 'Who is drinking in great gulps?'

A further rule rewrites the cover symbol DÕ, which allows choice of the suffix -dõ .03 'subjective' or the suffix -bẽ 70 'speculative'. (It is assumed, incidentally, that the interrogative word kĩbãe carries a morphophonemically-fused sequence of -bẽãe 70.07 'speculative, pejorative'.) Selection Rule (1) is applicable to the output of Permutation Rule (e).

Rule (1)
DÕ ⟶ -dõ, -bẽ

Thus æækãDÕ may be rewritten as æækãdõ 'who', without the component of speculation, which often seems to be rhetorical. Consider, in this respect, the following sentence:

æædõbẽ wodii wĩdõkãĩ? 'Which way would he have fled?' (The context is of Report, where listener could not be expected to answer the question.) (ææ 'which', -dõ 'direction', -bẽ 70 'speculative', wodii wĩdõ 'flee', -kãĩ? 'third person singular, inferential, interrogative').

A final example illustrates interrogative word with noun classifier.

(21) kĩwãedõ ĩpa? 'What tree is [it]?'

F (S21.1)

Assertive Sentence (in Convers. {99999.999}) =
+INTERROG:interrog.word +SUBJECT:pgn-31-s +PREDN:St.Cl.
+PREDN-T:100.005

F (S21.2)
St.Cl. = +Complement:demonstr.{ncl} +Pred:st.v.stem

R (S21.a)
demonstr{ncl} ⟶ ĩ-D-wãe 'this tree, demonstrative'

R (S21.b)

st.v.stem ⟶ ĩ 'be'

R (S21.c)

interrog.word ⟶ ææDÕ 'which'

R (S20.d)

101.005 ⟶ 1-pa? 'third person, assertive interrogative'

The terminal string of Sentence (21) (including material rewritten in preceding sentences and not repeated here) is rewritten by Permutation Rule (e) as follows:

ææDÕ Ø-s ĩ-D-wãæ ĩ 1-pa? ⟹ kɪ̃ wæDÕ Ø-s ĩ 1-pa?

Demonstratives which remain after all interrogative words (not to exceed one) are rewritten by obligatory Deletion Rule (f).

Deletion R. (f) Tobl

X ĩ-D-A Y ⟹ X ĩA Y

4.3. **Arbitrary surface permutations.** Permutations presented in this section are partially arbitrary, partially necessitated by simultaneous generation of elements which show concord.

4.3.1. **Past-tense permutation.** Permutation Rule (g), permutation of past tense, must apply before application of Permutation Rule (h), which follows.

Perm. R (g) Tobl

$$X \begin{bmatrix} \text{-ta} & \text{1-A} \\ \text{-ta} & \text{7-A} \\ \text{-ta} & \text{-ĩpa} \end{bmatrix} Y \Longrightarrow X \begin{bmatrix} \text{1-taA} \\ \text{7-taA} \\ \text{ĩtapa} \end{bmatrix} Y$$

Third and second persons precede the past tense marker, -ta, as does also the inferential marker -ĩ. Thus many sentences presented above must undergo the following transposition, since both gloss and pre-terminal string are presented in non-permuted order: -takãpa ⟹ -kãtapa. Note the rewrite in R (S11.c), Section 3.2.1.

1101.002 ⟶ -ta 1-pa; 'past, third person, assertive, semifinal'

Applying Permutation Rule (g), this preterminal string is transposed as follows:

-ta 1-pa; ⟹ 1-tapa; 'third person, past, assertive, semifinal'

4.3.2. **Permutation of subject marker.** Permutation of subject marker for this and many other illustrations is accomplished by Permutation Rule (h), which constitutes a slight revision of Obligatory Permutation Rule (a), Section 0.2, restated here as one of a partially-ordered set of rules. Permutation Rule (h) is applicable to the output of Permutation Rule (g).

Perm.R (h) Tobl

X A-s Y B {8}-C Z ⟹ X A-s Y BAC Z,

where X, Y, Z, and/or C may be null, and where Y may not include A-s.

Permutation Rule (h) applies cyclically until all instances of {8} to the left of a following A-s are rewritten. The remaining A-s is deleted in Rule (i), below. The cover symbol {8} ranges over numbers 1 'third person', 4 'first person', and 7 'second person'. Subject marker is transposed by this cyclically-applicable rule to mark restricted noun as well as any tense-mode manifestation which includes a subject marker. Consider again the illustration, Sentence (11), from which the rewritten 1-tapa; is taken. The terminal string of Sentence (11) is now rewritten as:

kõbẽ kã-s iwã õõ 1-tapa; ayãe, dãdi-s adoke adoke godõkã æãe 1-tapa. 'Kome, third person singular subject, howler monkey, shoot, past, third person assertive semifinal; then, third person plural subject, one only, one only, he gives, take, past, third person assertive final.'

Domain of the first A-s ends with the occurrence of the second; thus two applications of Permutation Rule (h) are made for two different subject markers:

kõbẽ kã-s iwã õõ 1-tapa; ⟹ kõbẽ kã-s iwã õõkãtapa; 'Kome howler monkey shot;'

ayãe, dãdi-s adoke adoke godõkã æãe 1-tapa. ⟹ ayãe dãdi-s adoke adoke godõkã æãedãditapa. 'Then, one [by] one he-gave they took.'

In Cumulative Sentence, the same subject marker is assigned to the tense-mode sequence for Semifinal and Nonfinal Sentences, by cyclical application. Turning again to Sentence (12), to which Permutation Rule (g) is not applicable, we have the following terminal string:

bõditõ bõdi-s goobæ go 4-pa; wĩ iyekeĩ go 4-; bõdi-s goobæ bæyetædõga go 4-.
'We, first person plural subject, far, go, first person assertive semifinal; not close by, go, first person semifinal; first person plural subject, far, Flint-River land, go first person final.'

Permutation Rule (h) is applied with the first bõdi-s as subject marker to be rewritten, in 2 cyclical applications:

bõditõ bõdi-s goobæ go 4-pa; wĩ iyekeĩ go 4-; ⟹ bõditõ bõdi-s goobæ gobõdipa; wĩ iyekeĩ go 4-;

bõditõ bõdi-s goobæ gobõdipa; wĩ iyekeĩ go 4-; ⟹ bõditõ bõdi-s goobæ gobõdipa; wĩ iyekeĩ gobõdi: 'We far went; not close-by-we-went;'

Final application rewrites the second subject marker, -bõdi:

bõdi-s goobæ bæ̃yetæ̃dõga go 4-. ⟹ bõdi-s goobæ bæ̃yetæ̃dõga gobõdi. 'Far to-Flint-River-land we-went.'

Deletion Rule (i) applies to all A-s after final application of Permutation Rule (h).

Del.R. (i) Tobl

X A-s Y ⟹ X Y

We may now apply Deletion Rule (i) to Sentence (12).

bõditõ bõdi-s goobæ gobõdipa; wĩ iyekeĩ gobõdi; bõdi-s goobæ bæ̃yetæ̃dõga gobõdi. ⟹ bõditõ goobæ gobõdipa; wĩ iyekeĩ gobõdi; goobæ bæ̃yetæ̃dõga gobõdi.

4.3.3. Permutation of REPETITION. REPETITION, generated in conjunction with PREDICATION in Generalized Formula (1) and Transformational Rule (a), (Section 3.1), entails the following modification of Clause and Verb Phrase formulae via Transformational Rule (cc).

Rule (cc) Tobl

X +Pred:{A} ⟹ X +Pred:{A}-R- -rep

Any manifestation of Predicate in the context of -rep is to be written with the suffix -R. Sentence (22) is the example originally cited in Section 3.1 for REPETITION.

(22) õtoga pædæ godõdã, kõtatapa. kõta ate,... 'She stretched a stick out toward it, and it sat upon it. After it had sat,...'

F (S22.1)

Assertive Sentence (in Legend {32232.334}) =

+SETTING:Circum.Dep.Sentence{200} +SUBJECT:pgn-31-s

+PREDN:Intrans.VP-rep +PREDN-T:1001.003 +REPETITION:100 2x.201

F (S22.2)

Circum.Dep.Sentence {200} = +SUBJECT:pgn-34-s +PREDN:Trans.Cl.

+PREDN-T:100.001

F (S22.3)

Trans.Cl. = +Object:noun inan. +Pred:Trans.V.Colloc.

R (S22.a)

noun inan. ⟶ õtoga 'stick'

R (S22.b)

Trans.V.Colloc. ⟶ pædæ godõ 'stretch out toward'

R (S22.c)

pgn-34-s ⟶ dã-s 'third person honorific, subject'

R (S22.d)

Intrans.VP-rep ⟶ R-kõta-R- 'sit, repetition'

R (S22.e)

1001.003 ⟶ -ta 1-pa. 'past, third person, assertive, final'

R (S22.f)

100 2x.201 ⟶ 1 ate, 'gerundial, see, gerundial, medial' i.e., 'prior gerund'

By Permutation Rule (g), -ta 1-pa. ⟹ 1-tapa.

By three applications of Permutation Rule (h), subject marker is transposed:

dã-s õtoga pædæ godõ 1-, ⟹ dã-s õtoga pædæ godõdã, 'Stick out she-stretched toward,'

Ø-s R-kõta-R 1-tapa. 1 ate, ⟹ Ø-s R-kõta-R-tapa. 1 ate,

Ø-s R-kõta-R-tapa. 1 ate, ⟹ Ø-s R-kõta-R-tapa. ate, 'it sat. it -ing,'

Permutation Rule (j) attaches a repetition of verb stem or Verb Collocation to the position of REPETITION.

Perm.R (j) Tobl

X R-A-R-B. C, ⟹ X AB. A C,

According to this rule, the verb stem kõta 'sit' is repeated with the marker for REPETITION.

Ø- R-kõta-R-tapa. ate, ⟹ Ø-s kõtatapa. kõta ate,

Thus gerundial repetition of the verb is placed in initial position in a following sentence, since it follows final intonation.

CHAPTER 5

PARTIAL LEXICON

The principal purpose of this supplement is to provide paradigmatic lists of closed sets referred to in the syntactic description, together with an indication of cognate relationships among certain of the sets. Listing of open sets is not our goal, except as these relate to closed sets. In the first section of the chapter, the set of noun classifiers is listed; Section 5.2 lists three sets of pronouns; and Section 5.3 deals with motion verbs and their derivatives.

5.1. **Noun classifiers.** The classificatory significance of .1 {ncl} 'noun classifiers' for Nominalization of Thing is described and illustrated above in Section 2.3.4, pages 68 and 71-72. Function of noun classifier in demonstrative and interrogative words is shown in Section 2.3.4, p. 70, and utilization for interrogative assignment is illustrated in Section 4.2.

Two further functions are illustrated in Section 2.2, page 41, where bẽkã 'two flesh' (bẽ- 'two', -kã 'flesh') is numeral + noun classifier; and ĩkã 'be flesh' (ĩ 'be', -kã 'flesh') is an incorporation of noun classifier into verb stem. Numerals belong to a class of restricted nouns which are composed of restrictive + noun classifier. Among restrictives are the two Auca numerals, ado 'one, same' and bĩ 'two'; temporals such as do 'previous' and yõwo 'present'; locationals such as ãebãe 'other side', ĩbãe 'this side', and tækæ 'in the midst'; and qualifiers such as baa 'whole', bĩĩ 'new', giyãe 'small', pikãe 'old', and wa 'other'. Co-occurrence with noun classifiers is highly selective, such that generalizations cannot be readily made. Full description awaits a subsequent publication. Many of the possible combinations are illustrated in connection with listing of noun classifiers, in the following pages of this section.

Noun classifiers also figure heavily in noun compounding, such that many noun stems comprise strings of classifiers. For instance, okabogata 'headdress' is composed of the following: 0- unidentified root, -ka 'stone, head', -bo 'egg, sphere', -ga 'place, surface', -ta 'shell, covering'. Each of these, except for the unidentified root morph, is one of the set of noun classifiers. Although compounding of noun classifiers also occurs in the formation of noun classifiers, only those combinations which occur with other-than-noun stems are considered to be true noun classifiers. That is, while each of the above is a separate classifier, the combination -depo 'season, year' (-de 'mouth, rim, -po 'hand, times') is one noun classifier, since it functions in at least some of the ways described in the opening paragraphs of this section: wadepo 'another year'; dãwadepo 'true season'.

In lists which follow, primitive noun classifier roots are listed first, with probable source noun, verb combination, and other (restrictive, demonstrative, or interrogative) combination in parallel columns. A sample of compounded classifiers follows, in the

same format. Only core meanings are listed in the gloss, and only samples of possible combinations appear.

{ncl}	Source Noun	With Verb	Other Combination
-ba	õba 'palm leaf'		adobake 'only one palm leaf'
-bæ	õbæ 'territory'		wabæka 'another territory'
-bẽ	õbẽ 'vine'	õkĩbẽ 'string he will make' (Nlz.)	kĩbẽdõ 'what vine, string'
-bo	ĩkeĩbo 'egg'		wabo 'another egg'
-bõ	õdõbõ 'eye,face'	ẽbõ 'to have a face'	adobõ 'same eye, face'
-dæ̃	kæ̃dæ̃ 'manioc'	kæ̃kĩdæ̃ 'manioc to be eaten'	wadæ̃ 'another manioc, plantain'
-de	õdõde 'mouth'	kæde 'to have pain in mouth'	adodeke 'one word'
-dẽ	õdõdẽ 'abdomen'	bẽdẽ 'to swell in abdomen'	
-dõ	oõdõ 'river'		kĩdõdõ 'what river'
-gæ̃	õgæ̃ 'genitals'	eõ togæ̃ 'to circumcise'	
-ga	baga 'tooth'	wæga 'tool he cries over' (Nlz.)	bĩga 'two teeth, tools'
-gõ	kagĩgõ 'corn (ear)'	kæ̃kĩgõ 'corn to be eaten' (Nlz.)	pikæ̃gõ 'old corn'
-ka	dika 'stone'	ẽka 'to have seed (stone)'	giyæ̃ka 'small stone'
-kæ̃	õwẽkæ̃ 'flesh'	ĩkæ̃ 'to be an animal'	kĩkæ̃bẽ 'what animal could it be'
-ko	weoko 'cloth'		kĩkodõ 'what cloth'
-kõ	õkõ 'dwelling'	godẽĩkõdẽ 'in the dwelling where he had gone' (Nlz.)	wakõdẽ 'in another dwelling'
-õdæ	õõdæ 'sky'	wæ̃kĩõdæ 'day he will die' (Nlz.)	ææõdædõ 'which day'

-Incl-	Source Noun	With Verb	Other Combination
-pa	õõpa 'dart'	tãedõpaka 'spear with which he spears' (Nlz.)	wapa 'another dart, spear'
-pæ	æpæ	bekĩpæ 'water to drink' (Nlz.)	kĩpædõ 'what water, liquid'
-po	õdõpo	kædẽpo 'hand with which he had worked' 'Nlz.)	æapodõ 'what hand'; i.e., 'how many'
-ta	õta 'nail,claw'	yõdõta 'table for laying things' (Nlz.)	giyãta 'small shell, clay bowl'
-tæ	batæ 'liver'		adotæke 'only one liver'
-ti	õdõti 'thigh'	giti 'to become numb in thigh' (Nlz.)	
-to	ooto 'basket'		æapotodẽdõ 'in how many baskets'
-wa	õdõwa 'foot'	kowa 'to pierce foot'	adowake 'only one foot'
-wæ	awæ 'tree'	wodõkĩwæ 'stick to be hung up' (Nlz.)	kĩwædõ 'what tree'
-wẽ	kẽwẽ 'manioc plant'	pæwẽ 'manioc which is growing' (Nlz.)	kĩwẽdõ 'what manioc'
-wo	ẽbõwo 'name'		wawo 'another name'
-yõ	oyõ 'leaf'		kĩyõdõ 'what leaf'
-∅	unclassified noun	ko-∅ 'to pierce'	kĩ-∅-dõ 'what (unclassified thing)'
-bẽdẽ	õdõbẽdẽ 'leg'	yãkæbẽdẽ 'to tie around leg'	æbæbẽdẽ 'the other leg'
-bõka	õdõbõka 'ear'	gipobõka 'to insert finger in ear'	ĩbæbõka 'this ear'
-gõpo	õdõgõpo 'finger'	kægõpo 'to have pain in finger'	bãdĩgõpo 'that finger'
-tawẽ	õdõtawẽ	kætawẽ 'to have pain in chest'	

{incl}	Source Noun	With Verb	Other Combination
-yabæ	õdõyabæ 'back'	kæyabæ 'to have backache	tækæyabæ 'in middle of back'

5.2. Pronominal sets. Of the four types of pronouns which appear in formulae for Nominalizations (cf. Sections 2.3.4 and 3.4.1), all except the relative pronoun dẽẽ 'which, who', comprise sets of more than one member: these are the set called simply "pronoun" (5.2.1), the set of demonstrative pronouns (5.2.2), and the set of relative possessive pronouns (5.2.3). Pronominal sets, which are partially overlapping in membership, are dominated by the parameters of Person and Gender-Number, PGN-88 (cf. Section 1.1.5), whose primitive application to person-gender-number markers pgn-88 appears in Matrix II, Section 2.2. There is, in fact, an obvious identity of morpheme running throughout the paradigm of person-gender-number and the three pronoun paradigms; however, inasmuch as specific forms are not entirely predictable apart from morphophonemic rules, sets are here presented in matrix display.

5.2.1. Pronoun. This set of pronouns optionally manifests SUBJECT and other substantive functions in any sentence except for nominalization. Members of this set may also function as possessor in all possessed noun phrases except for those having kin-referent noun as head. The paradigm of pronouns is presented below in Matrix IV, which is based on the same parameters as those of Matrix II, but with first and second persons only. Third person manifestations are provided by the set of demonstrative third-person pronouns (Section 5.2.2).

Terms in this and subsequent pronominal matrices are not glossed since the meaning is apparent from intersection of dominating features along parameters of the matrix.

MATRIX IV

PRONOUN

GN-8 / P-80 / P-10 'first'	GN-1 'singular'	GN-2 'dual, male affinal'	GN-3 'plural, fem. affinal'	GN-4 'honorific'
P-20 'second'	bitõ	bĩdatõ	bĩditõ	bĩtõ

5.2.2. **Demonstrative pronouns.** Demonstrative pronouns manifest the same functions as those manifested by simple pronouns, replacing them for intensification, to give the force of the English 'self' (nonreflexive); or, in possessive use, '(very) own'. However, since the set of third-person demonstrative pronouns provides the only manifestation of third-person pronominal possessor in possessed noun phrases, and since it so commonly replaces zero third-person pronouns in substantive functions, the semantic component of intensity is at best ambiguous, if not negligible, for all third-person forms except for the base form, tõbẽ 'that (very) person'.

The base form, tõbẽ, also functions as SUBJECT in Person Nominalization with actor as referent (cf. 3.4.1); in this function, the form tõbẽ has no number restriction, such that it could be translated, 'that or those (very person(s)', in agreement with the number marked in the predicate.

Demonstrative pronouns are presented in Matrix V.

MATRIX V

DEMONSTRATIVE PRONOUN

GN-8 / P-80 / P-10	GN-1 'singular'	GN-2 'dual, male affinal'	GN-3 'plural, fem. affinal'	GN-4 'honorific'
P-10 'first'	tõbẽbo	tõbẽbõda	tõbẽbõdi	tõbẽbõ
P-20 'second'	tõbẽbi	tõbẽbõda	tõbẽbõdi	tõbẽbõ
P-30 'third'	tõbẽ	tõbẽda	tõbẽdãdi	tõbẽdã
	tõbẽkã	animate-100		

tõbẽbi tædõkæ ãbi. 'You yourself want to spear.' (tõbẽbi PGN-21 'you yourself', tædõ 'spear', -kæ 40000 'inceptive', ã 'want', -bi 700.003 'second person, narrative, final').

tõbẽbo bæka 'my very own oriole' (tõbẽbo PGN-11 'my very own', bæka 'oriole').

5.2.3. **Relative possessive pronoun.** Relative possessive pronouns manifest RELATOR in Nominalizations where actor is not the referent, as well as manifesting possessor with

kin-referent nouns. The paradigm of relative possessive pronouns is presented in Matrix VI, from which gloss is omitted, since identical parameters dominate Matrices II, IV, V, and VI.

MATRIX VI

RELATIVE POSSESSIVE PRONOUN

GN-8	GN-1	GN-2	GN-3	GN-4
P-80				
P-10	botõ	bõda	bõdi	bõtõ
P-20	bitõ	bĩda	bĩdi	bĩtõ
P-30	dãtõ	dãda	dãdi	dãdã

Plural forms of the relative possessive pronoun occur in a substantive phrase marked by -kabo 'group, bunch', which indicates that possessor is included in the group. Number of possessor is not indicated, but plurality is ascribed to the inclusive group.

yæte edæ, dãdi wẽĩkabo wãgateĩpa. 'as for Yaete, he and his children have died.' (yæte 'Yaete [proper name]', edæ 'expletive, medial', dãdi PGN-33 'they, relative possessive pronoun', wẽĩ 'child', -kabo 'group', wã 'die', -gateĩpa. 4011.003 'resultative assertive'). Yaete, the singular possessor, is among those who died.

Likewise, dual forms of this pronoun occur in a substantive phrase marked by -kaya 'two in a given relationship', also with inclusion of referent or possessor.

dãda gãkaya...wãgadaĩpa. 'He and his spouse died.' (dãda PGN-32 'they two, relative possessive pronoun', gã 'spouse', -kaya 'two in relationship', wã 'die', -gadaĩpa. 4141.003 'inferential assertive').

The entire set of relative possessive pronouns functions as optional possessor of kin-referent nouns. These are listed below, in columns parallel to corresponding kin-address nouns, for which optional possession is shown by the first list of pronouns (Matrix IV). The list of kin terms is incomplete.

Kin-Referent	Kin-Address	Gloss (general)
wãa(dæ)	bæ(da)	'father-in-law'
wãapo(da)	bãapo	'uncle'

Kin-Referent	Kin-Address	Gloss (general)
wæbæ	bæbæ	'grandfather'
wæge	bæge	'sister-in-law (reciprocal)'
wægãdã	yæyæ	'(classificatory) grandmother'
wæke	bæke	'brother-in-law (reciprocal)'
wæpo(kã)	bæpo(kã)	'father'
wæpokoo	bæpokoo	'great-grandfather'
wæte(da)	bæte(da)	'mother-in-law, son-in-law'
yaa	yaa	'co-mother-in-law (reciprocal)'

5.3. **Verbs and adverbs of motion.** Motion verb stems in Auca comprise a closed set bearing features along two directional parameters: direction with relation to topography; and direction which answers to the discourse constraint of Orientation, or direction relative to a focal point (cf. Section 1.1.1). The second parameter is marked by a derivational suffix in most instances. Motion verb prardigm is presented in Matrix VII.

MATRIX VII

MOTION VERBS

Relative Direction	– Direction with relation to topography –					
	General	Upward	Downhill	Downstream	Outward	Inward
Toward	põ	æ	wææ	i	ta	gi
Away from	go	æi	wæi	igi	tago	gii

From this set are derived transitive motion verbs wich manifest Manner function in Clause. Because of slight irregularities which would otherwise require morphophonemic rules, this paradigm is also presented in matrix form. In Matrix VIII, transitivity is added to the parameters of Matrix VII.

MATRIX VIII

TRANSITIVE MOTION VERBS

Bring	bãpõ	bæ	bãwæ	bãgi	bãta	bãgi
Take	bãgo	bæi	bãwæi	bãgi	bãta	bãgi

Causal motion verbs are derived from a restricted set, which is the set of all motion verb roots, the same set from which at least three types of directional adverbs are derived. These are presented in parallel lists, as follows:

mot.v root	**-dõ 'cause'**	**-dõbẽke 'farther (direction)'**	**-bõ '-ward'**	**-bõga 'farther (location)'**
go	godõ 'give away'	godõbẽke 'farther away'	gobõ 'toward direction of going'	gobõga 'faraway place'
põ	põdõ 'give to'	põdõbẽke 'farther this way'	põbõ 'toward direction of coming'	–
ãæ	ãædõ 'raise'	ãædõbẽke 'farther upward'	ãæbõ 'upward'	ãæbõga 'higher place'
wæãæ	wãædõ 'lower'	wãædõbẽke 'farther downward'	wãæbõ 'downward'	wãæbõga 'lower place'
i	idõ 'take downstream'	idõbẽke 'farther downstream'	ibõ 'toward downstream'	ibõga 'downstream place'
ta	tadõ 'move out'	tadõbẽke 'farther outward'	tabõ 'outward'	tabõga 'place farther out'
gi	gidõ 'move in'	gidõbẽke 'farther inward'	gibõ 'inward'	gibõga 'inside place'

Distribution of paradigms with -dõ, -dõbẽke, -bõ, and -bõga, is as follows:

godõ 'give away' and põdõ 'give to' do not belong to the paradigm of causal motion verbs with which they are listed, since their function is manifestation of Cause in Ditransitive Motion Phrase, while the function of causal motion verbs with -dõ is manifestation of Predicate in Motion Clause or of Cause in Causal Motion Verb Phrase.

Directional adverbs with -bẽke manifest Direction in Motion Clause.

Directional adverbs with -bõ manifest Direction in Sight Verb Collocation.

Locational adverbs with -bõga manifest Location in any clause.

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