OBLIGATORY CONSTRUCTIONS OF ISTHMUS NAHUAT GRAMMAR

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HOWARD W. LAW

The obligatory constructions of Isthmus Nahuat grammar are described according to the tagmemic model for linguistic description developed by Kenneth L. Pike and his colleagues at the Summer Institute of Linguistics, Norman, Oklahoma. This description is based on the concept of a grammatical unit, the tagmeme, as the structural unit of the grammatical hierarchy, and the concept of several levels of grammatical structure, the number being determined by the requirements of the structure of each language. The tagmeme consists of a slot in a loosely defined matrix filled by a class of lower level structural units. At the lowest level, the morpheme, a lexical unit, fills the slots in that level. This level constitutes the minimum for the grammatical hierarchy is open-ended. Formulaic representations for each structural type in each level are used to indicate symbolically the slots and their filler classes as elements of the formula. Structural types are described for each distinctive construction at each level. A structural type is a variety of a construction which is different from other varieties by at least two differences: i.e., one internal to the construction and one external, or two internal differences.

The description of Isthmus Nahuat is first presented by means of preliminary survey chapter covering each of the following five structural levels of the grammatical hierarchy: sentence, clause, phrase, word, and stem.

In the five chapters that follow the introductory chapter each level is dealt with in detail, covering the formal characteristics of the obligatory tagmemes and structural types for each level.

Sentence types consist of Independent and Dependent sentences. There are two classes of Independent types: two Declarative types and one Interrogative type. There are two Dependent types: Response and Quotation types.

Both Independent and Dependent clause types occur. Within the Independent clauses

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by

HOWARD W. LAW
HARTFORD SEMINARY FOUNDATION

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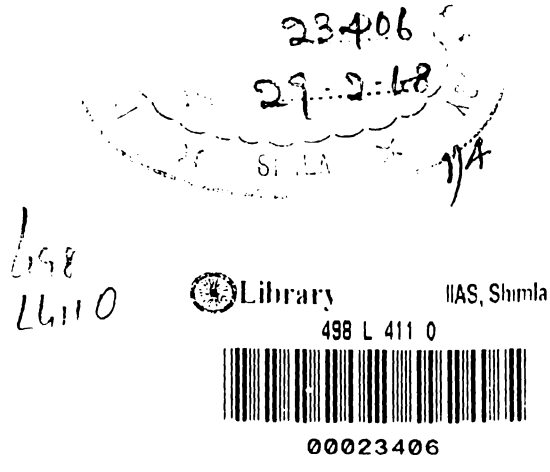

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PREFACE

The speakers of Isthmus Nahuat live in the southern part of the state of Veracruz, Mexico. The dialect described here is spoken in Mecayapan, Veracruz, as well as in the surrounding villages and communities. A 1957 local census reported at least 950 adults over 18 years of age in this village. In the state of Veracruz there have been variously reported from forty to seventy-five thousand speakers of Nahuat. In the northern part of the state Nahuatl is spoken. Nahuat and Nahuatl are two divisions of the Nahuatlan subfamily of the Uto-Aztecan stock of languages.

For further details of the classification of this dialect and for a description of the life of the people, see the author's ethnographic study "Mecayapan, Veracruz: An Ethnographic Sketch", Unpublished M. A. thesis, University of Texas, 1960.

Having lived among the speakers of this language for extensive periods each year, with few exceptions, since 1944, the author has learned to speak the language with some degree of fluency and has had numerous opportunities to observe how the language is used. The language was learned through the use of three bilingual informants mentioned earlier (Juan C. Salas, Victor Cruz, and Zacarias Martinez) and the many residents of the village and also neighboring villages with whom he had constant contact while living there. During the first two seasons (approximately nine months) words, phrases and simple sentences were learned by means of Spanish as an intermediate language. By the end of the second season (May, 1945), the author was speaking to Nahuat speakers in Isthmus Nahuat only. He has continued this practice ever since that time. Since about 1950 the author has also been engaged in Bible translation work in the Isthmus Nahuat language.

The text material in the appendix is given as recorded from a folktale told by Juan C. Salas, a competent bilingual Isthmus Nahuat speaker in the village of Mecayapan, Veracruz, Mexico. Since no tape recorder was available in 1946, the materials were transcribed manually as a part of the author's linguistic investigations. By this time he had become somewhat familiar with the phonology and morphology of the dialect. Technical publications were in progress at this time, the first one appearing in 1948.

Illustrative materials in this dissertation are either extracted from some native folklore text, recorded as a part of a conversation in the author's field notes, or constructed by the author as a possible native utterance. Some of the latter were

certainly heard once, if not many times, but perhaps never recorded on paper in precisely that form. This latter kind of illustration was felt to be usable with confidence because of the author's extensive residence in the village and the degree of fluency which he has obtained in speaking the language. Materials taken from native folklore texts are marked with an asterisk in each occurrence.

ACKNOWLEDGEMENTS

The indebtedness of the author for help in the preparation of this study begins with the early training in linguistics given by Dr. Eugene A. Nida and Dr. Kenneth L. Pike and their colleagues at the Summer Institute of Linguistics. These same people guided the author's later training as he pursued his further studies in linguistics.

In Mexico the Aztec Indians of southern Veracruz contributed the data for the analysis and description presented here. Three deserve special mention for their cooperation: Juan C. Salas, Victor Cruz, and Zacarias Martinez, all residents of Mecayapan, Veracruz, who served as informants for most of the material included in this paper.

At The University of Texas in addition to the professors who further instructed me in linguistics and anthropology, Dr. E. Bagby Atwood and Dr. David DeCamp also carefully read the manuscript, contributing helpful suggestions for improvement. To Dr. Winfred P. Lehmann a debt of gratitude is owed not only for teaching, reading the manuscript and suggestions of improvement, but also for numerous occasions of encouragement. From Dr. Werner Winter the author has received valuable guidance and criticism both in connection with the work on the dissertation and also in informal linguistic discussions. As supervising professor for the dissertion he patiently and understandingly directed me to a completion of the work. Unfortunately it has not been possible to document more specifically the contributions of each of the above.

None of this work would have been possible without the wholehearted support and active cooperation of my wife, Joan, and my two daughters.

To these belongs the credit for any contribution this dissertation may make to the study of languages. For its failure to do so, for errors of analysis and description the author assumes full responsibility.

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ABBREVIATIONS

A = Axis
adj. = adjective
adv. = adverb
Anaph. = Anaphoric
AR = Axis-Relator
Assoc. = Association
B, or Benefac. = Benefactive
Caus. = Causal
Cl. = Clause
Co., or Com. = Comment
Cond. = Conditional
conj. = conjunction
Conn. = Connector
Decl. = Declarative
demon. = demonstrative
Dep., or Depend. = Dependent
Descript. = Descriptive
dir. = direct
dist. = distributive
D. S. = Declarative Sentence
Eq., or Equat. = Equational
F = Focus
F O = Focus-Orienter
H = Head
Imp., or Imper. = Imperative
Indep. = Independent
Indic. = Indicative
Intens. = Intensifier
Interrog. = Interrogative
intr. = intransitive
Intro. = Introducer
I. S. = Interrogative Sentence
Lev. = Level
Lim. = Limitation
L, Loc., loc. = Locative
M = Modifier
Mann. = Manner
n. = noun
Non-trans. = Non-transitive
nucl. = nucleus
O = Object, or Orienter
Obj. = Object
Object. = Objective
Or. = Orienter
P = Predicate
part. = particle
poss. = possessive
Poss'd = Possessed
Poss'r = Possessor
Pro. = Pronoun
Q. S. = Quotation Sentence
r. = root
R = Relator
Refl., or Reflex. = Reflexive
Rel. = Relative
s. = subject, or stem
S = Subject
semi-trans. = semi-transitive
Sent. = Sentence
Sp. = Spanish
Spec. = Specifier
Subj. = Subject, or Subjunctive
Subst. = Substantive
T, Temp. = Temporal
Top. = Topic
Trans. = Transitive
v. = verb

Other abbreviations are either in common use, or are clear from the immediate context in which they are found.

1

THEORY AND PRELIMINARY SURVEY

1.0 INTRODUCTION

The present description is based on the concept of a grammatical unit – the tagmeme – as the structural unit of the grammar, and upon the concept of several levels of grammatical structure. The number of levels described is determined by the requirements of the structure of each language.

The model of description followed here is based on the work of Kenneth L. Pike.[1] Certain features of the later work of Longacre, Elson and Pickett have also been incorporated.[2]

Some terms used in this description may need to be clarified either because they are used in a new way or because they are not commonly used outside the area of tagmemic theory and description. Rather than present them and their definitions here a glossary has been included as an appendix to the main part of the descriptive materials.

1.1 SUMMARY OF TAGMEMIC THEORY

For readers not familiar with the tagmemic model of language description a brief summary of the theory is included here.

The tagmeme is a slot-class correlate. The slot is filled by a class of lower level structural units. At the lowest level the morpheme (a lexical unit) fills the slot. This level, the stem level, constitutes the minimum or threshold for the grammatical hierarchy. Other levels frequently found in language structures are: word, phrase, clause and sentence. The higher end of the hierarchy is open-ended as to the number and type of structures which occur.

[1] Pike, Kenneth L., *Language, in relation to a unified theory of the structure of human behavior*, Part I, preliminary edition (Glendale, Summer Institute of Linguistics 1954); Part II (1955); Part III (1960).

[2] Elson, Benjamin F., *Beginning Morphology-Syntax* (Glendale, Summer Institute of Linguistics, 1958). — Elson, Benjamin F. and Velma B. Pickett, *An Introduction to Morphology and Syntax* (Santa Ana, Summer Institute of Linguistics, 1962). — Longacre, Robert E., "String Constituent Analysis", *Language* 36:63-88 (1960). — Longacre, Robert E., *Grammatical Discovery Procedures* (The Hague, 1964).

The tagmeme is symbolized as, e.g. indicative intransitive P:indicative intransitive verb, which is read: an indicative intransitive predicate filled by an indicative intransitive verb class of words. The fact that this tagmeme occurs on the clause level is partly marked by the capital letter 'P' symbolizing the predicate slot, and partly by the occurrence of a class of words as a filler of the slot. (However, word classes may fill non-clause level slots also and other structural types may fill clause level slots [e.q. phrases], so the occurrence of a word class as a filler is not in itself a conclusive criterion.)

The representation of the tagmeme is incorporated into a formulaic representation of the construction of which it is a unit. Thus, each structural type beyond the minimum level may consist of more than one tagmeme. The content and arrangement of these tagmemes together with their concomitant features such as formal markers of a class (e.g. *-li* in sec. 6.2.1.3), co-occurrence restrictions (e.g. *ma-* or *ši-* with *-kan* in sec. 5.2.1), etc. constitute the description of each structural type within each level.

Certain conventions of notation have developed regarding the different levels. The lower levels (stem, word) contain only lower case letters in their formulaic notation; the higher levels (phrase, clause, sentence) contain capital letters as well as lower case. Linguists working with the tagmemic model have been gradually developing distinctive slot names for comparable slots on each level, e.g. core, nucleus, head, predicate and base for the central and obligatory slot in each level.

Each structural type is a class of allotypes whose variations within the class are only etic, i.e., non-significant. Each emic (significant) type is contrastive and differs from each other type by at least two structural differences.[3] These differences may be internal (i.e., differences of internal constituency, order or type of occurrence within the construction being described, e.g. non-transitive clause type vs. transitive clause type, sec. 3.2.1.1.1 and 3.2.1.1.2), or one internal and one external (i.e., a contrastive distribution of the types on the higher level, e.g. AR-3 phrase vs. AR-4 phrase, sec. 4.2.3.2.3 and 4.2.3.2.4).

The classes which fill the various slots are also contrastive by two differences since each class consists of members which are structurally identical to each other and different from other classes by two differences. At the minimum level the classes are morphemes, which are classes of allomorphs, with no internal structural differences from one class to another, but with only external differences. In the levels above the minimum the classes may consist of structural types defined by criteria from some other level plus an internal difference, or by criteria of an internal type only. These structural types are defined by criteria relevant at their respective levels. Thus each level can be viewed from the two standpoints: an internal and an external. Internally each level contains various types of constructions grouped together as classes of constructions; externally each level consists of classes of constructions which are fillers of slots on a higher level.

[3] Longacre, *ibid.*

Although this description presents only materials within the grammatical hierarchy, in tagmemic theory there are also other hierarchies, e.g. a phonological hierarchy.[4] It is also true that hyperclasses are contrastive, exhibiting two structural differences between them.

In addition, tagmemic theory involves a modal concept of the structure of language.[5] The three modes postulated by Pike are: Feature, Manifestation and Distribution. The Feature mode describes the identificational and contrastive characteristics (e.g., the formal markers) of the unit being described. The Manifestation mode describes the variations of the emic unit. The Distribution mode describes the distribution of the emic unit in slots in larger units. Thus, the units described in the Distribution mode at one level are the units described in the Feature mode at another level.

1.2 APPLICATION TO ISTHMUS NAHUAT

The description of Isthmus Nahuat presented here is overtly oriented to the concepts of slot, class, type and level rather than to the modal concepts mentioned above. However, the modal features just described are basic to each part of the description and can be extracted by the reader for each section of the description.

The following is an illustration of these modal features extracted from the fuller description presented in the following chapters. The unit selected is the verb, a class of word types on the word level. The feature mode of the Isthmus Nahuat verb consists of the following contrastive and identificational characteristics (among others): Indicative mode category, Subjunctive mode category, Imperative mode category. The Manifestation mode consists of the following variants for each verb type: Intransitive, Semitransitive,[6] Transitive, Reflexive and Benefactive. The Distribution mode consists of an Independent clause level slot for the Indicative verb, a Dependent clause level slot for the Subjunctive verb, and an Independent Imperative clause level slot for the Imperative verb.

For Isthmus Nahuat six emic levels of grammatical structure have been posited: stem, word, phrase, clause, sentence and at least one still higher level not yet sufficiently analyzed to receive a specific label. Two or more levels may have portmanteau manifestations by a single construction (e.g. in English *Mary* could be described as manifesting simultaneously the noun stem, noun word, noun phrase and clause levels at least).

In this paper the classification of Isthmus Nahuat structure is based primarily on external distribution (e.g. Independent Sentence Types vs. Dependent Sentence

[4] Cf. the hierarchies set up by Pike, 1954, and the treatment of hierarchies in Crawford, John C., "Pike's Tagmemic Model Applied to Totontepec Mixe Phonology". Unpublished Ph. D. dissertation, University of Michigan, 1959.

[5] Pike, *ibid.*, pp. 35-40.

[6] See glossary, p. 70.

Types, sec. 2.2.1 and 2.2.2). A second feature, internal arrangement, is used as a subclassifying feature (e.g. Declarative Type 1 Sentences vs. Declarative Type 2 Sentences, sec. 2.2.1.1.1 and 2.2.1.1.2) unless relevant structural considerations indicate that the internal arrangement is the more significant (e.g. in the Independent Clause Types vs. Dependent Clause Types, sec. 3.2.1 and 3.2.2 where the external distribution was unique for each type, but the internal arrangement was quite similar for each type). In such an instance, the external distribution was used as a subclassifying feature in order to simplify the number of classes to be treated on this level. Part of the justification of treating the phrases and dependent clauses in this way is that to have done otherwise would have resulted in just a list of numerous unclassified types with no significant groupings. In this way priority was given also to integration of these types with the larger system.

Although most constructions in a language consist of both obligatory and optional tagmemes, this description of Isthmus Nahuat treats only the obligatory tagmemes except where, in a few instances, the optional occurrence of a tagmeme contributes to the establishing of a structural type. In these instances the optional tagmeme has been considered a part of the nuclear construction.[7] Other optional tagmemes are considered peripheral in each construction type.

In Isthmus Nahuat the peripheral tagmemes have a much freer order of occurrence than do the nuclear ones. Such peripheral tagmemes as Subject, Manner, Location and Temporal on the clause level have no contrastive positional occurrence in relation to the lexical meanings signalled. On both the clause and word levels even the occurrence or absence of a peripheral tagmeme may be free or it may be conditioned by the occurrence of an analogous tagmeme on another level. On still other levels (sentence, phrase, stem) there are fewer peripheral tagmemes or they are more fixed in position and occurrence.

The peripheral tagmemes of the word and stem levels have been described in some detail, though not by means of a tagmemic model, in Law, 1958. The other peripheral tagmemes of this language have not been described here because of the added complexity such a description would have produced in terms of relative freedom of order and of occurrence conditioned by features of other structural levels.

1.3 PRELIMINARY SURVEY OF ISTHMUS NAHUAT STRUCTURE

The phonological description of Isthmus Nahuat has already been published,[8] although it is not based on the tagmemic model. Some of the grammatical materials were published earlier in a form influenced only to a small degree by the work of Pike in tagmemics at the time.[9] More materials in the grammatical hierarchy are

[7] Pittman, Richard S., "Nuclear structures in linguistics", *Language* 24: 287-92 (1948).
[8] Law, Howard W., "The Phonemes of Isthmus Nahuat", *El Mexico Antiguo* 8:267-78 (1955).
[9] *Ibid.*, "Morphological Structure of Isthmus Nahuat", *IJAL* 24:108-29 (April, 1958).

presented here, and the earlier materials largely revised to fit the tagmemic model and to form a consistent base for the additional materials.

It may be useful to give a preliminary survey of the grammatical structure of Isthmus Nahuat before taking each feature in detail. In this brief survey the description will proceed from the largest or the highest unit fully treated here, i.e., the sentence, to the fillers of the minimum slots (i.e. the obligatory component) in the minimum construction level, the stem level.

Sentences consist of a minimum of a base tagmeme. Sentences fill slots in higher level constructions, but these have not been described in this presentation.

Clauses consist of a minimum of a predicate tagmeme with subject and object as nuclear tagmemes also when they occur. Clauses fill slots in sentences, other clauses and in phrases.

Phrases consist of a minimum of a head tagmeme. Phrases fill slots in other phrases and higher level constructions. The nucleus in verb phrases, for example, is a verb head tagmeme filled by one of the two verbs.

Words consist of a minimum of a nucleus tagmeme. Words fill slots in phrases and higher level constructions. The nucleus in a verb, for example, is a verb nucleus tagmeme filled by a verb root or stem. There are five verb types each contrasting by two differences.

Stems consist of a minimum of a core tagmeme. Stems fill nuclear slots in higher level constructions. The nucleus in a verb stem, for example, is a verb root. Roots are minimal grammatical units.

In each of the above instances the minimum is the obligatory component.

1.3.1 *The Sentence*

The sentence is defined for Isthmus Nahuat as a grammatical unit which occurs potentially in isolation as a complete utterance.[10] Sentence types consist of two hyperclasses, i.e. two classes each of which includes classes and subclasses: Independent and Dependent. The Independent hyperclass consists of: Declarative and Interrogative classes. The Declarative class consists of two types: Declarative Type 1 and Declarative Type 2. The Interrogative class consists of a single type.

The Declarative Type 1 consists of an Independent Base slot filled by an Independent Clause with an optional expansion of an optional connector and a second Independent Base slot filled by an Independent Clause or an Anaphoric Clause. The Declarative Type 2 consists of a Dependent Base slot filled by a Sentence Level Dependent Clause with an optional expansion consisting of an optional connector and a second Dependent Base slot filled by the same filler type as the first and followed by an obligatory Independent Base slot filled by an Independent Clause.

The Interrogative Type consists of an Interrogative slot filled by an Interrogative

[10] Pickett, Velma B., "The grammatical hierarchy of Isthmus Zapotec", *Language dissertation no. 56* (Baltimore, Linguistic Society of America, 1960), p. 75.

particle (*keman* 'when', *kan* 'where', *katiapa* 'which one', etc., or *iš-*, question marker) or a particle phrase (e.g., *te: iga* 'why') plus an Independent Base slot filled by a Declarative sentence.

The Dependent hyperclass consists of: Response and Quotation classes. The Response class consists of a single type which is simple in structure and consists of a Dependent Base slot filled by a minimum phrase (i.e., a word). The Quotation class consists of a single type which is complex in structure and consists of a Dependent Base slot filled by an Independent Sentence with a Quotation slot filled by *-kiʔ*, an enclitic, postposed to the first word in the filler of the Dependent Base slot.

1.3.2 *The Clause*

The clause is defined as a unit containing a predicate or a predicate-like tagmeme.[11] Clause types consist of two hyperclasses of clause types: Independent and Dependent. The Independent hyperclass consists of five classes: Indicative, Subjunctive, Imperative, Topic-Comment, and Equational. The first three classes each consist of the following four types: Non-transitive, Transitive, Reflexive, and Benefactive. The last two classes consist of a single type each.

The Dependent hyperclass consists of five classes: Sentence Level Type 1, Sentence Level Type 2, Clause Level, Phrase Level and Anaphoric Clause. The Sentence Level Type 1 class consists of two types: Conditional and Causal. The Sentence Level Type 2 class consists of a single type: Purpose. The Clause Level class consists of four types: Temporal, Locative, Manner, and Objective. The Phrase Level class consists of a single type: Relative. Each of the types consists of an Introducer tagmeme plus a Specifier tagmeme. The Introducer tagmeme is manifested by a conditional, causal, purpose, temporal, locative, manner, objective, or relative particle respectively. The Specifier tagmeme is manifested by an Indicative, Subjunctive, Imperative, Topic-Comment, or Equational clause. (See Table VI, p. 37.) The Anaphoric clause constitutes a unique type consisting of an Indicative clause, the absence of the Predicate tagmeme of that clause, the obligatory occurrence of the Subject tagmeme, and at least one additional tagmeme which is optional in other types, e.g., Locative, Temporal or Association.

1.3.3 *The Phrase*

The phrase is defined as a single word which occurs as an expandable unit and fills at least phrase and clause level slots. Phrase types consist of two hyperclasses: Subordinate[12] phrases, and Non-subordinate phrases. There are two Co-ordinate phrases.

[11] Pickett, Velma B., *An Introduction to the Study of Grammatical Structure* (Glendale, Summer Institute of Linguistics, 1954) (Mimeo.), revised 1956, p. 32.

[12] Nida, Eugene A., *A Synopsis of English Syntax*, ed. Benjamin F. Elson (Norman, Oklahoma, 1960), p. ix *passim*.

The Subordinate Phrase hyperclass consists of four classes: Subordinate Noun phrases, Subordinate Verb phrases, Subordinate Pronoun phrases, and Subordinate Particle phrases.

The Subordinate Noun phrase class consists of three types: SN-1, SN-2 and SN-3. Subordinate N-1 consists minimally of a Head slot filled by a noun with a possible expansion of as many as two preposed modifiers and one postposed modifier. Subordinate N-2 consists of a Possessed tagmeme plus a Possessor tagmeme. Subordinate N-3 consists of a Modifier tagmeme manifested by a preposed Relative clause plus a Head tagmeme.

The Subordinate Verb Phrase class consists of two types: Subordinate V-1 consists of a Head slot filled by *-maka-* 'give' plus a Predicate Complement slot filled by *kʷenta* 'account', etc. Subordinate V-2 consists of a Head slot filled by *-onoʔ-* 'be' plus a Predicate Complement slot filled by *konforme* 'in agreement'.

The Subordinate Pronoun Phrase class consists of two types. Subordinate Pronoun-1 consists of a Head slot filled by a pronoun plus a Modifier slot filled by a particle. Subordinate Pronoun-2 consists of a Head slot filled by a pronoun plus a Modifier slot filled by Manner clause, which is a member of the Dependent Base and Independent Base sub-class, or a Dependent Clause Level Relative clause.

The Subordinate Particle Phrase class consists of two types. Subordinate Particle-1 consists of a Modifier slot filled by a particle plus a Head slot filled by a particle. Subordinate Particle-2 consists of a Head slot filled by a locative particle plus a Modifier slot filled by a Dependent Base and Independent Base sub-class Locative clause.

Coordinate Phrases are of two types. Coordinate Noun-1 consists of a Head slot filled by any noun, an obligatory Link slot filled by *iwa:n* 'and', and a second Head slot filled by any noun.

Coordinate Noun-2 consists of a noun or noun phrase or a demonstrative pronoun in apposition with a second noun or noun phrase.

The Non-subordinate Phrase hyperclass consists of two classes: Focus-Orienter and Axis-Relator. The Focus-Orienter class consists of five types: FO-1 consists of a Focus slot filled by *para* or *te*: and an Orienter slot filled by *ke* or *iga*. FO-2 consists of a Focus slot filled by a Spanish adverb plus an Orienter slot filled by *ke* or *iga*. FO-3 consists of a Focus slot filled by *ken* plus an Orienter slot filled by *iga*. FO-4 consists of a Focus slot filled by *am*, *aman*, *ya*, *no* plus an Orienter slot filled by *sí* or *ves*. FO-5 consists of a Focus slot filled by *a parte* plus an Orienter slot filled by *iga*.

The Axis-Relator class consists of four types. AR-1 consists of an Axis slot filled by a possessed noun or *este* or *a* plus a Relator slot filled by an SN-1 phrase. AR-2 consists of an Axis slot filled by *ken* plus a Relator slot filled by an SN-1 phrase or a certain type of clause class. AR-3 consists of an Axis slot filled by *iga* or *por* plus a Relator slot filled by the following: SN-1, SN-2, or SN-3. AR-4 consists of an Axis slot filled by *iwa:n* 'with' plus a Relator slot filled by the following: SN-1, SN-2, or SN-3.

1.3.4 *The Word*

The word is defined as a unit containing a nuclear slot filled by a stem and filling at least phrase level and clause level slots, but never word level slots. Word types consist of two hyperclasses: Verbs and Particles, and two classes: Nouns and Pronouns.

The Verb hyperclass consists of three modal classes (Indicative, Subjunctive, Imperative) with five types in each: Intransitive, Semi-transitive, Transitive, Reflexive, and Benefactive. The Particle hyperclass consists of two classes: Free and Bound. There are various types of Free particles, e.g., Adverbial, Negative, Temporal, etc. Bound particles are of two types: Proclitics and Enclitics. The Noun class consists of two types: Possessor Noun and Possessed Noun. The Pronoun class consists of three types: Personal, Interrogative and Demonstrative.

1.3.5 *The Stem*

The stem is defined as a unit manifesting the nuclear tagmeme in the word construction. There is one hyperclass of stems: Verb; there are two classes of stems: Noun and Particle.

Verb stems consist minimally of a root plus either a derivational affix or a second root. There are three classes of verb stem types: Intransitive, Transitive, and Benefactive.

Intransitive stems consist of two types: Compound and Derived. Compound intransitive stems consist of two core slots filled by either an intransitive and a transitive root, or by two intransitive roots. Derived intransitive stems consist of a core slot filled by an intransitive root and a formative slot filled by a derivational affix.

Transitive stems consist of two types: Compound and Derived. Compound transitive stems consist of a core slot filled by a noun root plus a core slot filled by a transitive verb root, or a core slot filled by a transitive root plus a link slot filled by *-s* plus a second core slot filled by *-neki-* 'want'. Derived transitive stems consist of a core slot filled by a transitive root plus a formative slot filled by a derivational affix.

Benefactive stems consist of a core slot filled by a transitive root plus a formative slot filled by *-li*.

Noun stems consist minimally of a root and either a second root or a derivational affix. There are two noun stem types: Compound and Derived. The compound type consists of a core slot filled by a noun root. The derived type consists of a core slot filled by a noun root and a formative slot filled by a stem formative affix or a derivational affix, or a core slot filled by a verb root and a formative slot filled by a derivational affix.

Particle stems consist minimally of a root and either a second root or a derivational affix. There are two particle stem types: Compound and Derived. The compound stem type consists of *a-*, negative, plus one of several other particle roots. The derived stem type consists of either an intransitive verb plus *-k* alternating with *-ktik* (phonologically conditioned), or of two particle roots.

SENTENCE STRUCTURE

2.1 FORMAL CHARACTERISTICS OF THE SENTENCE AS A UNIT

The minimum independent sentence consists of a single grammatical unit which occurs potentially in isolation as a complete utterance.[1] The grammatical unit may be a word, a phrase, or a clause. In this respect the sentence level overlaps various other levels or is in portmanteau relation with one or more of these levels, i.e., the same utterance may manifest simultaneously more than one structural level.

Only two sentence types may be expanded; the others occur only in a single unexpandable form. Sentences occur with contrastive intonational features for each type, but the relationship of these features to each sentence type has not been sufficiently analyzed as yet to include any description of them at this point.

2.2 SENTENCE TYPES AND OBLIGATORY TAGMEMES

Isthmus Nahuat sentence types divide into two hyperclasses, Independent and Dependent, on the basis of their occurrence in higher levels of structure.

2.2.1 *Independent Sentence Types*

The hyperclass of Independent Sentence Types consists of two classes: (1) Declarative and (2) Interrogative. The Declarative Sentence Class consists of two types: (1) Declarative Type 1 and (2) Declarative Type 2. The Interrogative Sentence Class consists of a single unique type.

2.2.1.1 *Declarative Class of Independent Sentence*

The Declarative sentence types constitute a class of types due to their single distribution in a higher level, i.e., the Statement slot.

2.2.1.1.1 *Declarative Type 1*

The diagnostic features of the Declarative Type 1 are: (1) an Independent Base filled

[1] Cf. Pickett, 1960:75 on which this description was based. Dependent sentences are discussed in sec. 2.2.2.

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by an Independent Clause, and (2) an optional expansion consisting of ± Conn: conj + Indep. Base:Indep. Clause / Anaphoric Clause. This formula is to be read 'An optional Connector slot filled by a conjunction plus an obligatory Independent Base slot filled by a second Independent Clause or an Anaphoric Clause'.

Any clause of the Independent Clause Class fills the Independent Base slot. A minimum Declarative Type 1 sentence consists of only an Independent Base tagmeme. Examples of minimum Declarative Type 1 sentences are: *neh nikowas nogak* 'I will buy my sandal', *yeh kinoɛaʔ isiwat* 'He called his wife', *nia-ya* 'I go now', *ša-ha* 'Go, then'. Examples of expanded Declarative Type 1 sentences are: *nia nikitati wan iwa:n nikihlis inón kosa* 'I'm going to see John and I will tell him that (thing)', *yehamen akimamkeh akitiskeh**[2] 'They did not cook it; they did not grind it'.

2.2.1.1.2 *Declarative Type 2*

The diagnostic features of the Declarative Type 2 are: (1) a Dependent Base filled by a Sentence Level Dependent Clause, and (2) an optional expansion consisting of ± Conn: conj + Dep. Base:Sent. Level Dep. Clause following the Dependent Base tagmeme.

Any clause of the Sentence Level Dependent Clause class fills the Dependent Base slot. A minimum Declarative Type 2 sentence consists of a Dependent Base plus an Independent Base. Examples of minimum Declarative Type 2 sentences are: *si nisas temprano, nia* 'If I awaken early, I'll go', *ikʷaʔ isas, niktamakas* 'When he wakes up, I'll feed him'. Examples of expanded Declarative Type 2 sentences are: *si nisas temprano iwa:n si nikehlamikis, nia* 'If I awaken early and if I remember it, I'll go', *ikʷaʔ mokʷepaʔ iwa:n komo ne:itaʔ kʷesiwi?* 'When he returned and since he saw me, he got angry'.

2.2.1.2 *Interrogative Type of Independent Sentence*

The Interrogative Sentence type occurs in the Question slot. No expansion of this type is possible.

The diagnostic features of the Interrogative type are: (1) an Interrogative slot filled by *keman* 'when', *kan* 'where', *katiapa* 'which one', etc., or by *iš-*, question marker requiring an affirmative or negative response, and (2) an Independent Base slot filled by a Declarative Sentence.

Any Declarative Sentence may occur in the Independent Base slot except an Imperative clause sentence. A minimum Interrogative sentence consists of an Interrogative tagmeme plus an Independent Base tagmeme. Examples of Interrogative sentences are: *keman tiwalah* 'When did you come?', *kan tia* 'Where are you going?', *katiapa tikneki* 'Which one do you want?', *ken tikmati* 'How do you feel?', *iš-tia* 'Are you going?', *iš-teh tinopileiːn* 'Are you my son?', *te: iga tičoka* 'Why are you crying?'.

[2] Forms marked thus are from a folktale.

TABLE I

Independent Sentence Types

Class & Type	Obligatory Component	Expansion	Slot in Higher Level
Declarative			
Type 1	+ Indep. Base: Indep. Clause	± Conn: conj + Indep. Base: Indep. Cl. / Anaph. Cl.	Statement
Type 2	+ Depend. Base: Sent. Level Depend. Clause + Indep. Base: Indep. Cl.	± Conn: conj + Depend. Base: Sent. Level Depend. Cl.	Statement
Interrogative	+ Interrog: Interrog. Part. + Indep. Base: Declarative Sentence		Question
	Dependent Sentence Types		
Response	+ Depend. Base: Word		Response
Quotation	+ Depend. Base: Indep. Sentence + Question: *-kiʔ*		Quotation

2.2.2 *Dependent Sentence Types*

Dependent sentences[3] contrast with independent sentences in that the former cannot occur as complete utterances without some defining context. They are formally marked for dependence as seen in the following types.

The hyperclass of Dependent Sentence Types consists of two classes: (1) Response and (2) Quotation. Each class consists of a single type; the Response is simple in structure, the Quotation is complex in structure. No expansion of these types is possible.

2.2.2.1 *Response Sentence Type*

The diagnostic features of the Response Sentence type are: (1) a minimum phrase (i.e., a word) or an expanded phrase fills the Dependent Base slot, and (2) occurrence only in the Response slot of the higher level.

Any word or phrase of any class fills the Dependent Base slot. Examples in context (indicated by parentheses) are: (*kan tia*) *neːpa* '(Where are you going?) Over there', (*teː onoʔ*) *até*: '(What is it?) Nothing'.

2.2.2.2 *Quotation Sentence Type*

The diagnostic features of the Quotation Sentence type are: (1) a Quotation tagmeme occurs with the Dependent Base tagmeme, and (2) this type occurs only in the Quotation slot of the higher level.

[3] Waterhouse, Viola, "Independent and Dependent Sentences", *IJAL* 29:45-54 (1963).

Only *-kiʔ* fills the Quotation slot, but any Independent Sentence may fill the Dependent Base slot. *-kiʔ* is an enclitic attached to the first word of the filler of the Dependent Base slot. Examples are: *ayá-kiʔ nikneki* 'I don't want it, he said', *ne:maka-kiʔ* 'Give it to me, he said', *keman-kiʔ tikneki šiwiki* 'Whenever you want to, come, he said'.

3

CLAUSE STRUCTURE

3.1 FORMAL CHARACTERISTICS OF THE CLAUSE AS A UNIT

3.1.1 The following syntactophonemic changes[1] occur at clause level:

(1) Between Predicate and Adverb tagmemes there is a loss of a vowel: *onoʔ* 'there is' + *ya* 'already' = *onʔya* 'there already is'.

(2) Between Negative and Adverb tagmemes there is loss of a vowel: *ayo* 'no more' + *más* 'more' = *ayʔmás* 'no more now'.

(3) Between Auxiliary and Predicate tagmemes there is loss of a vowel and assimilation of a consonant: *nemi* 'is' + *tekipanowa* 'he works' = *nentekipanowa* 'he is working', or loss of one or more syllables: *nia* 'I go' + *nimiɛmagati* 'I am going to hit you' = *niaɛmagati* 'I am going to hit you'.

(4) Between Object and Predicate tagmemes there is loss of a consonant and a vowel: *te:* 'what' + *tikči:wa* 'you are doing it' = *te:kči:wa* 'what are you doing?'.

3.1.2 The minimum clause consists of a single verb of any type filling the nuclear slot. A Predicate tagmeme or its equivalent (e.g. Comment tagmeme) will always constitute the nucleus of any clause. Thus, a clause may consist of simply a Predicate slot filled by an Indicative Transitive verb (e.g., *nikmati* 'I know it'), an Indicative Intransitive verb (e.g., *nia* 'I go'), an Indicative Reflexive verb (e.g., *momagaʔ* 'he hit himself'), an Imperative Intransitive verb (e.g., *šinehnemi* 'walk!'), etc.; or a Predicate tagmeme plus one or more peripheral tagmemes (e.g., *yehamen kitakeh inón ko:yame* 'they saw that pig' – Subject, Predicate and Object tagmemes).

3.2 CLAUSE TYPES AND OBLIGATORY TAGMEMES

Isthmus Nahuat clause types divide into two hyperclasses of clause types on the basis of their occurrence in more inclusive structures or higher levels of structure. These two hyperclasses are: Independent and Dependent Clause Types.

The members of the Independent hyperclass occur as fillers of slots in the various

[1] Nida, Eugene A., *Morphology: The Descriptive Analysis of Words* (Ann Arbor, Mich., University of Michigan Press, 1949), p. 200. — Nida, Eugene A., *Outline of Descriptive Syntax* (Glendale, Calif., Summer Institute of Linguistics, 1951) (Mimeo.), p. 49 *passim*.

types of Dependent hyperclass and as fillers of slots of sentence types on the sentence level. The members of the Dependent hyperclass fill slots on the sentence, the clause, and the phrase levels.

3.2.1 *Independent Clause Types*

The hyperclass of Independent Clause Types consists of five classes: (1) the Indicative Class, (2) the Subjunctive Class, (3) the Imperative Class, (4) the Topic-Comment Class, (5) the Equational Class. The first three classes consist of the following four class types: (1) Non-transitive type, (2) Transitive type, (3) Reflexive type, and (4) Benefactive type. The last two classes (i.e., the Topic-Comment and the Equational Class) consist of a single unique type each. The clause level objects of the Transitive and Reflexive types are in duplicative paratactic relation with the fillers of the word level object slots, e.g. *kito:ka sinti* 'he plants corn' (*ki-* and *sinti* refer to the same thing: corn).

3.2.1.1 *Indicative Class of Independent Clause Types*

The Indicative Clause types constitute a class of types due to their single distribution in the following higher level slots: Independent Base in Declarative Sentence Types 1 and 2, in Interrogative Sentence Type, and in Quotation Sentence; and in the following Dependent Clause types as fillers of the Specifier slot: Conditional, Causal, Temporal, Locative, Manner, Objective and Relative.

3.2.1.1.1 *Indicative Non-transitive Type*

The diagnostic features of the Indicative Non-transitive Type are: (1) an Indicative Non-transitive Predicate tagmeme, and (2) the obligatory absence of the Object tagmeme. The meaning of the Indicative Non-transitive Predicate tagmeme is the predication of an assertion not directed to any specific object.

An intransitive verb or a semi-transitive verb in the indicative mode fills the Indicative Non-transitive slot. Examples of minimum Indicative Non-transitive clauses are: (with intransitive verb) *niweeikeh* 'we (excl.) fell', *yahki* 'he went', *tičoka* 'you are crying', *nimikisnekiáʔ* 'I was wanting to die'; (with semi-transitive verb) *nitakʷa:* 'I eat', *tahtowa* 'he talks', *titakohkeh* 'we (incl.) bought (made our purchases)'.

3.2.1.1.2 *Indicative Transitive Type*

The diagnostic features of the Indicative Transitive Type are: (1) an Indicative Transitive Predicate tagmeme, and (2) an optional Object tagmeme. The meaning of the Indicative Transitive Predicate tagmeme is the predication of an assertion directed towards a specific object. The object is overtly marked within the filler of the Predicate slot.

A transitive verb in the indicative mode fills the Indicative Transitive slot. Exam-

ples of minimum Indicative Transitive clauses with clause level Object tagmemes manifested are: *niknamaka šapon* 'I'm selling soap', *kitaʔ iye* 'he saw his mother', *nimiɕita teh* 'I see you', *tine:magaʔ neh* 'you hit me'.

3.2.1.1.3 *Indicative Reflexive Type*

The diagnostic features of the Indicative Reflexive Type are: (1) an Indicative Reflexive Predicate tagmeme, and (2) an optional Object tagmeme. The meaning of the Indicative Reflexive Predicate tagmeme is the predication of an assertion directed towards a specific object of the same grammatical person as the subject of the predication.

A reflexive verb in the indicative mode fills the Indicative Reflexive slot. A pronoun or pronoun phrase fills the Object slot. Examples of minimum Indicative Reflexive clauses with clause level Object tagmemes manifested are: *momagaʔ yeh-sam mismo* 'he hit himself (his very own self)', *timoita teh* 'you see yourself', *nimoɕonteʔ* 'I cut just myself'.

3.2.1.1.4 *Indicative Benefactive Type*

The diagnostic features of the Indicative Benefactive Type are: (1) an Indicative Benefactive Predicate tagmeme, and (2) an optional Benefactive tagmeme. The meaning of the Indicative Benefactive Predicate tagmeme is the predication of an assertion directed towards an implied direct object and in reference to the "benefit" of a second or benefactive object optionally specified by the manifestation of the clause level tagmeme.

A benefactive verb in the indicative mode fills the Indicative Benefactive slot. When the direct object is other than third person, the identification of the person of the second or benefactive object *may* be expressed optionally by the clause level Benefactive tagmeme: *ne:kowilih iga yeh*[2] 'she bought me for him', *ne:kiɕkilih iga yeh* 'he caught me for him', *miɕnamakiltihkeh iga yeh* 'they sold you for him'. If the second or benefactive object is other than third person, the identification of the person *must* be expressed *if ambiguity* is to be avoided: *ne:kowilih iga teh*[3] 'she bought me for you', *ne:kiɕkilihkeh iga amehwa:n* 'he caught me for you (pl.)', *miɕnamakiltihkeh iga neh* 'they sold you for me'. The filler of the Benefactive slot in this and other Benefactive types may be either a Substantive phrase (i.e., Noun phrase or Pronoun phrase) or an Axis-Relator phrase (see sec. 4.2.3.2). This type of Axis-Relator phrase is illustrated by the above examples, *iga neh* 'for me' and *iga teh* 'for you'.

When the Benefactive tagmeme occurs in the clause construction, it marks the benefactive function of the clause redundantly since the benefactive verb is obligatory

[2] An expression used in conversations regarding marriages. Women are referred to as "bought" by the boy's mother, and money and other valuables are exchanged in the wedding ceremony. (See Law, Howard W., "Mecayapan, Veracruz: An Ethnographic Sketch". Unpublished M. A. thesis, The University of Texas, 1960.) Some of the expressions below also occur in connection with marriage.

[3] *Ibid.*

to the construction. One verb constitutes an exception to this statement, i.e., the verb *-maka-* 'give'. This verb root occurs in Benefactive clause constructions without any Benefactive tagmeme at the word level, i.e., *-maka-* plus *-li* is a non-permitted sequence. Examples of *-maka-* in benefactive clause constructions are: *kimagaʔ iga neh* 'he hit him for me', *kimaka iga teh* 'he hits him for me', *kimaka iga teh* 'he hits him for you', *kimagakeh iga amehwa:n* 'they hit him for you (pl.)'. Clauses with *-maka-* as the root of the verb manifesting the Predicate tagmeme limit the manifestation of the Benefactive tagmeme to an Axis-Relator phrase.

3.2.1.1.5 *Summary of Indicative Clause Types*

The four Indicative Clause types described above constitute four emic clause types because of the following two kinds of internal structural differences: (1) contrastive predicate tagmemes in each instance: non-transitive vs. transitive, etc., and (2) contrastive manifestation of a second tagmeme (e.g., Object tagmeme): optional occurrence vs. obligatory absence, or contrastive manifesting classes within the same tagmeme, etc.

Table II is a formulaic summary of the minimum formulas for each Indicative Clause Type. (Tagmemes with a ± occurrence are considered part of the minimum formula if such optional occurrence is one of the two contrastive features of the clause type. See Table II.)

TABLE II

Contrastive Features of Indicative Clause Types

Non-trans. type	=	+	Indic. Non-trans. P:indic. intr. verb / indic. semi-trans. verb - 0	
Trans. type	=	+	Indic. Trans. P:indic. trans. verb	± 0:Subst.
Refl. type	=	+	Indic. Refl. P:indic. refl. verb	± 0:Pro.
Benefac. type	=	+	Indic. Benefac. P:indic. benefac. verb	± B:Subst. / AR

3.2.1.2 *Subjunctive Class of Independent Clause Types*

The Subjunctive Clause types constitute a class of types due to their single distribution in the following higher level slots: Independent Base in Declarative Sentence Types 1 and 2, in Interrogative Sentence Type, and in Quotation Sentence; and also in the Dependent Purpose Clause type as filler of the Specifier slot.

3.2.1.2.1 *Subjunctive Non-transitive Type*

The diagnostic features of the Subjunctive Non-transitive type are: (1) a Subjunctive Non-transitive Predicate tagmeme, and (2) the obligatory absence of the Object tagmeme. The meaning of the Subjunctive Non-transitive Predicate tagmeme is the predication of a permissive assertion not directed to any specific object. The assertion in all subjunctive class clause types is permissive in that the action or situation referred

to is conditioned by receiving the permission of some non-subject person or by some other condition being fulfilled.

An intransitive verb or a semi-transitive verb in the subjunctive mode fills the Subjunctive Non-transitive slot. Examples of minimum Subjunctive Non-transitive clauses are: *maweɛi* 'let it fall', *makisa* 'that he leave', *mania* 'with your permission I go', *manitakowa* 'let me buy (make my purchases)', *matataniti* 'let him go earn'.

3.2.1.2.2 *Subjunctive Transitive Type*

The diagnostic features of the Subjunctive Transitive type are: (1) a Subjunctive Transitive Predicate tagmeme, and (2) an optional Object tagmeme. The meaning of the Subjunctive Transitive tagmeme is the predication of a permissive assertion directed towards a specific object.

A transitive verb in the subjunctive mode fills the Subjunctive Transitive slot. Examples of minimum Subjunctive Transitive clauses with clause level Object tagmemes manifested are: *maniknamaka šapon* 'let me sell soap', *makita iye* 'let him see his mother', *matikmagakan* 'let's hit him'.

3.2.1.2.3 *Subjunctive Reflexive Type*

The diagnostic features of the Subjunctive Reflexive Type are: (1) a Subjunctive Reflexive Predicate tagmeme, and (2) an optional Object tagmeme. The meaning of the Subjunctive Reflexive Predicate tagmeme is the predication of the permissive assertion directed towards a specific object of the same person as the subject of the predication.

A reflexive verb in the subjunctive mode fills the subjunctive transitive slot. A pronoun or pronoun phrase fills the Object slot. Examples of minimum Subjunctive Reflexive clauses with clause level object tagmemes manifested are: *mamomaga yeh-sam mismo* 'let him hit himself (his very own self)', *manimotaahaki neh* 'let me get dressed', *matimoyolpatakan tehamen* 'let's us ourselves repent', *mamoyolkʷepa yeh* 'that he become confused (confuse himself)'.

3.2.1.2.4 *Subjunctive Benefactive Type*

The diagnostic features of the Subjunctive Benefactive Type are: (1) a Subjunctive Benefactive Predicate tagmeme, and (2) an optional Benefactive tagmeme. The meaning of the Subjunctive Benefactive Predicate tagmeme is the predication of a permissive assertion directed towards an implied direct object and in reference to the "benefit" of a second or benefactive object optionally specified by the manifestation of the clause level Benefactive tagmeme.

A benefactive verb in the subjunctive mode fills the Subjunctive Benefactive slot.

The order of precedence and the identification of the direct object and second object in the Subjunctive Benefactive Type are as described for the Indicative Benefactive Type (sec. 3.2.1.1.4).

Examples of minimum Subjunctive Benefactive clauses with clause level tagmemes

manifested are: *mane:čiwili neh* 'let him do it to me', *manimiɛkowili teh* 'let me buy it for you', *makiwigili iga inón siwat* 'let him carry it for that woman', *manimiɛihli iga inón siwat* 'let me tell you for that woman'.

3.2.1.2.5 *Summary of Subjunctive Clause Types*

The four subjunctive clause types described above constitute four emic clause types because of the following two kinds of internal structural differences: (1) contrastive predicate tagmemes in each instance: non-transitive vs. transitive, etc., and (2) contrastive manifestation of a second tagmeme in each instance (e.g., an Object tagmeme), i.e., optional occurrence vs. obligatory absence, or contrastive manifesting classes within the same tagmeme, etc.

Table III is a formulaic summary of the minimum formulas for each Subjunctive

TABLE III

Contrastive Features of Subjunctive Clause Types

Non-trans. type	= + Subj.	Non-trans. P:subj. intrans. verb / subj. semi-trans. verb - 0	
Trans. type	= + Subj.	Trans. P:subj. trans. verb	± 0:Subst.
Refl. type	= + Subj.	Refl. P:subj. refl. verb	± 0:Pro.
Benefac. type	= + Subj.	Benefac. P:subj. benefac. verb	± B:Subst. / AR

Clause Type. (Tagmemes with a ± occurrence are considered part of the minimum formula if such optional occurrence is one of the two contrastive features of the clause type. See Table III.)

3.2.1.3 *Imperative Class of Independent Clause Types*

The Imperative Clause types constitute a class of types due to their single distribution in the following higher level slots: Independent Base in Declarative Sentence Types 1 and 2, in Quotation Sentence, and in the Purpose type of the Dependent Sentence Level Clause type.

3.2.1.3.1 *Imperative Non-transitive Type*

The diagnostic features of the Imperative Non-transitive type are: (1) an Imperative Non-transitive Predicate tagmeme, and (2) the obligatory absence of the Object tagmeme. The meaning of the Imperative Non-transitive Predicate tagmeme is the commanding of action or a state to a person or persons spoken to, but not directed to any specific object.

An intransitive verb or a semi-transitive verb in the imperative mode fills the Imperative Non-transitive slot. Examples of minimum Imperative Non-transitive clauses are: *šiwiki* 'come', *šisa* 'wake up', *šitakowa* 'buy', *šitatani* 'earn'.

3.2.1.3.2 *Imperative Transitive Type*

The diagnostic features of the Imperative Transitive Type are: (1) an Imperative Transitive Predicate tagmeme, and (2) an optional Object tagmeme. The meaning of the Imperative Transitive Predicate tagmeme is the commanding of action or a state to a person or persons spoken to and directed to a specific object.

A transitive verb in the imperative mode fills the Imperative Transitive slot. Examples of minimum Imperative Transitive clauses with clause level Object tagmemes manifested are: *šiknamaka šapon* 'sell soap', *šikita iye* 'see his mother', *šikmagakan yeh* '(all of you) hit him'.

3.2.1.3.3 *Imperative Reflexive Type*

The diagnostic features of the Imperative Reflexive Type are: (1) an Imperative Reflexive Predicate tagmeme, and (2) an optional Object tagmeme. The meaning of the Imperative Reflexive Predicate tagmeme is the commanding of action or a state to a person or persons spoken to and directed towards a specific object of the same person as the subject of the command or state.

A reflexive verb in the imperative mode fills the Imperative Reflexive slot. A pronoun or pronoun phrase fills the Object slot.

Examples of minimum Imperative Reflexive clauses with clause level Object tagmemes manifested are: *šimomaga teh-sam mismo* 'hit yourself (your own self)', *šimotaahaki teh* 'get yourself dressed', *šimoyolpatakan amehwa:n* 'you all repent (change your hearts)'.

3.2.1.3.4 *Imperative Benefactive Type*

The diagnostic features of the Imperative Benefactive Type are: (1) an Imperative Benefactive Predicate tagmeme, and (2) an optional Benefactive tagmeme. The meaning of the Imperative Benefactive Predicate tagmeme is the commanding of action or a state directed towards an implied direct object and in reference to the "benefit" of a second or benefactive object optionally specified by the manifestation of the clause level Benefactive tagmeme.

A benefactive verb in the imperative mode fills the Imperative Benefactive slot.

The order of precedence and the identification of the direct and second objects in the Imperative Benefactive Type are as described for the Indicative Benefactive Type (sec. 3.2.1.1.4).

Examples of minimum Imperative Benefactive clauses with clause level tagmemes manifested are: *šine:či:wili neh* 'do it to (for) me', *šikowili yeh* 'buy it for him', *šikwigili iga inón siwat* 'carry it for that woman', *šikpakili iga inón siwat* 'wash it for that woman'.

3.2.1.3.5 *Summary of Imperative Clause Types*

The four imperative clause types described above constitute four emic clause types because of the following two kinds of internal structural differences: (1) contrastive

predicate tagmemes in each instance: non-transitive vs. transitive, and (2) contrastive manifestation of a second tagmeme in each instance (e.g., an Object tagmeme), i.e., optional occurrence vs. obligatory absence, or contrastive manifesting classes within the same tagmeme, etc.

Table IV is a formulaic summary of the minimum formulas for each Imperative Clause Type. (Tagmemes with a ± occurrence are considered part of the minimum formula if such optional occurrence is one of the two contrastive features of the clause type. See Table IV.)

TABLE IV

Contrastive Features of Imperative Clause Types

Non-trans. type	= + Imp. Non-trans. P:imp. intrans. verb / imp. semi-trans. verb - 0		
Trans. type	= + Imp. Trans. P:imp. trans. verb	± 0:Subst.	
Reflex. type	= + Imp. Reflex. P:imp. reflex. verb	± 0:Pro.	
Benefac. type	= + Imp. Benefac. P:imp. benefac. verb	± B:Pro. / AR	

3.2.1.4 *Topic-Comment Class of Independent Clause Types*

The Topic-Comment class of clause types consists of a single type with external distribution the same as that of the Indicative class of clause types.

The diagnostic features of the Topic-Comment clause type are: (1) a Comment Predicate slot, and (2) a phrase filler of the Comment Predicate slot. The meaning of the Comment Predicate tagmeme is stating some comment about a topic of discussion explicitly expressed in the same clause or in the context, linguistic or social.

The occurrence of the Topic slot is optional and is filled by a Substantive phrase (i.e., Noun or Pronoun phrase). A minimum Comment slot filler consists of a single particle or a single noun. The order of the Topic and Comment tagmemes is non-significant.

Examples of minimum Topic-Comment clauses with the Topic tagmeme manifested are: *ke bonito mosin**[1] 'how beautiful (is) your corn', *ariero tahko-pɨɛaktik** 'the ant (has) a narrow waist'.

3.2.1.5 *Equational Class of Independent Clause Types*

The Equational class of clause types consists of a single type with external distribution the same as that of the Indicative class of clause types.

The diagnostic features of the Equational type are: (1) an obligatory Subject tagmeme, and (2) an obligatory Equational Predicate tagmeme. The meaning of the Equational Predicate tagmeme is the equating of an entity (indicated by the filler of the Subject slot) with the statement of its existence, identity or some relationship.

The order of the two tagmemes seems to be fixed: + Subj + Equat. Pred. A

[1] Forms thus marked are from a folktale.

minimum Equational Predicate filler consists of a single noun. The minimum formula for the Equational clause type is: + Subj:N/pro + Equat. Pred:N/der. verb.[5]

Examples of minimum Equational clauses are: *amehwa:n los ladrones** 'you all (are) the robbers', *teh tinopilɛi:n* 'you (are) my son'.

3.2.1.6 *Summary of Independent Clauses*

Table V presents a graphic summary of the contrastive features of the previously described independent clause classes (sec. 3.2.1).

TABLE V

Independent Clause Classes

Sec. No.	Name	Obligatory Component	Slot in Higher Level
3.2.1.1	Indicative	+ P:indic. v.	Base in D. S. 1, 2; Q.S.; I. S.; Spec. in Dep. Cl.
3.2.1.2	Subjunctive	+ P:subj. v.	Base in D. S. 1, 2; Q.S.; I. S.; Spec. in Dep. Cl.
3.2.1.3	Imperative	+ P:imper. v.	Base in D. S. 1, 2; Q. S.
3.2.1.4	Topic-Comment	+ Co:part. / n.	(same as Indicative)
3.2.1.5	Equational	+ S:n. / pro. + Eq:n.	(same as Indicative)

3.2.2 *Dependent Clause Types*

The Dependent Clause hyperclass consists of five contrastive classes: (1) Sentence Level Type 1, (2) Sentence Level Type 2, (3) Clause Level, (4) Phrase Level, and (5) Anaphoric Clause. Sentence Level types describe clauses filling slots on the sentence level in contrast to clause types which fill slots on the clause level and phrase types which fill slots on the phrase level.

3.2.2.1 *Sentence Level Type 1 Clauses*

The Sentence Level Type 1 clauses constitute a class of types due to the single type of filler of the Specifier slot, i.e. Indicative, Topic-Comment, and Equational clauses for each of the types. An associated Introducer slot obligatory to the construction functions as the relator element between the included clause and the second clause filling the Independent Base slot.

3.2.2.1.1 *Conditional Type*

The diagnostic features of the Conditional type are: (1) the Introducer slot mani-

[5] Described by this author in "Morphological Structures of Isthmus Nahuat" as derived verb, Type 10 (sec. 4.1.1), i.e. noun or noun root or stem plus a person marker prefix for verbs.

fested by either *si* or *si es ke*, and (2) occurrence in the Conditional Base slot of Declarative Sentence Type 2. The minimum formula for the Conditional type is: + Intro: *si* / *si es ke* + Spec: Indic. Cl. / Topic-Comment Cl. / Equational Cl. Examples: *si ayáʔ weɛi kiawat ipan inín mes* 'if it doesn't rain this month', *si se piyo motapačoltiáʔ* 'if a hen sets', *si kisaʔ bien* 'if it came out well'.[6]

3.2.2.1.2 *Causal Type*

The diagnostic features of the Causal type are: (1) the Introducer slot manifested by *iga* / *ke* / *porke*, and (2) occurrence in the Causal Base slot of Declarative Sentence Type 2. The minimum formula for the Causal Type is: + Intro: *iga* / *ke* / *porke* + Spec:Indic. Cl. / Topic-Comment Cl. / Equational Cl. Examples: *iga nikto:kas nomilpan** 'because I will plant my cornfield', *ke neh nia-ya** 'because I'm going now', *porke nofamilia mayana** 'because my family is hungry'.

3.2.2.2 *Sentence Level Type 2 Clauses*

The Sentence Level Type 2 clauses constitute a class of a single type whose filler of the Specifier slot is a Subjunctive or an Imperative clause. An associated Introducer slot obligatory to the construction functions as described in sec. 3.2.2.1. The single type is a Purpose type.

The diagnostic features of the Purpose type are: (1) the Introducer slot manifested by *iga*, and (2) occurrence in the Purpose Base slot of Declarative Sentence Type 2. The minimum formula for the Purpose type is: + Intro:*iga* + Spec:Subjunctive Cl. / Imperative Cl. Examples: *iga amo mane:išmatikan** 'so that they won't recognize me', *iga imanín manasero** 'so that immediately it will be born', *iga šikteki** 'so that you cut it'.

3.2.2.3 *Clause Level Clauses*

The Clause Level clauses constitute a class of types due to their single type of filler of the Specifier slot, i.e., Indicative, Topic-Comment, and Equational clauses for each of the types. An associated Introducer slot obligatory to the construction functions as the relator element between the included clause and the predicate of the including clause.

3.2.2.3.1 *Temporal Type*

The diagnostic features of the Temporal type are: (1) the Introducer slot manifested by *ikʷaʔ*,[7] and (2) occurrence in the Temporal slot of the including clause. The minimum formula for the Temporal type is: + Intro:*ikʷaʔ* + Spec:Indic.

[6] From an ethnographic life cycle description.

[7] Spanish loans such as *después que*, *al tiempo que* and even combinations, e.g., *después iga*, occur in place of *ikʷaʔ*.

Cl. / Topic-Comment Cl. / Equational Cl. Examples: *ikʷaʔ wit el momentoh* 'when the moment comes', *ikʷaʔ tamiʔ aːt** 'when the water was all gone', *despʷés ke asiʔ** 'after that he had arrived'.

3.2.2.3.2 *Locative Type*

The diagnostic features of the Locative type are: (1) the Introducer slot manifested by *kan*, and (2) occurrence in the Locative slot of the including clause. The minimum formula for the Locative type is: + Intro:*kan* + Spec:Indic. Cl. / Topic-Comment Cl. / Equational Cl. Examples: *kan miktok iyikni** 'where his brother is dead', *kan tikalaʔ** 'where you entered', *kan sokiyo retrato* 'where the picture is dirty'.

3.2.2.3.3 *Manner Type*

The diagnostic features of the Manner type are: (1) the Introducer slot manifested by *ken*, and (2) occurrence in the Manner slot of the including clause. The minimum formula for the Manner type is: + Intro:*ken* + Spec:Indic. Cl. / Topic-Comment Cl. / Equational Cl. Examples: *ken nimiɕihlih* 'as I told you', *ken kičih moye* 'as your mother did', *ken noʔ amoɕalam onoskeh maestros yeh takahkayawaskeh*[8] 'as there will also be teachers that will deceive people'.

3.2.2.3.4 *Objective Type*

The diagnostic features of the Objective type are: (1) the Introducer slot manifested by *iga* / *ke*, and (2) occurrence in the Objective slot of the including clause. The minimum formula for the Objective type is: + Intro:*iga* / *ke* + Spec:Indic. Cl. / Topic-Comment Cl. / Equational Cl. Examples: *iga yawi kikʷidaroti** 'that he was going to take care of it', *iga nikičtekiʔ porke nofamilia mayana** 'that I robbed it because my family was hungry', *ke itayol siempre moːčteʔ** 'that his corn had been robbed anyway'.

3.2.2.4 *Phrase Level Clauses*

The Phrase Level clauses constitute a class of a single type whose filler of the Specifier slot is an Indic. Cl. / Topic-Comment Cl. / Equational Cl. An associated Introducer slot obligatory to the construction function as the relator element between the included clause and the head of the including phrase. The single type is a Relative type.

The diagnostic features of the Relative type are: (1) the Introducer slot manifested by *yeh-*, and (2) occurrence in the Modifier slot of the including noun phrase. The minimum formula for the Relative type is: + Intro:*yeh-* + Spec:Indic. Cl. / Topic-Comment Cl. / Equational Cl. Examples: (*se miyonario*) *yeh-kipiaʔ tomin** '(a millionaire) who has money' (= a rich millionaire), (*inón siwat*) *yeh-taškalowa* '(that woman) who makes tortillas', (*katiapa tagat*) *yeh-tawan* '(which man) who is drunk?' (= 'which drunk man?)'.

[8] From the author's Bible translation materials (II Pet. 2:1).

3.2.2.5 *Anaphoric Clause*

The Anaphoric clause type is contrastive with all other types due to its special characteristics.

The diagnostic features of the Anaphoric type are: (1) the occurrence of an Indicative class only, (2) the absence of the Predicate tagmeme in that clause, (3) the obligatory occurrence of the Subject tagmeme, an optionally occurring tagmeme in all other clause types, and (4) the occurrence of at least one other tagmeme which may be optional in other types.

The absence of the Predicate tagmeme marks this clause type as Dependent, specifically in connection with occurrence of the Predicate tagmeme in the other clause. This clause type occurs as an expansion of the Declarative Type 1 sentence.

A minimum Anaphoric clause is: + Subject:n + (± Object ± Benefactive or any other tagmeme treated optional elsewhere). Examples: (*se kaʔ ipan pʷertah*) *iwa:n se ipan ohti** '(one stayed at the door) and one in the road', (*neh nikneki šapon*) *iwa:n yeh istat* '(I want soap) and he salt'.

3.2.3 *Independent Clauses Contrasted with Dependent Clauses*

The contrastive features of Independent Clauses and Dependent Clauses consist of: (1) the basis of classification and the resultant number and type of classes, (2) the formulaic characteristics of the two hyperclasses, and (3) the structural complexity of each hyperclass.

The members of the Independent hyperclass occur as fillers of slots in Dependent types of clauses and as fillers of slots on the sentence level. The members of the Dependent hyperclass, however, fill slots on the sentence level, the clause level, and the phrase level.

There are five classes of Independent clause types of which three consist of four types and two consist of a single type each. There are also five classes of Dependent clauses of which three consist of a single type each and two consist of more than one. The classes of Independent clauses have each a single higher level distribution; the classes of Dependent clauses have no single higher level distribution, but are grouped because of similar internal arrangements. As a hyperclass four of the Dependent classes have dependent marking tagmemes plus a Specifier tagmeme. (The fifth, the Anaphoric, has special characteristics.)

For each of the five Independent clause classes a minimum formula can be written (see Table V) since the classes are contrastive only for the filler of the Predicate slot and the filler of the Object slot or the Benefactive slot. For the Dependent clause classes no satisfactory minimum formula can be written.

It should also be noted that the Dependent clauses are not less complex structurally than the Independent clauses. Except for the Anaphoric clause, the Dependent clauses are equal to an Independent clause plus some overt dependent marking tagmeme.

TABLE VI

Dependent Clause Classes

Class	Type	Obligatory Component			Slot in Higher Level
Sent. Lev. Type 1	Cond.	+ Intro: *si / si es ke*	+ Spec:	Indic. Cl. Top.-Com. Cl. Equat. Cl.	Cond. Base in Decl. Type 2
	Causal	+ Intro: *iga*	+ Spec:	(same as Cond.)	Causal Base in Decl. Type 2
Sent. Lev. Type 2	Purpose	+ Intro: *iga*	+ Spec:	Subj. Cl. Imper. Cl.	Purpose Base in Decl. Type 2
Clause Lev.	Temp.	+ Intro: *ik^{w}a?*	+ Spec:	(same as Cond.)	Temporal slot in incl. cl.
	Loc.	+ Intro: *kan*	+ Spec:	(same as Cond.)	Loc. slot in incl. cl.
	Mann.	+ Intro: *ken*	+ Spec:	(same as Cond.)	Mann. slot in incl. cl.
	Object.	+ Intro: *iga*	+ Spec:	(same as Cond.)	Obj. slot in incl. cl.
Phrase Lev.	Relative	+ Intro: *yeh-*	+ Spec:	(same as Cond.)	Modifier slot in incl. phrase
Anaphoric Cl.	(See sec. 3.2.2.5 for special characteristics of this clause).				

4

PHRASE STRUCTURE

4.1 FORMAL CHARACTERISTICS OF THE PHRASE AS A UNIT

The minimum phrase consists of a single word of any class (noun of any type, verb of any type, etc.) filling any clause level slot or any phrase level slot (as an included item). Phrase constructions are structurally contrastive with clause constructions. Optional expansions of phrases consist of one or more modifiers plus a head tagmeme, two or more coordinated phrases, or two or more paratactically related fillers of phrase level slots. These expansions occur in three types: (1) Subordinate phrases,[1] (2) Coordinate phrases, and (3) Non-subordinate phrases. Further classification is based on the word classes constituting the fillers of significant slots in the phrase.

4.2 PHRASE TYPES AND OBLIGATORY TAGMEMES

Isthmus Nahuat phrase types divide into two hyperclasses: (1) Subordinate phrases, and (2) Non-subordinate phrases. The internal arrangements of each of these hyperclasses are contrastive with each other and thus constitute two contrastive classes of structural types.

4.2.1 *Subordinate Phrases*

The Subordinate Phrase hyperclass consists of four contrastive classes: (1) Subordinate noun phrases, (2) Subordinate verb phrases, (3) Subordinate pronoun phrases, and (4) Subordinate particle phrases.

4.2.1.1 *Subordinate Noun Phrases*

The Subordinate Noun Phrase types constitute a class of types which is characterized by the single type of filler of the Head slot, a noun. The occurrence of the noun is a recurrent feature in each type within this class.

[1] The terms subordinate and non-subordinate are taken from Nida, Eugene A., *Morphology: The Descriptive Analysis of Words* (Ann Arbor, Mich., University of Michigan Press, 1949), 94-6. See Glossary for definition.

4.2.1.1.1 *Subordinate Type SN-1*

The diagnostic features of the Subordinate Noun Phrase Type 1 are: (1) a noun filling the Head slot, and (2) one or two optional preposed modifiers plus one optional postposed modifier, each of which is in subordinate relation to the Head slot. The Head slot functions as the nucleus of the phrase to which the subordinated items relate as modifiers.

A single noun of any class, or a noun phrase of the same type (SN-1) fills the Head slot in SN-1. SN-1 phrases occur in various clause level slots such as Subject, Object, and in Axis-Relator phrases as an included phrase. The minimum SN-1 phrase consists of a single noun. Examples of expanded SN-1 phrases are: *se miyonario yeh-kipiaʔ to:min**[2] 'a millionaire who has money', *kʷatro mo:las de dinero** 'four mules of money', (*iga*) *se tagat* '(for) a man'.

4.2.1.1.2 *Subordinate Type SN-2*

The diagnostic features of the Subordinate Noun Phrase Type 2 are: (1) a possessed noun (see sec. 5.2.2.2) or a CN-1 phrase (see sec. 4.2.2) filling the Possessed slot, and (2) a possessor noun (see sec. 5.2.2.1) filling the Possessor slot. The Possessed slot functions as the nucleus of the phrase to which the subordinated item, i.e., the Possessor tagmeme, is related as a modifier.

A single noun of any class or a CN-1 phrase fills the Possessed slot, but the noun which occurs must consist of a member of morpheme class 100.2 (see sec. 5.2.2.2)[3] plus a noun root or stem as a minimum. Any noun of any class or any SN-1 phrase fills the Possessor slot. SN-2 phrases occur in various clause level slots such as Subject, Object, and in AR-3 and AR-4 phrases (see sec. 4.2.3.2.4). SN-2 phrases are recursive – theoretically to infinity. The Possessed slot may be filled with a possessed noun, e.g. (*kitaʔ*) *iko:ko isiwat ipiyo: ipiyo:cicin:n* '(He saw) his uncle's wife's hen's chicks'. Examples of SN-2 phrases are: *iwehkatamka inón kalat** 'that toad's height', *icoyot Biktor* 'Victor's younger brother', *itah Pedro* 'Peter's father', (*iga*) *itah Pedro* '(by means of) Peter's father'. The order of the Possessor and Possessed tagmemes occurs reversed also: *Biktor icoyot* 'Victor's younger brother'. *Tomas itah Pedro* 'Thomas, Peter's father' is an expansion involving the occurrence of a CN-1 type phrase in the Possessed slot.

4.2.1.1.3 *Subordinate Type SN-3*

The diagnostic features of the Subordinate Noun Phrase Type 3 are: (1) an obligatory Modifier slot, and (2) the Modifier slot filled by a Dependent Relative clause. The Head slot functions as the nucleus of the phrase to which the subordinated Modifier relates.

A single noun of any class fills the Head slot in SN-3. SN-3 phrases occur in at

[2] Forms marked thus are from a folktale.

[3] For an explanation of the numbers used to designate morphemes and morpheme classes see Law, Howard W., "Morphological Structure of Isthmus Nahuat", *IJAL* 24:108-29 (April, 1958).

least one clause level slot: Object, and in AR-3 and AR-4 phrases (see sec. 4.2.3.2). Examples of SN-3 phrases are: *yeh-yoksi nančin** 'a nanchin-fruit that is ripe', *yeh-po:š weyi tagat* 'a man who is very big'.

TABLE VII

Contrastive Features of Noun Phrase Types

Type	Slot in Higher Level
SN-1 = + H:n	Subj., Obj., Poss'r, Rel.
SN-2 = + Poss'd:n/CN-1 + Poss'r:n	Subj., Obj., Rel.
SN-3 = + M:Rel. Cl. + H:n	Subj., Obj., Poss'r, Rel.

4.2.1.2 *Subordinate Verb Phrases*

The Subordinate Verb Phrase types constitute a class of types due to the single type of filler of the Head slot, a verb.

4.2.1.2.1 *Subordinate Verb Type SV-1*

The diagnostic features of the Subordinate Verb Phrase Type 1 are: (1) the occurrence of some form of the verb *-maka* 'give' as the only filler of the Head slot, and (2) *kʷentah* (Spanish *cuenta*) 'account', *de kʷentah* (Spanish *de cuenta*), or *kasoh* (Spanish *caso*) 'attention' as the only fillers of the Predicate Complement slot. The Head slot functions as the nucleus of the phrase to which the subordinated tagmeme is related as a complement. Examples of SV-1 phrases are: *ne:ma? kʷentah* 'I learned of it', *amo šikči:wa kasoh* 'Don't pay any attention to that'.

4.2.1.2.2 *Subordinate Verb Type SV-2*

The diagnostic features of the Subordinate Verb Phrase Type 2 are: (1) the occurrence of some form of the verb *-ono* 'be' as the only filler of the Predicate Complement slot. The Head slot functions as the nucleus of the phrase to which the subordinate tagmeme is related as a complement. Examples of SV-2 phrases are: *nono? konforme* 'I am in agreement', *tonokeh konforme* 'we (incl.) are in agreement', *ayá? nonos konforme* 'I will not be in agreement'.

TABLE VIII

Contrastive Features of Verb Phrase Types

Type	Slot in Higher Level
SV-1 = + H:v-$_{maka}$ + Pred. Comp:*kʷenta/de kʷenta/kasoh*	Pred. in Indic., Subj., Imp. Cl.
SV-2 = + H:v-$_{ono}$ + Pred. Comp:*konforme*	Pred. in Indic., Subj., Imp. Cl.

4.2.1.3 *Subordinate Pronoun Phrases*

The Subordinate Pronoun Phrase types constitute a class of types which is characterized by the single type of filler of the Head slot, a pronoun.

4.2.1.3.1 *Subordinate Type SPro-1*

The diagnostic features of the Subordinate Pronoun Phrase Type 1 are: (1) a pronoun filling the Head slot, and (2) an optionally postposed Modifier slot filled by a particle. The Head slot functions as the nucleus of the phrase to which the subordinated particle relates as a modifier.

A single pronoun fills the Head slot. SPro-1 phrases occur in such clause level slots as Subject, Object, and in the Possessor, Relator, Modifier and Head slots of phrases. Examples are: *inón-sam* (*tagat*) 'that very (man)', (*kita?*) *yeh-sam* (he saw) the very one', (*iga*) *inín-sam* '(by means of) this very one'.

4.2.1.3.2 *Subordinate Type SPro-2*

The diagnostic features of the Subordinate Pronoun Phrase Type 2 are: (1) a pronoun filling the Head slot, and (2) an obligatory postposed Modifier slot filled by a clause. The Head slot functions as the nucleus of the phrase to which the subordinated clause relates as a modifier.

A single pronoun fills the Head slot. SPro-2 phrases occur in such clause level slots as Subject, Object, and in the Possessor and Relator slots of phrases. Examples are: *neh komo noselti ipan rančo** 'me (being) all alone in the ranch', *inón yeh kimiktihtok el miyonario** 'he (the one) who killed the millionaire', (*kitemohtoya*) *inón yeh čolohtikisa?* '(he was looking for) the one who had suddenly fled'.

TABLE IX

Contrastive Features of Pronoun Phrase Types

Type	Slot in Higher Level
SPro-1 = + H:pro ± M:part	Subj., Obj., Poss., Rel., Mod., H.
SPro-2 = + H:pro + M:Dep. Cl.	Subj., Obj., Poss., Rel.

4.2.1.4 *Subordinate Particle Phrases*

The Subordinate Particle Phrase types constitute a class of types due to the single type of filler of the Head slot, a particle.

4.2.1.4.1 *Subordinate Type SPart-1*

The diagnostic features of the Subordinate Particle Phrase Type 1 are: (1) the obligatory occurrence of a preposed Modifier slot filled by an adverbial particle,

and (2) the Head slot filled by a Spanish adverb or a Nahuat adjective particle. The Head slot functions as the nucleus of the phrase to which the subordinated item is related as a modifier. SPart-1 phrases occur in Comment slots on the clause level. Examples of SPart-1 phrases are: *muy bien* 'very well', *po:š yektik* 'very good', *ači malo* 'somewhat badly'.

4.2.1.4.2 *Subordinate Type SPart-2*

The diagnostic features of the Subordinate Particle Phrase Type 2 are: (1) the obligatory occurrence of a postposed Modifier slot filled by a Locative clause, and (2) the Head slot filled by a locative particle. The Head slot functions as the nucleus of the phrase to which the subordinated clause is related as a modifier. SPart-2 phrases occur in the Locative slot on the clause level. Examples of SPart-2 phrases are: *o:mpa kan tahmačo* 'there where she weaves', *ne:pa kan nikahteʔ nogak* 'over there where I left my sandals'.

TABLE X

Contrastive Features of Particle Phrase Types

Type	Slot in Higher Level
SPart-1 = +M:adv.part +H:Sp.adv/adj.part.	Comment of T-C clauses
SPart-2 = +H:loc.part +M:Loc.clause	Locative in any clause

4.2.2 *Coordinate Phrases*

The Coordinate Phrase class consists of two types, Coordinate Type CN-1 and Coordinate Type CN-2.

4.2.2.1 *Coordinate Type CN-1*

The diagnostic features of the Coordinate Noun Phrase Type-1 are: (1) the potential occurrence of a Link tagmeme between each two Head tagmemes, and (2) the optional occurrence of more than two Head tagmemes with all but the last Link tagmeme optionally omitted.[4]

A single noun of any class or a noun phrase fills the Head slots. CN-1 phrases occur in such clause level slots as Subject, Object, and in the Possessor slot of SN-2 phrases. The minimum phrase consists of a Head tagmeme, a Link tagmeme, and a second Head tagmeme. Examples of minimum CN-1 phrases are: *se tagat iwa:n se siwat* 'a man and a woman', *o:me šapon iwa:n medio kilo nešti* 'two bars of soap and half a kilo of lime', *iretrato hulia iwa:n wan* 'Julia and John's picture', *čiko iwa:n sinko:yame** 'badger and boar'.

[4] Theoretically there is no limit to the number of Head tagmemes which may occur in CN-1.

4.2.2.2 *Coordinate Type CN-2*

The diagnostic features of the Coordinate Noun Phrase Type 2 are: (1) the obligatory occurrence of a noun, noun phrase or demonstrative pronoun in apposition with the filler of the second Head slot, and (2) the obligatory absence of a Connector tagmeme. The Head slots are in appositive relationship to each other.

A single noun of any class or a noun phrase fills the Head slots. CN-2 phrases occur in such clause level slots as Subject, Object and Association. Examples of CN-2 phrases are: *inín topilɛi:n* 'this, our son', *maría moɛoyot* 'Mary, your sister', *inón tagat moko:ko* 'that man, your uncle', *imonso čiko iwa:n sinko:yame** 'his servants, badger and boar'.

TABLE XI

Contrastive Features of Coordinate Phrase Types

Type	Slot in Higher Level
CN-1 = +H:N +Link:conj[5] +H:N +(+Link:conj +H:N) ...	Subj., Obj., Poss.
CN-2 = +H:N/demon.pro. +H:N	Subj., Obj., Assoc.

4.2.3 *Non-subordinate Phrases*

The Non-subordinate Phrase hyperclass consists of two contrastive classes: (1) Focus-Orienter particle phrases, and (2) Axis-Relator particle phrases.

4.2.3.1 *Focus-Orienter Particle Phrases*

The Focus-Orienter particle phrases constitute a class of types due to the single type of filler of the Orienter slot, a particle phrase. The Focus slot functions as the locus of the phrase to which the Orienter slot points the other elements of the including clause or phrase.

4.2.3.1.1 *Non-subordinate Type FO-1*

The diagnostic features of the Non-subordinate Focus-Orienter Particle Phrase Type 1 are: (1) the obligatory occurrence of either *te*: 'what' or *para* (from Spanish *para*) 'for, in order to' as the filler of the Focus slot, and (2) the obligatory occurrence of either *iga* 'for'[6] or *ke* (from Spanish *que*) 'what, that' as the filler of the Orienter slot. Only the following combinations occur: *para ke* and *te*: *iga*. The FO-1 type phrase occurs in the Causal and Objective slots of the clause.

[5] All Link tagmemes may be ommitted but the last one. The recursiveness of this formula is shown by ... after the final tagmeme in the formula.

[6] On the function and translation of *iga* see Law, Howard W., "Problems of ambiguities in Isthmus Aztec translation", *The Bible Translator*, 11:87-90 (1960).

Examples of FO-1 phrases are: (*yeh kiči:wilih*) *para ke* (*makisa*) '(he did it to him) so that (he would leave)', *te: iga* (*kičih*) 'Why (did he do it)?', (*yeh ne:ihlih*) *para ke* (*kisaʔ*) '(he told me) why (he left)', (*yeh ne:ihlih*) *te: iga* (*kisaʔ*) '(he told me) why (he left)'.

4.2.3.1.2 *Non-subordinate Type FO-2*

The diagnostic features of the Non-subordinate Focus-Orienter Phrase Type 2 are: (1) the obligatory occurrence of a Spanish adverb or adverb phrase of time, e.g., *despʷés* 'after', *antes* 'before', or *tan luego* 'as soon', as the filler of the Focus slot, and (2) the obligatory occurrence of either *iga* 'that' or *ke* (from Spanish *que*) 'that' as the filler of the Orienter slot. All possible combinations occur. The FO-2 type phrase occurs in the Introducer slot of the Temporal clause.

Examples of FO-2 phrases are: *despʷés iga* (*tamiʔ kikomponeroh*)* 'after that (he had finished repairing it)', *tan luego iga* (*kitaʔ šiniʔ nančin*)* 'as soon as (he saw that the nanchin-fruit had fallen)', *antes iga* (*išwi*)* 'before (it sprouts)'.

4.2.3.1.3 *Non-subordinate Type FO-3*

The diagnostic features of the Non-subordinate Focus-Orienter Phrase Type 3 are: (1) the obligatory occurrence of *ken* 'how' as filler of the Focus slot, and (2) the obligatory occurrence of *iga* 'that' as filler of the Orienter slot. The FO-3 type phrase occurs only in the Introducer slot of the Manner clause.

Examples of the FO-3 phrase are: *ken iga* (*makikʷidaro*) 'how that (he would care for it)', (*yeh ne:ihlih*) *ken iga* (*manikto:ka sinti*) '(he told me) how that (I should plant corn)'.

4.2.3.1.4 *Non-subordinate Type FO-4*

The diagnostic features of the Non-subordinate Focus-Orienter Phrase Type 4 are: (1) the obligatory occurrence of either *am* or *aman* 'now', Spanish *ya* 'already, now', Spanish *no* 'no', or *ha* 'oh' as the filler of the Focus slot, and (2) the obligatory occurrence of either Spanish *sí* 'yes', Spanish *ves* 'you see', or an AR-2 phrase (see below) as the filler of the Orienter slot. Only the following combinations occur: *am sí*, *aman sí*, *ya ves*, *no ves*, and *ha* plus AR-2. The FO-4 type phrase occurs only in the Interjection slot.

Examples of FO-4 phrases are: *an sí* (*nikpiaʔ nokohkowihtol*)* 'now, indeed, (I have my bow)', *aman sí* (*niwalah*)* 'now indeed (I came), *ya ves* (*tiahka*)* 'now you see (you went)', *no ves* (*kʷesiwiʔ*)* 'Don't you see (she's angry?)', *ha ke čahya** 'oh, how nutty-flavored!', *ha ke weli šohšogoro nančin** 'oh, how delicious is a green nanchin-fruit!'.

4.2.3.1.5 *Non-subordinate Type FO-5*

The diagnostic features of the Non-subordinate Focus-Orienter Phrase Type 5 are: (1) the obligatory occurrence of the Spanish particle phrase *a parte* as filler of

the Focus slot, and (2) the obligatory occurrence of *iga* 'for' as filler of the Orienter slot. The FO-5 type phrase occurs only in the Axis slot of an AR-4 phrase (see below).

Examples of FO-5 phrases are: (*kičí:wilih*) *a parte iga* (*yeh*) '(he did it) on account of (him)', (*kiweciltih nopilɛi:n*) *a parte iga* (*inón tagat*) '(he knocked her down) on account of (that man)'.

TABLE XII

Contrastive Features of Focus-Orienter Particle Phrase Types

Type	Slot in Higher Level
FO-1 = +F:*para/te:* +O:*ke/iga*	Caus., Obj.
FO-2 = +F:Sp. adv. +O:*ke/iga*	Intro. of Temp. Clause
FO-3 = +F:*ken* +O:*iga*	Intro. of Mann. Clause
FO-4 = +F:*am/aman*/Sp. part. +O:*si/ves*/AR-2	Interjection
FO-5 = +F:*a parte* +O:*iga*	Axis of AR-4

4.2.3.2 *Axis-Relator Particle Phrases*

The Axis-Relator Particle phrases constitute a class of types due to the single type of filler of the Relator slot, a noun phrase. The Axis slot functions as the pivot for the relationship expressed between the Relator slot and the related tagmeme in the including clause or phrase.

4.2.3.2.1 *Non-subordinate Type AR-1*

The diagnostic features of the Non-subordinate Axis-Relator Particle Phrase Type 1 are: (1) the obligatory occurrence of either *ipan* (or some other locational noun), *este* (from Spanish *hasta*), or *a* (from Spanish) as the filler of the Axis slot, and (2) the obligatory occurrence of a SN-1 phrase as the filler of the Relator slot. The AR-1 type phrase occurs in the Location and Temporal slots of the clause.

Examples of AR-1 phrases are: (*kimotaʔ*) *ipan ikʷakahlo** '(he threw it) on her head', (*kasiʔ*) *iyikan weya:ʔ* '(he found it) across the deep water', *a los otros dias* (*walah seh*)* 'a few days later (he came again)'.

4.2.3.2.2 *Non-subordinate Type AR-2*

The diagnostic features of the Non-subordinate Axis-Relator Particle Phrase Type 2 are: (1) the obligatory occurrence of a Spanish particle or *ken* 'how', as the filler of the Axis slot, and (2) the occurrence of either an SN-1 phrase or an Independent clause as filler of the Relator slot. The AR-2 type phrase occurs in the Manner slot of the clause, the Modifier slot of subordinate noun phrases, and the Orienter slot of an FO-4 phrase.

Examples of AR-2 phrases are: (*kičih*) *ken se bolahci:n** '(he made it) like a little

ball', (*kičk^{w}ah se šapot*) *de un metro taltampa** '(he dug a hole) one meter deep', (*ha*) *ke weli šohšogoro nančin** '(oh) how delicious is a green nanchin-fruit'.

4.2.3.2.3 *Non-subordinate Type AR-3*

The diagnostic features of the Non-subordinate Axis-Relator Particle Phrase Type 3 are: (1) the obligatory occurrence of either *iga* or Spanish *por* as the filler of the Axis slot, and (2) the occurrence of either an SN-1, SN-2 or SN-3 phrase as the filler of the Relator slot. The AR-3 type occurs in the Means and Causal slots of the clause.

Examples of AR-3 phrases are: (*kikickih*) *iga matayawal** '(he caught it) with a net', (*ayáʔ kineki*) *por otra cosa** '(he didn't want it) for anything else', (*kitahtanih*) *iga yeh-kitaʔ* '(he asked) for what he saw', (*kimiktih*) *iga ikarabin itah* '(he killed it) with his father's gun'.

4.2.3.2.4 *Non-subordinate Type AR-4*

The diagnostic features of the Non-subordinate Axis-Relator Particle Phrase Type 4 are: (1) the obligatory occurrence of an FO-5 phrase as the filler of the Axis slot, and (2) the occurrence of either an SN-1, SN-2 or SN-3 phrase as the filler of the Relator slot. The AR-4 type phrase occurs in the Benefactive slot of the clause.

Examples of AR-4 phrases are: (*kiči:wilih*) *a parte iga yeh* '(he did it) on account of him', (*kiweɛiltih nopilɛi:n*) *a parte iga inón tagat* '(he knocked her down) on account of that man'.

TABLE XIII

Contrastive Features of Axis-Relator Particle Phrase Types

Type	Slot in Higher Level
AR-1 = +A:poss'd n./*este/a* +R:SN-1	Loc., Temp.
AR-2 = +A:*ken*/Sp. part. +R:SN-1/Clause	Mann., Mod., Orient.
AR-3 = +A:*iga/por* +R:SN-1/SN-2/SN-3	Means, Causal
AR-4 = +A:FO-5 +R:SN-1/SN-2/SN-3	Benefactive

5

WORD STRUCTURE

5.1 FORMAL CHARACTERISTICS OF THE WORD AS A UNIT

The minimum word consists of a nucleus slot filled by a stem or a root. The morpheme or morpheme construction constituting the word when used as a minimum free form[1] manifests at least phrase, clause and sentence level tagmemes, but never word level tagmemes (i.e., no word is included within a word as a word level filler). There are two types of words phonologically, free words and bound forms. Most free forms occur with a penultimate stress. Bound forms (proclitics and enclitics) are atonic and are phonologically dependent on the preceding (for enclitics) or following (for proclitics) words.

Tagmemically there are two hyperclasses of words: Verbs and Particles, and two classes: Nouns and Pronouns. Subclasses, where pertinent, will be discussed within the description of the class.

Words which are free forms may be expanded by derivational and inflectional processes except for the class of particles where only derivational processes occur.

5.2 WORD TYPES AND OBLIGATORY TAGMEMES

Isthmus Nahuat Word types divide into classes as mentioned above on the basis of their occurrence in more inclusive constructions or higher levels of structure.

5.2.1 *Verb Types*

There are three modal classes each consisting of five verb types. The Indicative mode is characterized by an obligatory prefix subject slot filled by morpheme class 100.3[2] and the obligatory occurrence of either a suffix tense slot filled by morpheme class 210 or a suffix aspect slot filled by morpheme class 220-30.

The Subjunctive mode is characterized by an obligatory subjunctive marker pre-

[1] Cf. Bloomfield, Leonard, "A set of postulates for the science of language", *Language* 2:153-64 (1926).

[2] For an explanation of the numbers used to designate morphemes and morpheme classes see Law, 1958.

ceding the obligatory subject slot and *-kan* as plural marker. *ma-* fills the subjunctive marker slot and morpheme class 100.3 fills the subject slot in this mode also.

The Imperative mode is characterized by the obligatory occurrence of morpheme 126.3, *ši-*, as filler of the subject slot, and by the occurrence of *-kan* as the plural marker.

Contrastive examples of the three modes are: *nikita* 'I see it', *manikita* 'Let me see it', *šikita* 'See it!'; *timotalowah* 'we (incl.) are running', *matimotalokan* 'Let us (incl.) run', *šimotalokan* 'Run, all of you!'.

TABLE XIV

Contrastive Features of Verb Modal Classes

Class	Obligatory Component
Indicative Mode	+ subj.: 100.3 + nucl.: v.r. + tense: 210/asp.: 220-30
Subjunctive Mode	+ subjunc.: *ma-* + subj.: 100.3 + nucl.: v.r. + pl.:*-kan*
Imperative Mode	+ subj.: 126.3 + nucl.: v.r. + pl.:*-kan*

The five verb types occurring in each mode are: Intransitive, Semi-transitive, Transitive, Reflexive, and Benefactive.

5.2.1.1 *Intransitive Verb Type*

The diagnostic features of the Intransitive Verb type are: (1) an intransitive root or stem, and (2) occurrence in the Non-transitive clause types. The intransitive verb consists minimally of: + s:100.3 + nucl:intr. v. r.[3] Examples are: *ničoka* 'I cry', *mačoka* 'Let him cry', *šiwiki* 'Come!'.

5.2.1.2 *Semi-transitive Verb Type*

The diagnostic features of the Semi-transitive Verb type are: (1) a distributive object marker, 145, *ta-*, and (2) occurrence in Non-transitive clause types. The semi-transitive verb consists minimally of: + s:100.3 + dist. obj:*ta-* + nucl:trans. v. r. Examples are: *titakowakeh* 'we (incl.) bought (something)', *tanamakah* 'they are selling (something)', *nitahk^{w}ilowa* 'I am writing (something)'.

5.2.1.3 *Transitive Verb Type*

The diagnostic features of the Transitive Verb type are: (1) a direct object marker, class 100.4, *ki-*, and (2) occurrence in Transitive clause types. The transitive verb

[3] The obligatory tagmemes for a particular mode must always be added to any particular verb type to form the word in that mode.

consists minimally of: + s:100.3 + dir. obj: *ki-* + nucl:trans. v. r. Examples are: *nikmati* 'I know it', *šikmaga* 'Hit him!', *makikowa* 'Let him buy it'.

5.2.1.4 *Reflexive Verb Type*

The diagnostic features of the Reflexive Verb type are: (1) a reflexive marker, morpheme 146, *mo-*, and (2) occurrence in Reflexive type clauses. The reflexive verb consists minimally of: + s:100.3 + reflex:*mo-* + nucl:trans. v. r. Examples are: *timoita* 'you see yourself', *mamomaga* 'Let him hit himself', *šimotali* 'Seat yourself!' (i.e. Be seated).

5.2.1.5 *Benefactive Verb Type*

The diagnostic features of the Benefactive Verb type are: (1) a benefactive stem (see sec. 6.2.1.3), and (2) occurrence in Benefactive clause types. The benefactive verb consists of three allo-types: (1) Semi-transitive Benefactive: + s:100.3 + dist. obj:*ta-* + nucl:benefactive v. s., (2) Transitive Benefactive: + s:100.3 + dir. obj:*ki-* + nucl:benefactive v. s., and (3) Reflexive Benefactive: + s:100.3 + reflex:*mo-* nucl:benefactive v. s. Examples are: *nitakowiliáʔ* 'I am buying (things) for him', *kiweɛiltih* 'he caused him to fall', *nimoči:wilih* 'I did it to myself'.

When the direct object is third person, the second or benefactive object takes precedence and manifests the word level object slot: *manikihli* 'Let me tell it to him', but *manimiɛihli* 'Let me tell it to you'; *miɛihkʷilowilih* 'he wrote you (a letter)', *te:tapowilihkeh* 'they opened it for us'. When the direct object is third person, its presence is implied by the transitive stem filler of the Predicate slot. (Cf. also sec. 3.2.1.1.4.)

TABLE XV

Contrastive Features of Verb Types

Type	Obligatory Component	Slot in Higher Level
Intransitive Verb	+ subj: 100.3 + nucl: intrans. v. r.	Non-trans. Cl.
Semi-transitive Verb	+ subj: 100.3 + obj: 145 + nucl. trans. v.r.	Non-trans. Cl.
Transitive Verb	+ subj: 100.3 + obj: 100.4 + nucl: trans. v.r.	Trans. Cl.
Reflexive Verb	+ subj: 100.3 + reflex. obj: 146 + nucl: trans. v.r.	Reflex. Cl.
Benefactive Verb	+ subj: 100.3 + obj: 145/100.4/146 + nucl: benef. v.s.	Benef. Cl.

5.2.2 *Noun Types*

All members of the word type, Noun, consist minimally of: + nucl:noun root. There are two types: (1) Possessor Noun Type, and (2) Possessed Noun Type.

5.2.2.1 *Possessor Noun Type*

The diagnostic features of the Possessor Noun type are: (1) optional occurrence or obligatory absence of class 100.2, and (2) occurrence in a particular slot in phrase type SN-2 (see sec. 4.2.1.1.2). The Possessor Noun consists minimally of: + nucl:noun root. Examples are: *ko:yame* 'pig', *taškal* 'tortilla', *ahayo* 'beans'.

5.2.2.2 *Possessed Noun Type*

The diagnostic features of the Possessed Noun Type are: (1) obligatory occurrence of class 100.2, and (2) occurrence in a particular slot in phrase type SN-2 (see sec. 4.2.1.1.2). The Possessed Noun consists minimally of: + poss:100.2 + nucl:noun root. Examples are: *iyol* 'his heart', *nok^{w}ač* 'my shirt', *mogak* 'your sandals', *točam* 'our (incl.) house', *amotah* 'your (pl.) father'.

TABLE XVI

Contrastive Features of Noun Types

Type	Obligatory Component	Slot in Higher Level
Possessor	+nucl: n.r.	certain slot of SN-2
Possessed	+poss: 100.2 +nucl: n.r.	certain slot of SN-2

5.2.3 *Pronoun Types*

All members of the word type, Pronoun, consist minimally of: + nucl.:pronoun root. Three types exist on the basis of distribution in higher levels of structure: (1) Personal Pronouns, (2) Interrogative Pronouns, and (3) Demonstrative Pronouns.

5.2.3.1 *Personal Pronouns*

Personal pronouns consist of: *neh* '1st per.', *teh* '2nd per. incl.', *ameh-* '2nd per. pl.', and *yeh* '3rd per.' These root morphemes combine with each of two mutually exclusive plural morphemes to form the various personal pronouns. Personal pronouns occur as subjects, direct objects and benefactive objects of clauses, and as fillers of Head slots in phrases. Examples are: *neh* 'I/me', *teh* 'you (sg.)', *yeh* 'he/him, she/her, it', *nehamen* 'we/us (excl.)', *tehamen* 'we/us (incl.)', *amehwa:n* 'you (pl.)', *yehamen* 'they/them'; *nehemen* 'we/us (excl.) (as representative of a larger group)', *amehemen* 'you (pl.) (as representative of a larger group)', *yehemen* 'they/them (as representative of a larger group)'.

5.2.3.2 *Interrogative Pronoun*[4]

Interrogative pronouns consist of: *aʔkin* 'who (near)', *aʔkon* 'who (distant)', *katiapa*

[4] Certain members of this class and of the next one (sec. 5.2.3.3) can possibly be considered as

'which one', *te*: 'what', *kan* 'where', *keman* 'when', *ken* 'how'. They occur as fillers of the Introducer slot in Interrogative sentences (see sec. 2.2.1.2) as well as in other slots such as Subject and Object slots in Independent clauses, and in Locative, Temporal and Manner slots in Dependent clauses. Examples of usage are: *aʔkin kičih* 'Who did it?', *aʔkon kinoɛa* 'Who is calling him?', *katiapa tikneki* 'Which one do you want?', *te: kihtosneki* 'What does it mean?', *kan tiaʔ* 'Where are you going?', *keman tiwalah* 'When did you come?', *ken tikčih* 'How did you do it?'.

5.2.3.3 *Demonstrative Pronouns*

Demonstrative pronouns consist of: *inín* 'this one' and *inón* 'that one'. They occur as subjects, direct objects and benefactive objects of clauses and as fillers of Head slots and Modifier slots in phrases. Examples of usage are: *inín tikčih* 'You did this', *inín walah yegin* 'This one came a little while ago.', *inón ayáʔ walah yalwa* 'That one didn't come yesterday.', *yalwa anikitaʔ inón siwat* 'Yesterday I didn't see that woman.', *ayáʔ niwalah iga inín* 'I didn't come because of this'.

TABLE XVII

Contrastive Features of Pronoun Types

Type	Obligatory Component	Slot in Higher Level
Personal Pronoun	+ nucl: pro.r.	Subj., Obj., Benef., Head
Interrogative Pro.	+ nucl: pro.r.	Intro. in Interrog. Sent., Subj., Obj., Loc., Temp., Mann.
Demonstrative Pro.	+ nucl: pro.r.	Subj., Obj., Benef., Head, and Mod.

5.2.4 *Particle Types*

All members of the word type, Particle, consist minimally of: + nucl:particle root. None occur inflected, although derived particle stems do occur. There are two classes of particle types: (1) Free, and (2) Bound.

5.2.4.1 *Free Particle Types*

Free particles are single morphemes or a derived particle stem. There are several types of free particles; the number of types depends on the number of distinctive functions the investigator sees represented in the external distribution since the internal form is the same for all. The following are some suggested types with ex-

morphemically complex. For example, the recurring partials *-in* and *-on* can be related to degrees of distance in several instances. This may be submorphemic for this dialect; tagmemic formulas do not seem to be particularly productive here.

amples: (1) Adverbial (i.e., modifiers qualifying verbs on the clause level): *seh* 'again', *po:š* 'much'; (2) Negative: *ayo* 'no longer', *aya* 'not yet', *ayíʔ* 'never'; (3) Temporal: *yalwa* 'yesterday', *mosta* 'tomorrow', *aman* 'today'; (4) Locative: *nigah* 'here', *o:mpa* 'there', *sentapal* 'on the other side'; (5) Numeral: *se* 'one', *o:me* 'two', *eyi* 'three', *nawi* 'four', *sinko* 'five'; (6) Manner: *yoliʔ* 'slowly', *bien* 'well'; (7) Introducer: *iga* 'for, by means of, by', *para* 'for'; (8) Focus-Orienter: *ke* 'what, that', *a parte* 'on the behalf of'; (9) Axis: *este* 'until'.

5.2.4.2 *Bound Particle Types*

Bound particle types are: (1) Proclitics, and (2) Enclitics.[5] Proclitics[6] consists of: *a-* 'negative' occurring with verbs, pronouns and particles, *iš-* filling the Interrogative slot in Interrogative Type sentences, *sam-* 'just' filling the Adverbial slot in clauses, and *yeh-* 'who, which, that' filling the Introducer slot in Relative clauses. Examples are: *anikneki* 'I don't want it', *ayéh inín* 'It's not this one', *iš-tia* 'Are you going?', *iš-yeh inón tagat yeh-čoloh* 'Is he the man that fled?', *išsam-tikčih* 'Did you just do it?', *sam-nikčih* 'I just did it', *inón kʷeyi yeh-yéh kičih* 'that skirt which she made'.

Enclitics[7] consist of (1) *-sam* 'just', *-ha* ~ *-ya*[8] 'now, already', and *-oʔ* 'just barely' filling the Adverbial slot on clause level; (2) *-waʔ* 'emphatic' following a member of any word class; and (3) *-kiʔ* 'quotative' filling the Quotation slot in a Quotation sentence type. Examples are: (1) *yahki-sam* 'he just went', *nitakʷah-sam* 'I just ate', *yahki-ha* 'he's already gone', *niknamáʔ-ya* 'I already sold it', *yahki-oʔ* 'he just barely left', *nitakʷah-oʔ* 'I just barely (finished) ate'; (2) *yahki-waʔ* 'he's gone, indeed', *nitakʷah-waʔ* 'I ate all right'; (3) *yahki-kiʔ nočam* 'he went to my house, he said', *nemi-kiʔ takʷa:* 'He's eating, he said'.

[5] Two types are sufficient if one doesn't mind classifying the same particle in both classes; otherwise, three classes are necessary, i.e., a third class has to be added for the one particle, *sam* 'just', which occurs both as a proclitic and as an enclitic.

[6] Proclitics are written with postposed hyphens indicating their bound and postposed status in relation to the word to which they are phonologically attached.

[7] Enclitics are written with preposed hyphens indicating their bound and preposed status in relation to the word to which they are phonologically attached.

[8] The alternation of *-ha* ~ *-ya* is as follows: *-ha* follows vowels and /h/; *-ya* follows all other consonants.

6

STEM STRUCTURE

6.1 FORMAL CHARACTERISTICS OF THE STEM AS A UNIT

The unit of the stem manifests the nuclear tagmeme in the word construction; it consists of the word minus its inflectional elements. Each word class except the Pronoun class contains stem units. Each stem class except the Benefactive class contains two types: Compound and Derived stems.

6.2 STEM TYPES AND OBLIGATORY TAGMEMES

Isthmus Nahuat Stem types divide into one hyperclass, Verb Stems, and two classes, Noun Stems and Particle Stems, on the basis of their occurrence in the nuclear slots of the Verb, Noun and Particle.

6.2.1 *Verb Stem Types*

Verb stems consist minimally of a root plus either a derivational affix or a second root. There are three classes of verb stem types: Intransitive, Transitive and Benefactive.

6.2.1.1 *Intransitive Stem Class*

The diagnostic features of the Intransitive stem are: (1) a core of an intransitive root, a noun root, or a particle root, and (2) occurrence in Intransitive verb nucleus. The intransitive stem consists of two types: (1) Compound and (2) Derived. The Compound type consists minimally of a core slot filled by an intransitive root or stem plus a second core slot filled by a second root or stem (transitive or intransitive), i.e. a causative transitive stem plus certain intransitive roots, or an intransitive root plus *-s* plus *-neki-* 'want'. Examples are: *-takʷiktinemi-* 'go singing' < *-takʷikti-* 'sing' + *-nemi-* 'go', *-motalohtiwi-* 'come running' < *-motalohti-* 'run' + *-wi-* 'come', *-čokasneki-* 'he wants to cry' < *-čoka-* 'cry'.

The Derived type consists minimally of a core slot filled by an intransitive verb root, a noun root or a particle root plus a formative slot filled by a derivational affix

such as morpheme 317, *-o*, or 314, *-toʔ*. These derivational affixes derive, according to their function, variant allotypes, e.g. *-o*, Spanish loan derived stems: *-hugaro-* 'play' (from Spanish *jugar*), *-toʔ*, stative stems: *-kočtoʔ-* 'be asleep' (from *-koči-* 'sleep'). Intransitive Derived stems are also fromed by reduplication:[1] *-kakalaki-* 'enter repeatedly' (from *-kalaki-* 'enter').

6.2.1.2 *Transitive Stem Class*

The diagnostic features of the transitive stem type are: (1) a core of a transitive root, and (2) occurrence in Semi-transitive, Transitive, Reflexive, and Benefactive verb nuclei (see sec. 6.2.1.3). The transitive stem consists of two types: (1) Compound and (2) Derived. The Compound type consists minimally of a core slot filled by a noun root plus a core slot filled by a transitive verb root, or a core slot filled by a transitive root plus a link slot filled by *-s* plus a second core slot filled by *-neki-* 'want'.[2] Examples are: *-ma:posteki-* 'break an arm' < *-ma:-* 'arm' + *-posteki-* 'break', *-taltemi-* 'earthfill' < *-tal-* 'earth' + *-temi-* 'fill', *-yokači:wa-* 'do alone' < *-yoka-* 'aloneness' + *-či:wa-* 'do', *-takʷasneki-* 'want to eat' < *-takʷa-* 'eat' + *-s* + *-neki-* 'want'.

The Derived type consists minimally of a core slot filled by a transitive root plus a formative slot filled by a derivational affix such as morpheme 317, *-o*, 312, *-ti*. These derivational affixes derive, according to their function, variant allotypes: e.g., *-o*, Spanish loan derived stems: *-pagaro-* 'pay' (from Spanish *pagar*), *-ti*, causative stems: *-kočti-* 'put to sleep'. Transitive Derived stems are also formed by reduplication: *-nonoɐa-* 'advise' (from *-noɐa-* 'call').

6.2.1.3 *Benefactive Stem Type*

The diagnostic features of the Benefactive Stem type are: (1) a benefactive marker, morpheme 313, *-li*, and (2) occurrence in Benefactive verb nucleus. The benefactive stem consists minimally of a core slot filled by a transitive root plus a formative slot filled by *-li*. Examples are: *-či:wili-* 'do something for someone', *-weɐilti-* 'cause to fall', *-kowili-* 'buy something for someone', *-ihli-* 'tell something to someone', *-ihkʷilowili-* 'write something to someone'.

Two types of morphophonemic changes occur in benefactive stems: (1) *-li* becomes *-l* preceding *-ti*. (See examples above.) (2) The final vowel of the transitive root or stem becomes /i/. (See examples above.)

[1] Reduplication can be treated as a member of the derivational affix class by assigning it appropriate cover symbols such as C_1 and V_1, and indicating it as substitutable for other derivational affixes.

[2] Certain other elements which occur preposed to the verb root and function as stem forming elements are: *ɐon-* and *sen-*. The first has no identifiable meaning; the second means 'together', but it is apparently not inflected. No other clear examples of this type have been noted. Examples with these are: *-ɐonteki-* 'cut with a machete', *-sennehnemi-* 'walk together', *-senteki-* 'cut together'.

For a fuller description of the stem variations within verbs, and for a description of root classes see Law, 1958, pp. 124-6 (sec. 4.1), and pp. 115-6 (sec. 3.1.6).

TABLE XVIII

Contrastive Features of Verb Stem Classes

Class	Obligatory Component	Slot in Higher Level
Intransitive	+ core: intrans.v.r./n.r./part.r.	Intrans. verb nucleus
Transitive	+ core: trans. v.r.	Semi-trans., trans, refl, and benef. verb nuclei
Benefactive	+ core: trans.v.r. + stem form: 313	Benefactive verb nucleus

TABLE XIX

Contrastive Features of Verb Stem Types

Type	Obligatory Component
Compound	+ $core_1$: root ± link: -s + $core_2$: root
Derived	+ core: root + stem form: der. suf.

6.2.2 *Noun Stem Types*

Noun stems consist minimally of a root plus either a derivational affix or a second root. There are two types of stems: (1) Compound and (2) Derived. The Compound type consists minimally of a core slot filled by a noun root or a verb root plus a second core slot filled by a noun root. Examples are: (n + n) *k^{w}etaškostal* 'leather bag' < *k^{w}etaš* 'leather' + *kostal* 'bag' (from Spanish *costal*), *piyoteksis* 'hen egg' < *piyo* 'hen' + *teksis* 'egg'; (v + n) *tako:mičkan* 'dark place' < *tako:mik* 'dark' + *-kan* 'place'. (See also Law, *op. cit.*, p. 127.) The Derived type consists minimally of a core slot filled by either a noun root plus a formative slot filled by a stem formative or a derivational affix, or a core slot filled by a verb root plus a formative slot filled by a derivational affix.

There are four stem formatives which occur with Class IB noun roots[3] as allomorphs of a single noun stem marker. These are: (*-ti* ~ *-t*) ∞ *-yo* in which *-ti* ~ *-t* occurs with Class IB roots in possessor nouns and *-yo* occurs with Class IB roots in possessed nouns, i.e., morpheme class 100.2 is obligatory to the occurrence of *-yo*, but is not obligatory to the occurrence of *-ti* ~ *-t*. The alternation of *-ti* with *-t* is: *-ti* occurs with monosyllabic roots, and *-t* with polysyllabic roots. Examples are: *nakat* 'meat, flesh', *nonakayo* 'my flesh'; *k^{w}ačti* 'shirt', *nok^{w}ač* 'my shirt'; *ehekat* 'wind', *noehekayo* 'my breath'.

[3] Law, *op. cit.*, pp. 119-20. One root, *oh-* 'road' also occurs with *-wi* with obligatory occurrence of class 100.2.

There are three derivative affixes which occur with noun roots of all classes.[4] They are: morpheme 331, *-h* 'collective indicator', morpheme 332, *peɛ-* 'content simplicity', and morpheme 333, *namol-* 'composition simplicity'. Examples are: *k^{w}awih* 'woods' (from *k^{w}awit* 'tree, wood'), *peɛtaškal* 'plain tortilla' (*taškal* 'tortilla'), *namolk^{w}awit* 'soft, nondurable wood'.

There are four nominalizing suffixes which occur with verb roots. They are: morpheme 334, *-lo*, morpheme 335, *-l*, morpheme 336, *-ni*, morpheme 337, *-lis*. Examples are: *pewalo* 'beginning' (from *-pewa-* 'begin'), *tak^{w}a:l* 'meal' (from *-tak^{w}a:-* 'eat'), *te:k^{w}a:ni* 'tiger' (from *-te:k^{w}a:-* 'eat people'), *kisalis* 'diarrhea' (from *-kisa-* 'go out').

When a reduplicated verb stem occurs with morpheme 335, *-l*, a voiceless reduplicated stem consonant becomes voiced: *-pepečowa-* 'mud a house wall' < *tabepečol* 'mudded wall'.

TABLE XX

Contrastive Features of Noun Stem Types

Type	Obligatory Component	Slot in Higher Level
Compound	+ core$_1$: n.r./v.r. + core$_2$: n.r.	Core in derived noun stems
Derived	+ core: n.r./v.r. + stem form: der. suf.	Core in compound noun stems

6.2.3 *Particle Stem Types*

Particle Stem types consist minimally of a core slot filled by a particle root plus a formative slot filled by a derivational affix or a second particle root. There are two types of derived particle stems: (1) Compound: Particle root plus particle root, and (2) Derived: Verb plus *-k* ~ *-ktik*. The first type consists of the negative bound particle *a-* plus one of several other particle roots. Examples are: *akan* 'nowhere', *aya* 'not yet'. In the second type the alternation of *-k* with *-ktik* is: *-k* follows /i/ and *-ktik* follows all else.[5] Examples are: *pistik* 'black', *etik* 'heavy', *šošoktik* 'green', *tomaktik* 'fat'.

[4] *peɛ-* occurs with a particle *-kan* in one instance: *-peɛkan* 'nakedness', e.g., *ipeɛkan* 'his nakedness'.

[5] This analysis differs from the one presented in the author's earlier description of particles (Law, Howard W., "Morphological Structure of Isthmus Nahuat", *IJAL* 24:128, April, 1958). Neither one seems completely satisfactory. A final /-k/ has been subsequently observed in the second allomorph. The present analysis also recognizes the complementary phonological distribution of the two allomorphs. However, it has the disadvantage (not completely absent in the earlier description either) of presenting a morphemic form with a unique canonical shape, -CCVC. If a more typical canonical shape, CVC, were chosen, the /k/ of the cluster could be ascribed to the preceding element as a verbal suffix. The derivation would then be from verb to particle. However, this would make forms like *pistik* homophonous as both verbs and particles.

TABLE XXI

Contrastive Features of Particle Stem Types

Type	Obligatory Component	Slot in Higher Level
Compound	+ $core_1$: part. root +$core_2$: part. root	Loc., Temp. etc.
Derived	+ core: intrans. verb +stem form.: der. aff.	Mod.

APPENDIX
ILLUSTRATIVE FOLKTALE TEXT

The following pages present the structural description of a series of sentences from a native text recorded in Mecayapan, Veracruz, Mexico. By this means the description in Chapters II-VI is applied to a corpus of the language complete with context for each structural type.

In the first ten sentences of the text approximately half of the construction types described in Chapters II-VI were found and are identified in the following materials. Each level in the hierarchy is illustrated repeatedly. The construction types which do not occur in these illustrative sentences are the less frequently occurring ones. In the next five sentences only a few structural types occur. Three sentences (# 11, 14, 15) are added to show these. (Sentence # 14 is added only to give context for # 15).

Items in the sentences are labeled with preposed numbers. In the identification section below the horizontal line a sequence relevant at a particular level is labeled with two numbers, the beginning and ending numbers of the sequence, e.g., (4-9). A single number before an item in the identifications below the horizontal line indicates that the unit is a minimal unit and not further identified. Sequences are identified as to their parts on a lower or included level.

A free translation of these sentences from the folktale is included at the end of the section.

1. (1)#(2)k(3)ih(4)to(5)wa (6)anteriormente (7)a(8)yá?
it is said (that) formerly not
(9)#(10)mo(11)i:š(12)mati(13)á? (14)sin(15)ti.
it was known corn.

Independent Declarative Type 1 sentence

Sentence level

(1-15) = Indep. Decl. Type 1 = (1-15) Indep. Base: Indep. Indic. Trans. clause.

Clause level

(1-15) = Indep. Indic. Trans. cl. = (1-5) Indic. Trans. Pred:indic. trans. verb, (6) Temp:Span. loan adverb, (7-15) O:Indic. Refl. clause.

(7-15) = Indic. Refl. cl. = (7-8) Neg:neg. part., (9-13) Indic. Refl. Pred:indic. refl. verb, (14-15) S:n.

Word level

(1-5) = indic. trans. verb = (1) s:133.3, (2) o:133.4, (3-4) intr. v. nucl:intr. v. s., (5) asp:311.1.

(9-13) = indic. refl. verb = (9) s:133.3, (10) refl:146, (11-12) refl. v. nucl:refl. v. s., (13) asp:214.

Stem level

(3-4) = intr. verb stem = (3) intr. v. core:intr. v. r., (4) stem formative:314.

(7-8) = neg. part. = (7) part. core:bound part. r., (8) part. core:bound part. r.

(11-12) = refl. verb stem = (11) refl. v. core:noun r., (12) refl. verb core:trans. v. r.

(14-15) = noun = (14) n. core:noun r., (15) stem formative:321.

2. (1)solamente (2)#(3)ki(4)pia(5)ya (6)se (7)taga(8)t (9)riko
only he had it a man rich
(10)embodegado.
stored.

Independent Declarative Type 1 sentence

Sentence level

(1-10) = Indep. Decl. Type 1 = (1-10) Indep. Base:Indep. Indic. Trans. cl.

Clause level

(1-10) = Indic. Trans. cl. = (1) Lim:Span. part., (2-5) Indic. Trans. Pred:indic. trans. verb, (6-9) S:SN-1, (10) Descrip:Span. loan participle.

Phrase level

(6-9) = SN-1 = (6) M:numeral part., (7-8) H:n., (9) M:Span. loan adj.

Word level

(2-5) = indic. trans. verb = (2) s:133.3, (3) o:133.4, (4) trans. v. nucl:trans. verb r., (5) asp:213.

Stem level

(7-8) = n. = (7) noun core:noun r., (8) stem formative:322.

3. (1)#(2)k(3)iyan(4)to(5)ya (6)iga (7)a(8)mo
he was hiding it so that not
(9)#(10)ma(11)mo(12)i:š(13)mati.
it would be known.

Independent Declarative Type 1 sentence

Sentence level

(1-13) = Indep. Decl. Type 1 = (1-13) Indep. Base:Indep. Indic. Trans. cl.

Clause level

(1-13) = Indep. Indic. Trans. cl. = (1-5) Indic. Trans. Pred:indic. trans. verb, (6-13) Pur:Dep. Purpose Type cl.

(6-13) = Dep. Purpose Type cl. = (6) Intro:purpose part., (7-8) Neg:neg. part., (9-13) Subjunctive Refl. Pred:subj. refl. verb.

Word level

(1-5) = indic. trans. verb = (1) s:133.3, (2) o:133.4, (3-4) trans. verb nucl:stative trans. stem, (5) asp:213.

(9-13) = subj. refl. verb = (9) s:133.3, (10) subjunctive mode:12, (11) refl:146, (12-13) refl. verb nucl:trans. verb stem.

Stem level

(3-4) = stative trans. stem = (3) trans. v. core:trans. v. r., (4) stem formative:314.

(7-8) = neg. part. = (7) part. core:bound part. r., (8) part. core:bound part. r.

(12-13) = trans. v. stem = (12) trans. v. core:n., (13) trans. v. core:trans. v. root.

4. (1)pero (2)un (3)diah (4)añieroh(5)meh (6)#(7)mo(8)maka(9)keh
but one day ants they learned
(10)k^{w}entah (11)kan (12)iyan(13)tok (14)sin(15)ti.
... where hidden corn.

Independent Declarative Type 1 sentence

Sentence level

(1-14) = Indep. Decl. Type 1 = (1-14) Indep. Base: Indep. Indic. Refl. cl.

Clause level

(1-14) = Indep. Indic. Refl. cl. = (1) Intro:Span. loan conj., (2-3) T:SN-1, (4-5) S:n., (6-10) Indic. Refl. Pred:SV-1, (11-15) L:AR-1.

(12-14) = Indep. Indic. Intr. cl. = (12-13) Indic. Intr. Pred:indic. intr. verb, (14-15) S:n.

Phrase level

(2-3) = SN-1 = (2) M:Span. loan numeral particle, (3) H:n.

(6-10) = SV-1 = (6-9) H:indic. refl. verb, (10) M:*k^{w}entah.*

(11-15) = AR-1 = (11) A:loc. part., (12-14) R:Indep. Indic. Intr. cl.

Word level

(4-5) = n. = (4) noun nucl:noun r., (5) num:22.1.

(6-9) = indic. refl. verb = (6) s:133.3, (7) refl:146, (8) refl. v. nucl:trans. v. r., (9) tense:241.2.

Stem level

(12-13) = indic. intr. verb = (12) intr. verb core:intr. v. r., (13) stem formative:314.

(14-15) = n. = (14) n. core:n. r., (15) stem formative:322.

5. (1)komo (2)inón[1] (3)sin(4)ti (5)i(6)te:ko (7)#(8)ki(9)k^{w}idar(10)o(11)to(12)ya
since that corn its owner he was guarding it
(13)en (14)diah (15)ay(16)agah (17)#(18)kalaki(19)# (20)i(21)wa:n
in day no one he enters and
(22)añieroh(23)meh (24)#(25)kala(26)keh (27)tayowa (28)kan
ants they enter at night where
(29)alin (30)koyon(31)yo (32)kahli[1].
small holed-part house

Independent Declarative Type 2 sentence

Sentence level

(1-32) = Indep. Decl. Type 2 = (1-14) Dep. Base:Dep. Cond. Cl., (15-19) Indep. Base:Indep. Indic. Intr. cl., (20-21) Conn:conj., (22-32) Indep. Base:Indep. Indic. Intr. cl.

Clause level

(1-14) = Dep. Cond. cl. = (1) Intr:cond. part., (2-6) S:SN-1, (7-12) Indic. Trans. Pred:indic. trans. verb, (13-14) T:AR-1.

(15-19) = Indep. Indic. Intr. cl. = (15-16) S:neg. part., (17-19) Indic. Intr. Pred:indic. intr. verb.

(22-32) = Indep. Indic. Intr. cl. = (22-23) S:n., (24-26) Indic. Intr. Pred:indic. intr. verb, (27) T:part., (28-32) L:AR-1.

Phrase level

(2-6) = SN-1 = (2) M:demon. part., (3-6) H:SN-2.

(3-6) = SN-2 = (3-4) M:poss'd. n., (5-6) H:poss'r. n.

(13-14) = AR-1 = (13) A:Span. loan part., (14) R:Span. loan n.

(28-32) = AR-1 = (28) A:loc. part., (29-32) R:SN-1.

(29-32) = SN-1 = (29) M:part., (30-31) M:n., (32) H:n.

Word level

(5-6) = poss'r. n. = (5) poss:133.2, (6) noun nucl:n. r.

(7-12) = indic. trans. verb = (7) s:133.3, (8) o:133.4, (9-11) trans. verb nucl:trans. v. s., (12) asp:213.

(17-19) = indic. intr. verb = (17) s:133.3, (18) intr. verb nucl:intr. verb r., (19) tense:211.1.

(20-21) = conj. = (20) poss:133.2, (21) noun nucl:n.r.

(22-23) = n. = (22) noun nucl:n. r., (23) num:22.1.

(24-26) = indic. intr. verb = (24) s:133.3, (25) intr. verb nucl:intr. v. r., (26) tense: 241.2.

Stem level

(3-4) = n. = (3) noun core: n. r., (4) stem formative:321.

[1] This form could be treated as polymorphemic, but since there would be problems of identification, it has been left unitary in this treatment. With *kahli* various allomorphs would result: *-kal-*, *kah-*, and *kahli*.

(9-11) = trans. v. stem = (9) trans. stem core:trans. Span. loan infinitive, (10) stem formative:317, (11) stative stem formative:314.
(15-16) = neg. part. = (15) part. core:bound part. r., (16) part. core: free part. r.
(30-31) = n. = (30) noun core:n. r., (31) stem formative:52.

6. (1)i(2)wa:n (3)despʷés (4)i(5)te:ko (6)sin(7)ti (8)≠(9)mo(10)maga(11)ʔ
and after its owner corn he learned
(12)kʷentah (13)iga (14)i(15)tayol (16)≠(17)šeli(18)wi (19)i(20)pan
... that his corn it was less in
(21)koštal(22)meh.
bags.

Independent Declarative Type 1 sentence

Sentence level
(1-22) = Indep. Decl. Type 1 = (1-22) Indep. Base:Indep. Indic. Refl. clause.
Clause level
(1-22) = Indep. Indic. Refl. clause = (1-2) Intro:conj., (3) Temp:Span. loan adv., (4-7) S:SN-2, (8-12) Indic. Refl. Pred:SV-1, (13-22) O:Dep. Object. type cl.
(13-22) = Dep. Object. type cl. = (13) Intro:part., (14-15) S:n, (16-18) Indic. Intr. Pred:indic. intr. verb, (19-22) L:SN-2.
Phrase level
(4-7) = SN-2 = (4-5) Poss'd:poss'd. n., (6-7) Poss'r:poss'r. n.
(8-12) = SV-1 = (8-11) H:indic. refl. verb, (12) M:*kʷentah.*
(19-22) = SN-2 = (19-20) Poss'd:poss'd. n., (21-22) Poss'r:poss'r. n.
Word level
(1-2) = conj = (1) poss:133.2, (2) noun nucl:n. r.
(4-5) = poss'd. n. = (4) poss:133.2, (5) noun nucl:n. r.
(8-11) = indic. refl. verb = (8) s:133.3, (9) refl:146, (10) refl. verb nucl:trans. verb r., (11) tense:212.1.
(14-15) = poss'd. n. = (14) poss:133.2, (15) noun nucl:n. r.
(16-18) = indic. intr. verb = (16) s:133.3, (17) intr. verb nucl:intr. v. r., (18) asp:311.2.
(19-20) = poss'd. n. = (19) poss:133.2, (20) noun nucl:n. r.
(21-22) = n., = (21) noun nucl:n. r., (22) num:22.1.
Stem level
(6-7) = n. = (6) noun core:n. r., (7) stem formative:322.

7. (1)entonses (2)komo (3)yeh(4)wa (5)i(6)pan (7)i(8)čam
therefore since he in his house
(9)≠(10)ki(11)pia(12)ya (13)komo (14)monso (15)čiko
he was keeping them as servants badger

(16)sin(17)ko:yame (18)masa(19)t (20)i(21)wa:n (22)varios (23)animales,
boar deer and various animals
(24)entonses (25)#(26)k(27)obligar(28)o(29)wa (30)čiko
therefore he obliged them badger
(31)i(32)wa:n (33)sin(34)ko:yame (35)iga
and boar that
(36)#(37)ma(38)k(39)esperar(40)o(41)kan (42)tayowa (43)a (44)ver
they wait for him at night to see
(45)a? (46)#(47)kalaki(48)# (49)yeh-(50)#(51)k(52)ičteki(53)#
who he enters he who is stealing it
(54)sin(55)ti.
corn.

Independent Declarative Type 2 sentence

Sentence level

(1-55) = Indep. Decl. Type 2 = (1-23) Dep. Base:Dep. Causal Type clause, (24-55) Indep. Base:Indep. Indic. Trans. clause.

Clause level

(1-23) = Dep. Causal Type clause = (1-2) Intro:FO-1, (3-4) S:pro., (5-8) L:SN-2, (9-12) Indic. Trans. Pred:indic. trans. verb, (13-23) M:AR-2.

(24-55) = Indep. Indic. Trans. clause = (24) Intro:Span. loan part., (25-29) Indic. Trans. Pred:indic. trans. v., (30-34) O:CN-1, (35-55) Pur:Dep. Purpose Type clause.

(35-55) = Dep. Purpose Type cl. = (35), Intro:purpose part., (36-41) Subj. Trans. Pred:subj. trans. verb, (42) Temp:part., (43-55) Pur:Subj. Trans. cl.

(43-55) = Subj. Trans. cl. = (43-44) Subj. Trans. Pred:Span. loan infinitive phrase,[2] (45-55) O:Dep. Object. Type clause.

(45-55) = Dep. Object. Type cl. = (45) S:pro., (46-48) Indic. Intr. Pred:indic. intr. verb, (49) S:bound part., (50-53) Indic. Trans. Pred:indic. trans. verb, (54-55) O:poss'r. noun.

Phrase level

(1-2) = FO-1 = (1) F:Span. loan part., (2) O:Span. loan part.

(5-8) = SN-2 = (5-6) Poss'd:poss'd. n., (7-8) Poss'r:poss'r. n.

(13-23) = AR-2 = (13) A:Span. loan part., (14-23) R:CN-1.

(14-23) = CN-1 = (14) H:n., (15) H:n., (16-17) H:n., (18-19) H:n., (20-21) Conn: conj., (22-23) H:SN-1.

(22-23) = SN-1, = (22) M:Span. loan adj., (23) H:Span. loan n.

(30-34) = CN-1 = (30) H:n., (31-32) Conn:conj. (33-34) H:n.

(43-44) = Spanish loan infinitive phrase = (These two units are borrowed as a single unit and function as such in the Nahuat structure).

[2] This form is treated as filling a Subj. Trans. Pred. slot since its Nahuat substitute would be a subj. trans. verb.

Word level

(3-4) = pro. = (3) pro. nucl:pro. r., (4) emphatic:64.
(5-6) = poss'r. n. = (7) poss:133.2, (8) noun nucl:n. r.
(7-8) = poss'r. n. = (7) poss:133.2, (8) noun nucl:n. r.
(9-12) = indic. trans. verb = (9) s:133.3, (10) o:133.4, (11) trans. verb nucl:trans. v. r., (12) asp:213.
(20-21) = conj. = (20) poss:133.2, (21) noun nucl:n. r.
(25-29) = indic. trans. verb = (25) s:133.3, (26) o:133.4, (27) trans. verb nucl:Span. loan infinitive, (28) stem formative:317, (29) asp:311.1.
(31-32) = conj = (31) poss:133.2, (32) noun nucl:n. r.
(36-41) = subj. trans. verb = (36) subject:133.3, (37) subjunctive:12, (38) o:133.4, (39) trans. verb nucl:Spanish loan infinitive, (40) stem formative:317, (41) num:242.
(46-48) = indic. intr. verb = (46) s:133.3, (47) intr. verb nucl:intr. v. r., (48) tense: 211.1.
(50-53) = indic. trans. verb = (50) s:133.3, (51) o:133.4, (52) trans. verb nucl:trans. v. r., (53) tense:211.1.

Stem level

(16-17), (33-34) = n. = (16), (33) stem formative:noun derivation prefix, (17), (34) noun core:n. r.
(18-19) = n. = (18) noun core:n. r., (19) stem formative:322.
(54-55) = n. = (54) noun core:n. r., (55) stem formative:321.

8. (1)#(2)velar(3)o(4)hkeh (5)toda (6)la (7)noče (8)en (9)g^{w}ardia
they stayed awake all night on guard
(10)i(11)wa:n (12)#(13)k(14)ita(15)keh (16)iga (17)ay(18)agah
and they saw it that no one
(19)#(20)kala(21)ʔ (22)i(23)pan (24)p^{w}ertah.
he entered through door.

Independent Declarative Type 1 sentence

Sentence level

(1-24) = Indep. Decl. Type 1 = (1-9) Indep. Base:Indep. Indic. Intr. cl., (10-11) Conn:conj, (12-24) Indep. Base:Indep. Indic. Trans. clause.

Clause level

(1-9) = Indep. Indic. Intr. cl. = (1-4) Indic. Intr. Pred:indic. intr. verb, (5-7) T:Span. loan temporal phrase, (8-9) Mann:Span. loan adverbial phrase.
(12-24) = Indep. Indic. Trans. cl. = (12-15) Indic. Trans. Pred:indic. trans. verb, (16-24) Obj:Dep. Object. Type cl.
(16-24) = Dep. Object. Type cl. = (16) Intro:part., (17-18) S:neg. part., (19-21) Indic. Intr. Pred:indic. intr. verb, (22-24) L:SN-2.

Phrase level

(5-7) = Span. loan temporal phrase = (These three units are borrowed as a single unit and function as such in the Nahuat structure).

(8-9) = Spanish loan adverbial phrase = (These two units are borrowed as a single unit and function as such in the Nahuat structure).

(22-24) = SN-2 = (22-23) Poss'd:poss'd. n., (24) Poss'r:poss'r. n.

Word level

(1-4) = indic. intr. verb = (1) s:133.3, (2-3) intr. verb nucl:intr. v. s., (4) tense: 241.2.

(10-11) = conj = (10) poss:133.2, (11) noun nucl:n. r.

(12-15) = indic. trans. verb = (12) s:133.3, (13) o:133.4, (14) trans. verb nucl:trans. v. r., (15) tense:241.2.

(19-21) = indic. intr. verb = (19) s:133.3, (20) intr. verb nucl:intr. v. r., (21) tense: 212.1.

(22-23) = poss'd n. = (22) poss:133.2, (23) noun nucl:n. r.

Stem level

(2-3) = intr. verb stem = (2) verb core:intr. Span. loan infinitive, (3) stem formative:317.

(17-18) = neg. part. = (17) part. core:bound part. r., (18) part. core:free part. root.

9. (1)i(2)wa:n (3)ta(4)ne:si(5)ko (6)i(7)te:ko (8)sin(9)ti
and it dawned its owner corn
(10)#(11)mo(12)maga(13)ʔ (14)k^{w}entah (15)ke (16)i(17)tayol (18)siempre
he learned ... that his corn anyway
(19)#(20)mo(21)čte(22)ʔ
it was stolen.

Independent Declarative Type 1 sentence

Sentence level

(1-22) = Indep. Decl. Type 1 = (1-5) Indep. Base:Indep. Indic. Non-trans. cl., (6-22) Indep. Base:Indep. Indic. Refl. clause.

Clause level

(1-5) = Indep. Indic. Non-trans. cl. = (1-2) Intro:conj, (3-5) Indic. Semi-trans. Pred:indic. semi-trans. verb.

(6-22) = Indep. Indic. Refl. cl. = (6-9) S:SN-2, (10-14) Indic. Refl. Pred:SV-1, (15-22) Obj:Dep. Object. Type cl.

(15-22) = Dep. Object. Type cl. = (15) Intro:part., (16-17) S:poss'd. n., (18) Intens:Span. loan part., (19-22) Indic. Refl. Pred:indic. refl. verb.

Phrase level

(6-9) = SN-2 = (6-7) Poss'r. n., (8-9) Poss'd:poss'd. n.

(10-14) = SV-1 = (10-13) H:indic. refl. verb, (14) M:*k^{w}entah*.

Word level

(1-2) = conj = (1) poss:133.2, (2) noun nucl:n. r.

(3-5) = indic. semi-trans. verb = (3) semi-trans:145, (4) semi-trans. verb nucl:intr. v. r., (5) asp:223.

(6-7) = poss'r. n. = (6) poss:133.2, (7) noun nucl:n. r.

(10-13) = indic. refl. verb = (10) s:133.3, (11) refl:146, (12) refl. verb nucl:trans. v. r., (13) tense:212.1.

(16-17) = poss'd. n. = (16) poss:133.2, (17) noun nucl:n. r.

(19-22) = indic. refl. verb = (19) s:133.3, (20) refl:146, (21) refl. verb nucl:trans. v. r., (22) tense:212.1.

Stem level

(8-9) = poss'r. n. = (8) noun core:n. r., (9) stem formative:322.

10. (1)entonses (2)#(3)k(4)ahahwa(5)# (6)i(7)monso (8)čiko
therefore he scolds his servants badger
(9)i(10)wa:n (11)sin(12)ko:yame.
and boar.

Independent Declarative Type 1 sentence

Sentence level

(1-12) = Indep. Decl. Type 1 = Indep. Base: Indep. Indic. Trans. clause.

Clause level

(1-12) = Indep. Indic. Trans. cl. = (1) Intro:Span. loan part., (2-5) Indic. Trans. Pred:indic. trans. verb, (6-12) Obj:CN-2.

Phrase level

(6-12) = CN-2 = (6-7) H:poss'd. n., (8-12) H:CN-1.

(8-12) = CN-1 = (8) H:n., (9-10) Conn:conj, (11-12) H:n.

Word level

(2-5) = indic. trans. verb = (2) s:133.3, (3) o:133.4, (4) trans. verb nucl:trans. v. r., (5) tense:211.1.

(6-7) (9-10) = poss'd. n. = (6), (9) poss:133.2, (7), (10) noun nucl:n. r.

Stem level

(11-12) = n. = (11) stem formative:deriv. noun prefix, (12) noun core:n. r.

11. (1)ameh(2)wa:n (3)#(4)k(5)ih(6)li(7)h (8)a(9)yáʔ
you (pl.) he said it to them not
(10)an(11)servir(12)o(13)wa(14)h (15)komo (16)sintinela (17)porke
you served as guards because
(18)a(19)yáʔ (20)am(21)mo(22)maka(23)keh (24)kʷentah (25)aʔ
not you (pl.) learned ... who

(26)#(27)kala(28)ʔ (29)porke (30)tayol (31)siempre
he entered because corn anyway
(32)#(33)mo(34)čte(35)ʔ.
it was stolen.

Dependent Quotation Type sentence

Sentence level

(1-35) = Dependent Quot. Type = (1-2) (8-35) Dep. Base:Indep. Decl. Type 1, (3-7) Quotation:indic. trans. verb.

(1-2) (8-35) = Indep. Decl. Type 1 = Indep. Indic. Trans. cl.

Clause level

(1-2) (8-35) = Indep. Indic. Trans. cl. = (1-2) S:pro., (8-9) Neg:neg. part., (10-14) Indic. Trans. Pred:indic. trans. verb, (15-16) Mann:AR-2, (17-35) Caus: Dep. Causal Type cl.

(17-35) = Dep. Causal Type cl. = (17) Intro:Span. loan causal part., (18-19) Neg: neg. part., (20-24) Indic. Refl. Pred:SV-1, (25-28) Obj:Indep. Indic. Intr. cl., (29-35) Caus:Dep. Causal Type cl.

(25-28) = Indep. Indic. Intr. cl. = (25) S:Interrog. part., (26-28) Indic. Intr. Pred: indic. intr. verb.

(29-35) = Dep. Causal Type cl. = (29) Intro:Span. loan caus. part., (30) S:n., (31) Intens:*siempre*, (32-35) Indic. Refl. Pred:indic. refl. verb.

Phrase level

(15-16) = AR-2 = (15) A:manner part., (16) R:n.

(20-24) = SV-1 = (20-23) H:indic. refl. verb, (24) M:*kʷentah.*

Word level

(1-2) = pro. = (1) pro. nucl:pro. r., (2) num:62.1.

(3-7) = indic. trans. verb = (3) s:133.3, (4) o:133.4, (5-6) trans. verb nucl:benefac. verb stem, (7) tense:212.2.

(10-14) = indic. intr. verb = (10) s:122.3, (11) intr. verb nucl:intr. Span. loan verb root, (12) stem formative:317, (13) asp:311.1, (14) tense:212.2.

(20-23) = indic. ref. verb = (20) s:122.3, (21) refl:146, (22) refl. verb nucl:trans. v. r., (23) tense:241.2.

(26-28) = indic. intr. verb = (26) s:133.3, (27) intr. verb nucl:intr. v. r., (28) tense: 212.1.

(32-35) = indic. refl. verb = (32) s:133.3, (33) refl:146, (34) refl. verb nucl:trans. v. r., (35) tense:212.1.

Stem level

(8-9) = neg. part. = (8) part. core:bound part. r., (9) part. core:bound part. r.

14. (1)entonses (2)#(3)ki(4)noɬa(5)# (6)o:men (7)tekʷisih(8)meh
therefore he called them two crabs

(9)i(10)wa:n (11)≠(12)k(13)ih(14)li(15)hkeh.
and he said to them:

Independent Declarative Type 1 sentence

Sentence level

(1-15) = Indep. Decl. Type 1 = (1-8) Indep. Base:Indep. Indic. Trans. cl., (9-10) Conn:conj, (11-15) Indep. Base:Indep. Indic. Trans. clause.

Clause level

(1-8) = Indep. Indic. Trans. cl. = (1) Intro:Span. loan part., (2-5) Indic. Trans. Pred:indic. trans. verb, (6-8) Obj:SN-1.

(11-15) = Indep. Indic. Trans. cl. = (11-15) Indic. Trans. Pred:indic. trans. verb.

Phrase level

(6-8) = SN-1 = (6) M:numeral part., (7-8) H:n.

Word level

(2-5) = indic. trans. verb = (2) s:133.3, (3) o:133.4, (4) trans. verb nucl:trans. v. r., (5) tense:212.1.

(7-8) = n. = (7) noun nucl:n. r., (8) num:22.1.

(9-10) = conj = (9) poss:133.2, (10) noun nucl:n. r.

(11-15) = indic. trans. verb = (11) s:133.3, (12) o:133.4, (13-14) trans. verb nucl: benefac. v. s., (15) tense:241.2.

Stem level

(13-14) = benefactive verb stem = (13) benefac. verb core:trans. v. r., (14) stem formative:313.

15. (1)nigah (2)ni(3)mi¢(4)no¢(5)keh.
here I called you.

Dependent Quotation Type sentence

Sentence level

(1-5) = Dep. Quot. Type = (1-5) Dep. Base:Indep. Indic. Trans. clause.

Clause level

(1-5) = Indep. Indic. Trans. cl. = (1) L:loc. part., (2-5) Indic. Trans. Pred:indic. trans. verb.

Word level

(2-5) = indic. trans. verb = (2) s:113.3, (3) o:125.4, (4) trans. verb nucl:trans. v. r., (5) tense:241.2.

Free Translation

(1) It is said that formerly corn was not known. (2) Only a rich man had it stored. (3) He was hiding it so it would not be known. (4) But one day some ants learned

where the corn was hidden. (5) Since the owner of the corn was guarding it in the daytime, no one entered, and the ants entered at night through a small hole in the house. (6) And afterwards the owner of the corn learned that his corn had become less in the bags. (7) Therefore since he was keeping as servants in his house a badger, a boar, a deer and various other animals, he therefore ordered the badger and boar to be on the lookout at night to see who was entering and stealing the corn. (8) They stayed awake on guard all night and saw no one enter through the door. (9) And as it dawned the owner of the corn learned that his corn was stolen (again) anyway. (10) So he scolds his servants, the badger and boar. (11) He said to them, "You're no good as guards because you did not learn who entered because the corn was stolen (again) anyway..." (14) Therefore, he called two crabs and said to them, (15) "I called you here".

GLOSSARY

Axis-Relator.[1] A phrase type consisting of two obligatory tagmemes. The Axis slot functions as the pivot for the relationship expressed between the Relator slot and the related tagmeme in the including clause or phrase.

Base. The obligatory nuclear tagmeme on the sentence level.

core. The obligatory nuclear tagmeme on the stem level.

Focus-Orienter. A phrase type consisting of two obligatory tagmemes. The Focus slot functions as the locus of the phrase to which the Orienter slot points the other elements of the including clause or phrase.

grammatical hierarchy. One of three hierarchies (in Pike's view of tagmemics) of linguistic structure. Description of the grammatical units of the languages in contrast to the phonological and lexical descriptions of the phonological and lexical hierarchies.

hyperclass. A class of classes.

non-subordinate. An exocentric construction. A phrase not containing a head plus modifier relationship.

nucleus. The obligatory nuclear tagmeme on the word level.

semi-transitive. A verb type contrastive with intransitive in its constituent tagmemes, and contrastive with transitive both in its constituent tagmemes and in its external environment.

structural type. A variety of a construction having two structural differences from some comparable variety, one within the construction itself and one outside the construction, or two within the construction.

subordinate. An endocentric construction. A phrase containing a head plus modifier relationship.

syntactophonemic change. Alteration of phonemes occurring at clause level, in contrast to morphophonemic change occurring at word level.

tagmeme. A slot-class correlate of grammatical structure.

Topic-Comment. A clause type consisting of two tagmemes as a minimum: the Topic, which is the subject of the comment being made, and the Comment, which is the statement made about the topic.

[1] Note that capitalization and non-capitalization follow tagmemic convention.

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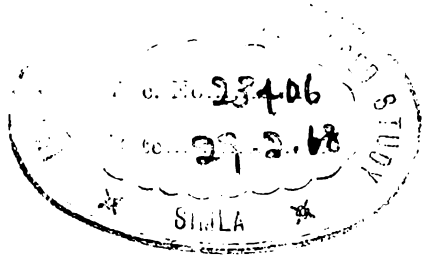

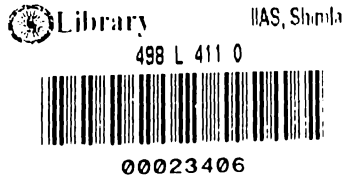
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