

HIERARCHICAL STRUCTURES

IN

GUAJAJARA

Thesis

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by

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## ABSTRACT

This thesis presents an analysis of the phonology and the grammar of the Guajajara language, each in turn being described within a hierarchical framework.

Following a general introduction to the Guajajara people and language, (Chapter One), and an account of the transcription employed, (Chapter Two), a theoretical introduction to the analytical framework of the study and a summary of the hierarchies, are found in Chapter Three.

Chapters Four to Seven describe the phonological hierarchy, starting with the largest unit, the Span, (Chapter Four) and working down through successively smaller units, the Foot (Chapter Five) and the Syllable (Chapter Six) to the smallest ones, Consonants and Vowels.

Chapters Eight to Fourteen describe the grammatical hierarchy. The Sentence, and specially the favourite sentence, is dealt with in Chapter Eight, verbal and Nominal Units in Chapters Nine and Ten respectively, other units of phrase rank in Chapter Eleven, and Particles in Chapter Twelve. Chapter Thirteen describes non-favourite sentences, and Chapter Fourteen, constructions larger than the sentence.

Theoretical conclusions are drawn in Chapter Fifteen, and a parsed text presented in Chapter Sixteen.

The thesis ends with a bibliography, both of general linguistic works, and of works relating to the Guajajara people and language, and with an index and a key to the abbreviations used.

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## CHAPTER 1 GENERAL INTRODUCTION

The Guajajara language is spoken by a group of South American Indians in the State of Maranhão, in North Eastern Brazil. These people live in some forty small villages and in many isolated family groups, mostly along the banks of the rivers Pindaré, Grajaú and Mearim, and their tributaries, in the western part of the State of Maranhão. According to rough calculations made during a survey trip in October, 1962, the speakers number about four thousand persons. Probably more than half of these have a fair command of 'trade Portuguese', but Guajajara is the language of the home for all but a few.

The name Guajajara is applied to both the people and their language. The Indians' name for themselves is Tenetehara, and this name has also been applied to them in some of the literature. A small group of Indians living to the north in the State of Pará, and known as the Tembé, use the same language, according to Wagley and Galvão in their description of Tenetchara culture. (This and other literature in which the Guajajara are mentioned is listed in the bibliography at the end of this thesis.) The language is a member of the Tupí-Guarani family.

The Guajajara people have frequently been visited by anthropologists and others who have provided a number of descriptions of various aspects

of their culture, and recorded lists of words. These are too numerous to warrant individual mention, but they are listed, together with notes concerning their contents in a few cases, in the bibliography at the end of this thesis. Special attention may be drawn to two of these.

In 'The Tenetehara Indians of Brazil', Wagley and Galvão have provided a comprehensive study of the Guajajara culture in the mid 1940s which is of excellent quality. Those desiring further information about the culture of this tribe in recent years are referred to this publication with confidence.

The word list of Roberts and Symes is also a most useful collection, though not without some uncertainties of transcription, chiefly in the case of central vowel sounds. It is assumed that the unpublished pedagogical grammar, graciously made available to me by missionaries of the Unevangelized Fields Mission, represents the work of Roberts and Symes in part at least. This grammar was found helpful in the early stages of field work. It is chiefly concerned with morphology and the usage of affixual forms, and has been found accurate, but of restricted value since it refers but little to constructions larger than the word. So far as is known, no comprehensive structural description of Guajajara phonology or grammar has been published up to the present time.

The present study is based on investigations carried out under the auspices of the Museu Nacional in Rio de Janeiro and of the Summer Institute of Linguistics, during the period July 1960 to March 1963. Some twenty months in all have been spent in residence at the Guajajara village, 'Centro de Manoel Viana', which is located about one hour's walk from the Pôsto Indígena Gonçalves Dias, of the Serviço de Proteção aos Índios. The Pôsto is located on the river Pindaré, some miles up-river from the Brazilian township of Pindaré-Mirim. About a month has also been spent travelling among Guajarajas living along the tributaries of the Mearim and the Grajaú, in the more southerly area of the tribe, near Barra do Corda and Grajaú.

Frequent and fairly intimate contact has been made, throughout this period, with some fifty Guajajara Indians, inhabitants of, or frequent visitors to, this village. The majority of the detailed linguistic investigation has been carried out with the help of two men, Manoel Viana, aged about 75 years, and Mane Luis, aged about 45 years. The description therefore reflects the idiolects of these two individuals and the dialect of the local Pindaré area, to a large extent. So far as could be determined by the trip to the more southerly area of the tribe, and by visits from Indians coming from that area, there is little dialectical difference in the speech of those living in other parts.

The data upon which the phonological analysis is based is a quantity of tape-recorded material obtained from half-a-dozen different speakers at various times. The majority of this is narrative material recorded by Mane Luis or Manoel Viana. A total of about one hour's length of continuous speech has been studied in detail, and the resulting analysis spot checked by reference to additional recorded material. Reference has also been made to notes on phonological matters made during field investigation.

The data upon which the grammatical analysis is based consists for the most part of the same tape-recorded materials. A total of more than ten hours continuous speech, chiefly narrative material, has been transcribed, and this has been supplemented by reference to spontaneous and elicited utterances written down during field investigations. A corpus of about a thousand sentences, consisting of every sentence in a number of short narratives, was transferred onto edge punched cards, and served as the basis for provisionally determining the major patterns and relationships. Much of the rest of the transcribed narrative material was then examined, additional edge-punched cards being made for all examples of sentences which modified the provisional analysis, but not for sentences exemplifying the most common constructions. The analysis may thus be said to be representative of the whole transcribed corpus, supplemented by twenty months of field study and use of the language, though not every sentence has been

subjected to the rigorous and exhaustive analysis provided by transference to the edge-punched card system.

With these limitations in the quantity of data examined, in the style of speech and number of speakers represented in that data, and in the time during which the language has been used, this description cannot be regarded as an exhaustive statement of the language as a whole. It is hoped, however, that it is an adequate statement of the structure of the narrative speech style of the two speakers named, and as such, representative of a major section of the language.

## CHAPTER 2 THE TRANSCRIPTION

Three different transcriptions are employed in this study, which may be termed 'phonological', 'phonetic' and 'reading' respectively. In each of the transcriptions, the phonetic value of typescript symbols corresponds in most cases to the value suggested for them in the IPA. There are however, certain substitutions for typewriter convenience as stated below.

The phonological transcription is employed in the citation of examples throughout the phonological section, chapters 4 - 7, and for the relevant parts of chapter 16. It will not be described here, since it depends upon the phonological categories set up in these chapters and is fully described in the course of the statement of such categories. For a detailed statement of the phonetic realisation of phonematic units, see chapter 7.

The phonetic transcription corresponds to the International Phonetic Alphabet (the IPA) in the case of each symbol except the following, the exceptions being made for typewriter convenience.

- r represents an alveolar flap
- ŋ represents a velar nasal
- ə represents a central vocoid between half-close and half-open position, such as is generally known as 'shewa'.

This transcription is employed only in chapter 7.5 and is invariably enclosed in square brackets.

The reading transcription is properly a 'phonemic' one, and corresponds closely to that listed as such in chapter 7.5. As such it contrasts with the phonological transcription, because the two belong to quite different systems. The fact that the two transcriptions utilize almost identical lists of symbols, which moreover share a common phonetic realisation, should not be allowed to obscure the differences between the two systems. The reading transcription is employed solely as the most convenient means of representing grammatical and lexical units so that the reader can pronounce them without undue difficulty and with a fair degree of accuracy. It is employed in the citation of examples throughout the grammatical section, chapters 8 - 15, and for the relevant parts of chapter 16.

The symbols employed in this reading transcription are first set out in tabulated form, so that a rough impression of their phonetic value may be quickly gained. They are then described in turn, with details of major variations due to different environments. For a more detailed description of such variations, see the phonological description, especially chapter 7, sections 1 and 2.

CONSONANTS

	Bilabial	Dental/ Alveolar	Velar	Labio- Velar	Glottal
Plosive	p	t	k	kw	'
Affricate		c			
Nasal	m	n	ŋ	ŋw	
Flap		r			
Fricative		z			h
Frictionless Continuant	w				

It should be noted that the symbols c and ' are here used with different values from those suggested in the IPA, in addition to the symbols already noted as differing.

Plosives

All plosives are voiceless and unaspirated, and none of them have major variations of position due to different environments.

- p represents bilabial closure
- t represents dental closure. When preceding another consonant which is in a heavily stressed syllable, closure is followed by a shewa release.
- k represents velar closure. When preceding another consonant which is in a heavily stressed syllable, closure is followed by a shewa release.
- kw represents simultaneous lip rounding and velar closure.
- ' represents glottal closure.

Affricate

- c represents voiceless alveolar closure with fricative release. It varies to palato-alveolar position before a close front vowel, and sometimes before a heavily stressed half-open front vowel.

Nasal

All nasals are voiced, and none have major variations of position due to different environments. When preceding another consonant which is in a heavily stressed syllable, closure is followed by a shewa release. This occurs only with m, n and ŋ.

- m represents bilabial closure  
 n represents alveolar closure  
 ŋ represents velar closure  
 ŋw represents simultaneous lip rounding and velar closure.

Flap

- r represents a voiced momentary contact at the alveolar position, and varies freely, without conditioning factors, to a flapped lateral. When preceding another consonant or pause this flap always has a shewa release.

Fricatives

- z when occurring before a vowel, this symbol represents a voiced fricative varying freely from alveolar to palato-alveolar position without conditioning factors. The tongue tip is always well up, and is sometimes slightly retroflexed.

When preceding another consonant or pause,  
it represents a voiced palatal frictionless continuant.

h represents voiceless glottal friction.

### Frictionless Continuant

w represents a voiced labio-velar frictionless  
continuant. When preceding another consonant  
which is in a heavily stressed syllable, a  
shewa sound follows the frictionless continuant.

### VOWELS

	Front	Central	Back
Close	i	y	u
Half Close		ə	
Half Open	e		
Open	a		o

It should be noted that the symbols e, y and o are here  
used with different values from those suggested in the IPA

The vocalic qualities represented by these symbols  
may be individually described as follows.

- i Close front unrounded: slightly retracted and  
lowered before syllable-final ŋ.
- e Half-open front unrounded: slightly raised  
before syllable-final r.
- a Open front unrounded, but more retracted  
than cardinal four.

- y Close central unrounded, but not fully close: advanced and raised following t and n, and before syllable-final z.
- ø Central unrounded, mid-way between half-close and half-open: lowered to half-open before syllable-final ŋ.
- u Close back rounded, but lower than cardinal eight.
- o Open back rounded, but higher than cardinal five.

### Punctuation Marks

Sentences which are paratactically linked with following sentences, as described in chapter 14, are followed by a comma. All other sentences are followed by a full stop. Individual sentences cited as examples are not always punctuated, however.

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CHAPTER 3 THEORETICAL INTRODUCTION AND OUTLINE3.0 The Theoretical Approach and Terminology

The main purpose of this study is to provide a fairly comprehensive description of the phonology and the grammar of the Guajajara language.<sup>1</sup> No attempt is made to describe the lexicon systematically, though reference to lexical categories and general semantic relationships will be made from time to time in the course of the formal description of the grammar and phonology.

Phonology, as viewed here, is the study of the phonetic features and patterns of the language as phonetic entities, without primary reference to their function as meaningful units. Grammar, on the other hand, is the study of the formal relationships of meaningful units as such. The presence or absence of certain phonological phenomena is recognised as potentially relevant for the identification of grammatical abstractions, but phonological abstractions are set up without reliance upon grammatical criteria.

A subsidiary purpose of this study is the application of the concept of hierarchy to both the phonology and the grammar of a language in a single comprehensive description. It is hoped that this attempt to describe both these aspects of a language within a single conceptual framework may be of value in the study of the inter-relation of the two.

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1. Cf. chap. 1 for details of the field investigations upon which this study is based, etc.

Thus, for both the phonology and the grammar, the recurrence of stretches of speech exhibiting similar characteristics of function or structural pattern is recognised by the abstraction of 'Units'. The inter-relationship of such units is described by setting up a hierarchy consisting of a number of ranks, with units at one rank being included in units at a higher rank. Most commonly a unit is included in another unit at the next higher rank, but it may also be included in a unit at some other rank.

Such an analysis contrasts with the type of phonemic analysis which analyses the speech stream into an exhaustive series of ultimate elements, phonemes, without recognising intermediate groupings of such elements. It contrasts also with some forms of immediate constituent grammatical analysis, in which intermediate groupings are recognised, but no attempt is made to classify together such groupings as display similarities of function or structural pattern, and to arrange them in a hierarchy according to their most common patterns of inclusion. It is the recognition of intermediate groupings of ultimate constituents, and the arrangement of the resulting abstractions, the Units, in a hierarchy, which is the fundamental characteristic of the descriptive framework employed in this study.

The term 'Unit' is therefore a technical one. A unit may be defined as an abstraction of a structural pattern and/or functional similarity displayed by stretches of speech which are not necessarily similar in other respects. Units which comprise the lowest

rank of a hierarchy do not, of course, exhibit any structural pattern, since they are by definition not divisible into any smaller constituents.

Within the phonological hierarchy such lowest-rank units are abstractions of particular phonetic characteristics, and are therefore referred to as 'Constituent Units', or 'Constituents'. Within the grammatical hierarchy, such units are abstractions of groups of forms with similarity of function, and they are therefore referred to as 'Class Units', or 'Classes'. (Within the phonological hierarchy, one of the Constituents is also expressed as comprising 2 classes, cf. sect. 3.1.) When a distinction is required between such lowest-rank units and those at a higher rank, the latter are referred to as 'Structural units' or 'Structures'.

Within both hierarchies, but especially within the grammatical one, another technical term is employed, the 'Element'. Structural units are said to consist of a number of elements in a particular arrangement or pattern, looking down the hierarchy. Units, both structures and classes, are said to manifest, or function as, the elements of other units, looking up the hierarchy. The term element is used only to express the structural pattern exhibited by units. It would be possible to describe a hierarchy in terms of units (structures and classes) alone, so that a unit at a given rank would be said to consist directly of units of a lower rank. Very considerable economy and clarity of description is achieved throughout the grammatical hierarchy, however, by the abstraction of the element in addition to the unit. This may be illustrated

by reference to the grammatical unit 'The Sentence', which will be fully described in chapters 6 and 13 below. For the present illustration, the reader is referred to the diagram in sect. 3.21., which summarises grammatical relationships, see page 31.

The sentence is there diagrammed as consisting of six elements, The Verbal Phrase (VPh), Subject (Subj), Object (Obj), Auxiliary Verb (AV), Adjunct (Adj) and Particle (Pt). The Adjunct may be manifested by any of three different units, the Adverbial Phrase, (APh), the Relational Phrase, (RPh), or the Down-Ranked Sentence Phrase (DRSPH). These three units have quite different structural patterns, but they each share the same primary function, i.e. that of manifesting the sentence element, Adjunct. On the other hand, the sentence elements Subject and Object are each manifested by the one unit the Nominal Phrase, (NPh), though the function of the two elements within the sentence is quite distinct.

To regard the sentence as consisting immediately of units from the lower levels would result in its being analysed as consisting of VPh, NPh, AV, APh, RPh, DRSPH and Pt. This would tend to obscure the difference of function between the Subj and the Obj, and also the similarity of function of the APh, RPh and DRSPH. The abstraction of the Element as distinct from the Unit makes it possible to state differences and similarities of both function and structure, neither being obscured by the statement of the other. The abstraction of the Element serves to group together units having a common function; the abstraction of the Unit serves to

differentiate diverse manifestations of the same element.

In some cases an element may only be manifested by one unit, and there is then no practical advantage gained by the abstraction of the element as distinct from the unit which manifests it. The two are however regarded as present conceptually, so as to preserve a uniform theoretical approach, and so as to avoid the setting up of units which might consist in part of elements and in part of other units.

When two or more units may manifest a single element the element is normally given a different label from that of either of its manifesting units. When only one unit may manifest an element, then both unit and element are given the same name, so as to avoid the unnecessary multiplication of labels. It is always clear from the context, in such cases, whether the label applies to a unit or an element.

The theoretical approach of this study, and the terminology employed in it, have much in common with that of M.A.K. Halliday in his 'Categories of the theory of Grammar',<sup>2</sup> The precise signification of such terms as Unit, Class, Structure, Element and Hierarchy, as used here, must however be clearly distinguished from that assigned to them by Halliday. In particular the kind of hierarchy which is set up for the grammar of Guajajara

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2. See bibliography.

contrasts with that upon which Halliday insists in the following ways. Both upward and downward rank-shift are permitted. Relationships within the hierarchy are considered to operate along two dimensions, as may be noted from the diagram already referred to. Such a hierarchy is no doubt weaker than Halliday's in its potential as a universal category, but it seems to provide a much clearer description of the data of Guajajara. The hierarchy here set up is rather closer to that of the tagmemic school of Pike, Longacre, etc. and the distinction here made between element and unit is parallel in some ways to their distinction between slot and filler.<sup>3</sup> It should be stressed, however, that the primary purpose of this study is to provide a clear and concise statement of the language described, rather than a modification of existing models of language description.

Before entering into a detailed description of the hierarchies, it may be helpful to describe them in outline. A discussion of theoretical implications which may be present in such a hierarchical presentation will be found in chapter 15, after the full description of the data.

### 3.1 The Phonological Hierarchy in Outline

The phonology of Guajajara is described in terms of

- 
3. A further similarity with the tagmemic School is the description of the phonology as a hierarchy, parallel to the grammatical one. For the tagmemic approach to linguistic description, see Pike, 'Language ...'. Longacre, 'Grammar Discovery Procedures', and Elson and Pickett, 'An Introduction to Morphology and Syntax'. For full details see bibliography.

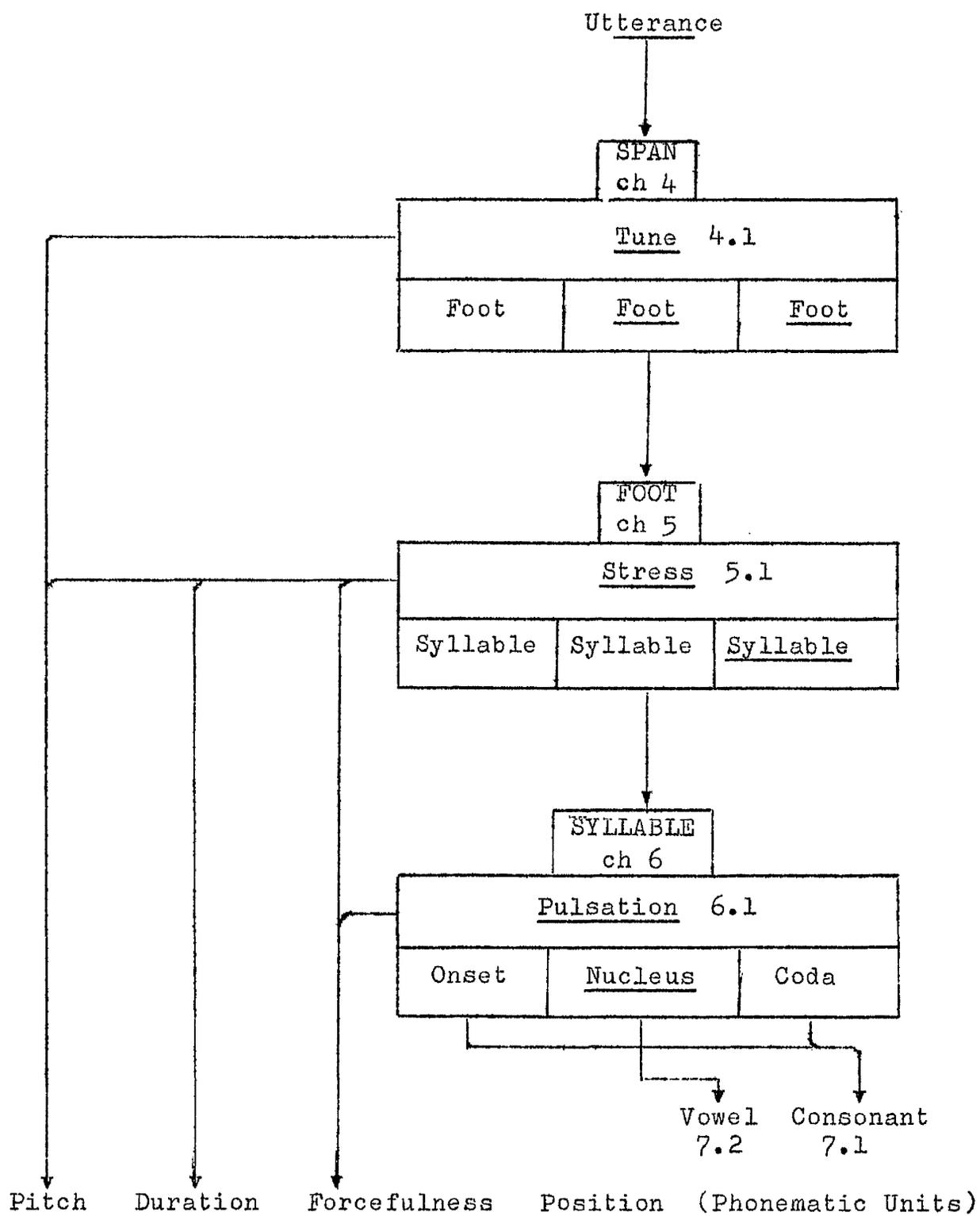
three structures - the Span, the Foot and the Syllable, and four constituents - Pitch, Duration, Forcefulness and Position. (The fourth constituent, Position, relates in some cases to the manner of articulation as well as to the position of the articulatory organs. Both these aspects of the phonetic realisation are included in one phonological constituent here labelled 'Position' for brevity.)

The distribution of the first three of these constituents is accounted for by setting up certain prosodic features - Tune, Stress and Pulsation. These prosodic features are said to function as elements of the structures in which they occur.<sup>4</sup> The distribution of the fourth constituent, Position, is accounted for by setting up certain phonematic units, which are classified as either consonants or vowels. These are considered class units, and function as elements within structures just as do grammatical classes. Within the phonological hierarchy, they are assigned to the lowest rank, as an expression of the constituent 'Position'.

The relationships of these different abstractions within the hierarchy are represented diagrammatically in section 3.11., page 27, to which reference should be made at this point. Constituents comprise the lowest rank of the hierarchy, and are therefore shown at the bottom of the diagram, in lower-case script. Structural

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4. There is nothing in the grammatical hierarchy which is truly parallel to the prosodic feature; cf. fuller discussion of the two hierarchies in chapter 15.

3.11 DIAGRAM OF PHONOLOGICAL HIERARCHY

units are shown at the hierarchical rank relevant to them, enclosed in boxes and in upper-case script (capital letters). The elements of which structural units consist are shown enclosed in boxes immediately beneath them, in lower-case script. Obligatory occurrence is shown by underlining.

As shown in the diagram, any Guajajara utterance, any stretch of speech, may be described as consisting of one or more spans. Any span consists of two or more feet, occurring together with certain pitch phenomena which are described as the prosodic feature of tune. Any foot consists of one or more syllables occurring together with certain phenomena of pitch, duration and forcefulness, which are jointly described as the prosodic feature of stress. Any syllable consists of one or more phonematic units, occurring together with certain phenomena of forcefulness which are described as the prosodic feature of pulsation. Phonematic units are abstractions of certain articulatory manners and positions, and are grouped into the two classes consonant and vowel. The distribution of these classes within the syllable is described in terms of three syllable elements, the nucleus, the onset and the coda. The occurrence of the constituent 'Position' within the syllable is different in nature from that of the other constituents in the units Span, Foot and Syllable, and necessitates distinctions of class and function not required elsewhere.

The present description may be said to be generally 'prosodic' in its approach. The distinction between prosodic features and phonematic units, which is characteristic of prosodic analysis, is well brought

out by the hierarchy which is set up, and these terms themselves are employed as labels when appropriate. Consonants and vowels are recognised as phonematic in character because their realisation may be regarded as primarily involving the temporal succession of entities not further divisible. Tune, Stress and Pulsation are recognised as prosodic, on the other hand, because their exponents extend over stretches which are divisible into a number of smaller units.

Certain aspects often present in prosodic descriptions are however absent from or not fully developed in the present study, including especially the abstraction of prosodic features and sub-systems which are relevant to a small proportion of the data. This is because attention is here focused upon overall patterns and major systems, with a view to describing the phonology as a whole, and providing a basis for comparison with the grammar as a whole. Patterns and systems which are of universal or major relevance have been fully described, while those of less wide relevance have been noted but not described in such detail. The aim has been to provide a comprehensive set of abstractions in one integrated system, to which any stretch of Guajajara speech may be referred: the focus is on the whole, not the part.

### 3.2 The Grammatical Hierarchy in Outline

The grammar of Guajajara is described in terms

of eleven Structures and sixteen Classes. These are arranged in four ranks to constitute a hierarchy, the classes being the fourth, lowest rank in the hierarchy.

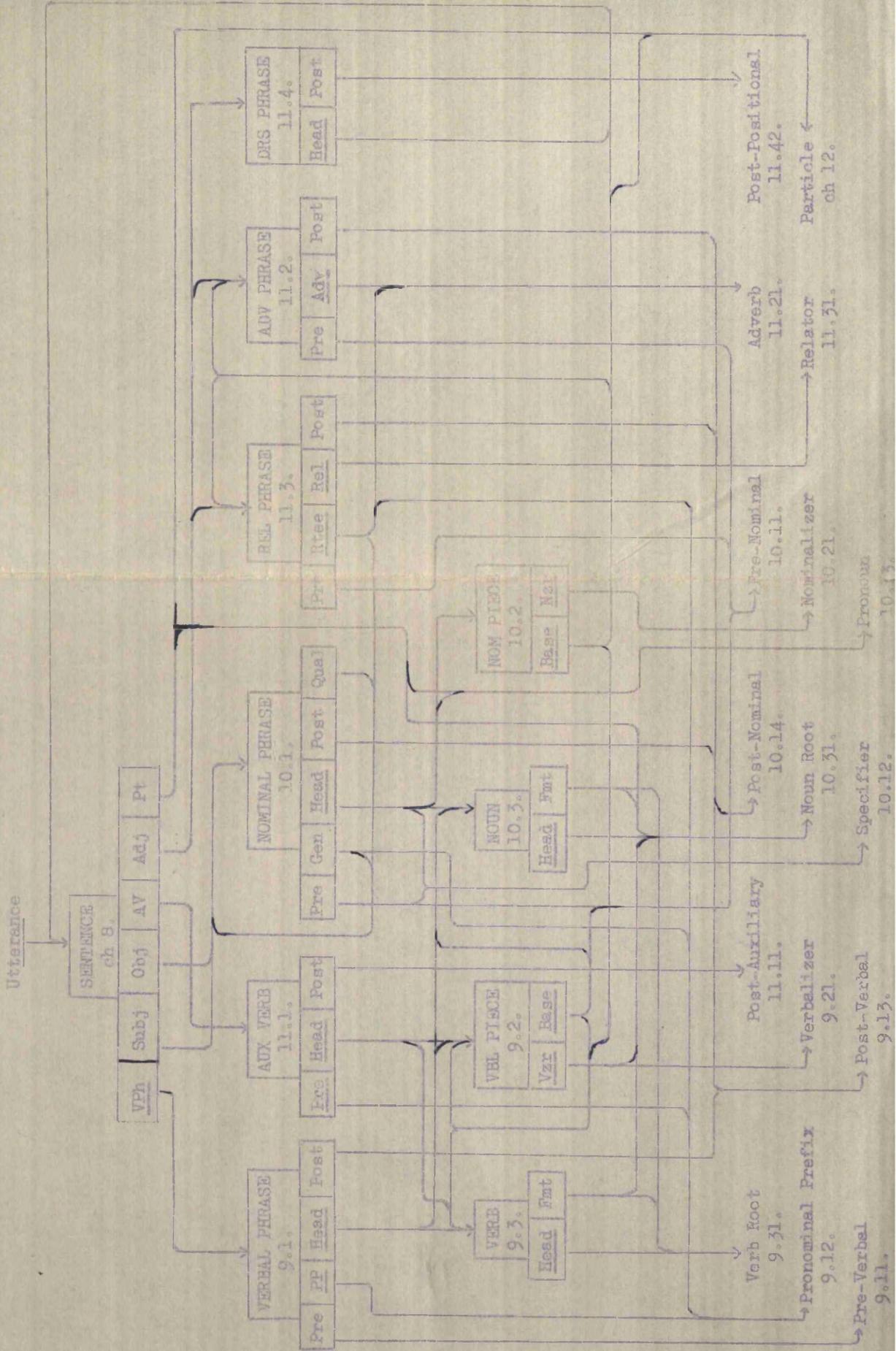
The most common relationships of these abstractions are represented diagrammatically in sect. 3.21., page 31 to which reference should be made at this point. Class units are arranged along the bottom of the diagram, in lower case script. Structural units are shown in upper case script (capital letters), within boxes. The elements of which a unit consists are shown in smaller boxes immediately below, and are written in lower case script.

The potential manifestation of elements may be traced by following the arrows which leave them from beneath, and the potential function of units may be traced by following back to their sources the arrows which join them from above. In tracing arrow lines, right-angle intersections should be ignored, and junction points should be followed only when the initial angle of divergence is small, and not when it is greater than a right angle.<sup>5</sup> The obligatory occurrence of an element is shown by underlining.

The diagram is to be interpreted as follows. The Sentence is the unit which is of the highest rank. It functions independently in utterances. This is its

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5. See A.C.Day, 'The Syntax of Tho' for a somewhat similar diagrammatic representation of syntactic relationships: cf. Bibliography. The help of A.C.Day, C.M.Naish and G.L.Story, fellow students at S.O.A.S. and colleagues in S.I.L., is gratefully acknowledged in devising these diagrams and in discussion of the theoretical approach they represent.



primary, or most common function, and it may also function as the Head element in a DRS Phrase, or as the Nominal Base element in a Nominal Piece. It consists of six elements, five being manifested by units from the next lowest rank, and one being manifested by a class, from the lowest rank of all.

Six different units are set up as operating at the next lower rank, which may conveniently be termed 'phrase rank', because of the labels which the units bear. The units are the Verbal Phrase, The Auxiliary Verb, the Nominal Phrase, the Relational Phrase, the Adverbial Phrase, and the Down Ranked Sentence Phrase. These units also consist of elements, some being manifested by units from the next lower rank, and others by classes from the lowest rank of all. In the Verbal Phrase, for example, three elements are manifested by classes, and one by units from the next lower rank.

Four different units are set up as operating at the next lower rank, which may conveniently be termed 'piece rank', because of the labels which two of the units bear. The units are the Verb, the Verbal Piece, the Noun and the Nominal Piece. Again these units may consist of classes from the next lower rank, or of units, each of which in this case is functioning at some rank other than the one next above it, i.e. has either shifted down or along the hierarchy.

It may help the reader to interpret the diagram if the various relationships of the unit 'nominal phrase' are traced out here. The unit's most common function is to manifest the element Subject or Object in the sentence.

It may also manifest the Genetival element or the Qualifier element in a nominal phrase, or the Relatee element in a relational phrase. The various elements of the nominal phrase may be manifested as follows. Pre-nominal element, by either a pre-nominal or specifier class: Genetival element, by either a nominal phrase, or a pronominal prefix: Head element, by either a specifier, a pronoun, a noun or a nominal piece: Post-nominal element, by a post-nominal or a post-verbal: and Qualifier element, only by a nominal phrase.

It will be readily observed from this diagram that there is a considerable degree of multiple function for most units and classes. Of the classes recognised, only the following do not have multiple function; Pre-verbal, Post-auxiliary, Post-<sup>positional</sup>DRS, Relator, Nominalizer and Verbalizer, each of which is a small closed class. Of the structural units, only the Verbal Phrase, Nominal Piece, Auxiliary Verb and DRS Phrase do not have multiple function.

This multiple function involves 'shifting' both down and along the hierarchy, and is the main reason for the recognition of a second dimension to the hierarchy. In the case of such classes as the pronominal prefix, the post-verbal and the pre-nominal, the two different dimensions of the hierarchy combine to present a very clear representation of the function of the class.

The need to permit down-ranking within a hierarchy has been recognised widely in other hierarchical descriptions.<sup>6</sup> In the case of Guajajara, its need is immediately apparent from the diagram. The Base element in the unit 'Nominal Piece' for example, could hardly be accounted for in any other way, since though it must be regarded as forming part of a nominal phrase in its function, it must just as clearly be regarded as incorporating phrases and even sentence type relationships in its structure.

The practical advantage of permitting up-ranking may also be clearly seen from the diagram. The particle element in a sentence cannot be regarded as part of any of the other sentence elements, because of its freedom of distribution and difference of function. Yet it must be manifested by units which have no structure, i.e. classes. If up-ranking is not permitted, it becomes necessary to set up a particle phrase and particle piece, though neither unit has any structural pattern. This would not only complicate the hierarchy unnecessarily, but would also obscure the monomorphemic nature of the particle in its function within the sentence.

It may be pointed out that some traditional grammatical categories, such as word and affix, are not used in the hierarchical outline. These terms are employed at various times in the body of the description,

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6. See Halliday, 'Categories of the theory of Grammar' and Longacre, 'Grammar Discovery Procedures'. Cf. Bibliography.

in the sense defined below, but do not have a fixed place in the hierarchy.

A word is a stretch of speech which is characterised by internal stability in the arrangement of any constituent parts, and external mobility in its occurrence with other words.<sup>7</sup> An affix is a member of a closed class of forms which may occur with members of an open class to form words. It may be noted that the following Class Units are composed of or include, affixes: Pronominal prefix, (chap. 9.12.) Pre-Verbal, (chap. 9.11.) Post-Verbal, (chap. 9.13.) Verbalizer, (chap. 9.21.) Nominalizer, (chap. 10.21.) and Post-Nominal, (chap. 10.14.) There is no necessary correlation between the word and any one hierarchical rank. The lowest rank consists entirely of morphemes, i.e. units which may not be divided into a number of smaller units.

The symbol - is used in the present description to indicate forms which are morphologically bound, i.e. forms which must always be accompanied by another form to constitute a word.

### 3.3 The Third Dimension of the Hierarchies

. These diagrams indicate the relationships of grammatical and phonological units along two dimensions,

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7. In some cases supplementary phonological criteria are relevant in addition to the above grammatical one. These are the occurrence of heavy stress (which often occurs word final, cf. chap.5.0) and the occurrence of a sequence of consonants (syllables with final consonants only occur word final, cf. chap. 7.31.)

vertically and horizontally. It should be stressed that they indicate only the most common structural patterns of these units. For a complete description of all possible patterns a third dimension would be needed. The structural units in most cases should in fact be understood as classes of units, each class member having a slightly different structural pattern but identical function, the pattern stated in the diagram being the most common or all-inclusive one.

This may be most clearly understood by the help of specific illustrations. Three different verbal phrases might be distinguished, the transitive, intransitive and stative verbal phrases. These are structurally different from each other in that each includes a different paradigm of pronominal prefixes (cf. chap. 9.12.), and in that the lists of units which may function as the head of each such phrase would constitute three mutually exclusive classes, (cf. chap. 9.31). A third dimension to the hierarchy would show these three phrase types as distinct structures. Similarly in the nominal phrase, it would be possible to show that when a specifier or a pronoun functions as the head element, it may not be accompanied by a genetical or qualifier element, (cf. chap. 10.103).

In the phonological hierarchy, spans might be shown with three, or only one, obligatory feet (as in pitch patterns two and seven respectively, cf. chap. 4.12 and 4.17.). Different types of syllables might be shown having no coda element, corresponding to restrictions in the occurrence of certain vowels and consonants, (cf. chap. 7.31).

Since written diagrams can themselves operate in only two dimensions, and because the relationships already indicated are quite complex, no attempt has been made to include in this diagram such alternate structural patterns. The restrictions of occurrence which give rise to such alternate patterns are however noted in the text of the description of each unit which follows. These diagrams may therefore be said to be 'at primary delicacy', to use Halliday's phrase for a generalised statement which does not obscure an overall pattern by including all possible details.<sup>8</sup> The patterns set out for each unit in the diagram are all-inclusive, so that any other patterns that would find expression along a third dimension would always consist of some or all of the same elements, though these might occur in a different order, or be subject to restrictions relating to the class or the sub-class of the units which might manifest these elements.

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8. See Halliday, 'Categories of the Theory of Grammar' pp. 272-3

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CHAPTER 4 THE SPAN

4.0 The Span as a Unit

The span is the largest phonological unit which is set up for Guajajara. All utterances may generally<sup>9</sup> be divided immediately and entirely into one or more spans. Any residual sections which do not conform to the description of the span as set out below are regarded as either incomplete spans which have been interrupted, or as extra-systemic communication such as the imitation of some non-speech noise.

In most cases, a stretch of speech which is phonologically a span is also grammatically a sentence (cf. chapters 8 and 13). A few cases have been found in which the two units are not co-extensive.

A span consists of one or more Feet, (cf. chap.5), which occur in one or other of several contrasting pitch patterns, and may be followed by indefinite pause. The Prosodic Feature of Tune is abstracted to account for these pitch patterns, see below sect. 4.1..

All the constituents of a span and most aspects of the arrangement of these constituents, are accounted for in the two abstractions, the Tune and the Foot. Certain aspects of the arrangement of some of these

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9. Here, and elsewhere in this study, the term 'generally' is to be understood as denoting a rule to which some few exceptions may be found, and not as an absolutely invariable 'general rule'.

constituents are not however accounted for in these abstractions, and such aspects are described below in sect. 4.2.

Spans which are of Pitch Pattern Seven commonly have only one foot, and those of Pitch Pattern Two may not have less than three feet. All other spans must consist of two or more, and most commonly have three, four or five feet. There seems to be no fixed upper limit to the number of feet in a span, though more than eight feet have been found only rarely.

#### 4.1 The Prosodic Feature of Tune

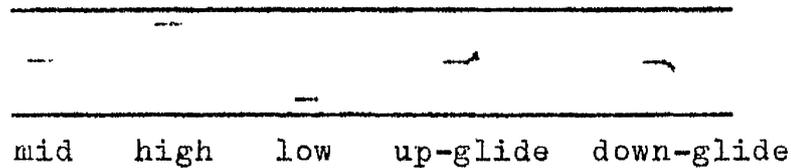
Tune is abstracted and set up as a prosody in order to account for the fact that all spans conform to one or other of seven contrasting patterns in the pitch of their constituent feet. Seven pitch patterns are therefore set up, and the pitch of any span may be referred to one or other of these. Only the pitch of the final, heavy stressed syllable of a foot is relevant to the Tune, the pitch of any other syllables being accounted for below in the prosody of Stress as relevant to the Foot. The pitch of any non-final syllables within a foot is described in sect. 5.14. As stated there, there is generally a slight change of pitch in between successive foot-final syllables, but this is to a large extent predictable within the foot. No account is taken of any such pitch change/<sup>not</sup> upon the foot-final syllable, for the prosody of tune. The expression 'the pitch of a foot' is therefore to be understood as referring only to the pitch of the final syllable of that foot, unless otherwise indicated.

For the statement of these pitch patterns three levels of pitch are recognised, Mid, High and Low. These levels in their turn are abstractions. They are mid, high or low, solely in relation to each other, not in terms of any absolute pitch scale. They are not always realised at the same pitch level, but differ from speaker to speaker according to the natural pitch of the person's voice. They may also vary from utterance to utterance within one person's speech according to the style of speech employed. The more lively the style, for example, the wider the absolute difference between high and low in the same span.

A foot is said to be of mid pitch when it is within that central range of the voice which is used for the major part of most spans. A foot is of high pitch when it is considerably higher than this mid range, and it is of low pitch when it is considerably lower. The absolute pitch difference between mid and high, or mid and low, is rarely less than two tones of the musical scale, and is commonly considerably more; but it differs from style to style.

In most cases the pitch of a syllable remains level throughout its duration, and any rise or fall of pitch tends to occur at syllable boundaries. In some cases however the pitch may rise or fall noticeably during the course of the syllable. In such cases the syllable is said to have an upward or downward glide, and the

beginning and ending points of the glide will be stated as appropriate. The terms 'rise' and 'fall' of pitch will be reserved for differences of pitch between consecutive syllables, a rise or fall within a syllable being spoken of as a 'glide'. The pitch levels will be indicated by the following convention.



When two or more feet of mid pitch follow one another, a slight up and down alternation between the absolute pitch levels of successive feet is sometimes to be observed, though each foot remains within the mid pitch range, as defined above. Thus the second such foot may be slightly higher in pitch than the first, the third slightly lower than the second, the fourth slightly higher than the third, etc. Such alternation is in most cases of about one semitone, and is rarely more than a tone. Such variation is considered non-significant in the present study, since it is unpredictable, and does not correlate with any structural factors. The following is a good example of this phenomena; a third line is included to facilitate perception of the relative pitch height of successive feet.

9.21.9.<sup>10</sup>


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nezewe zek<sup>w</sup>ehe karaiw wanekon a'e wānoh  
 'The white men used to live like that.'

Here as elsewhere in chapters 4 to 7, space is used to divide the span into feet, and has no necessary correlation with any grammatical unit such as the word.<sup>11</sup>

The following are the seven pitch patterns to which all spans may be referred. It should be noted at this point that the material upon which this study has been based is largely consecutive narrative and contains little conversation. It is not thought that any additional pitch patterns would be found if additional conversational material were included, but the frequency with which some patterns occur might well be different within such material.

- 
10. The numerical references which accompany examples refer to the data book, page and line in which the utterance is recorded. All the examples quoted for the phonology are extracts from tape-recorded narrative, subsequently transcribed into a data book, unless stated otherwise.
11. See chap. 3.2 for a definition of the word as a grammatical entity. The term 'word' is not relevant to the phonological hierarchy, as here set up, but it is employed at times in the indication of partial correlations between grammar and phonology.

4.11 Pitch Pattern One

Some 75% of all the spans studied are referable to pitch pattern one. It has no special meaningful associations, and occurs most commonly with consecutive narrative and statements of fact. It can be regarded as the unmarked member of the system of pitch patterns. Spans of this pattern consist of two or more feet, all of which are of mid pitch.

e.g.

\_\_\_\_\_

-            -            -            -

\_\_\_\_\_

uze'eŋ zek<sup>w</sup>ehe tupən ikotyh

9.21.1

'Long ago Tupan spoke.'

The final foot of spans of this pattern is often considerably prolonged, the extra duration being mostly on the final syllable. In such cases the pitch is generally sustained at mid level. In certain speech styles, especially reflective speech, it may glide gradually downwards.

e.g.

\_\_\_\_\_

-            -            -            ~

\_\_\_\_\_

mani'yw uruetyk a'e pekuryh

6.35.7

'We left the mandioca there.'

4.12 Pitch Pattern Two

Some 10% of the spans studied are referable to this pattern. It is particularly associated with

exclamations, emphatic or contrasting statements, and statements of personal opinion. It may be said to have implications of a certain degree of emphasis.

Spans of this pattern consist of one or more feet of mid pitch followed by one foot of high pitch and one foot of low pitch.

e.g.



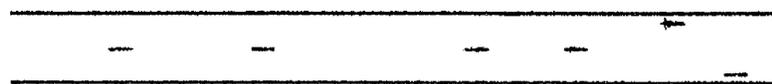
nazaha k<sup>w</sup>aw ihe pah

9.22.10

'I'm not going to bathe.'

The two final feet of spans of this pattern are commonly somewhat shorter in duration than those of mid pitch which precede them. The final, low foot in particular is very commonly much abbreviated, and moreover often voiceless or rapidly devoiced. This is especially true if the final grammatical element of the span is the particle 'ce', (a particle which is rarely found except in spans of this pitch pattern, cf. chap. 12.48.)

e.g.



pyhewe zozepɛ tazuhezuhe zihe nehe ce'

9.22.1

'I'll only wash tomorrow.'

#### 4.13 Pitch Pattern Three

Rather less than 5% of the spans studied are referable to this pattern. It is particularly associated

with the final spans of a series which have a common theme, which theme is about to be concluded or to yield to a new one. It does not generally occur however as the final span of a narrative, i.e. preceding final pause. Its occurrence may thus be said to mark the coming introduction of a new theme within a narrative.

Spans of this pitch pattern consist of one or more feet of mid pitch, followed by one foot of low pitch.

e.g. 

nezewe mehe aikoh 9.11.4  
'I was like that then.'

As in the case of spans of pattern one, the final foot of the span may be somewhat longer than those that precede it. At times there may also be a slight lowering of the pitch of the penultimate foot, though this normally stays within the mid range.

e.g. 

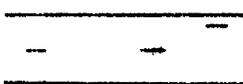
uzahak oho a'e wānoh 9.21.15  
'They went to bathe.'

#### 4.14 Pitch Pattern Four

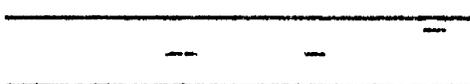
Rather less than 10% of the spans studied are referable to this pattern. It is almost always associated

with spans which are grammatically or semantically dependent upon another span which follows them. (Cf. chap. 7.432.)

Spans of this pattern consist of one or more feet of mid pitch followed by one foot of high pitch.

e.g.    
 pe wia'e noh 'From there.' 9.12.12

Just as in the case of spans of patterns one and three, the final foot of spans of this pattern may be somewhat longer than those that precede it. The pitch of the final syllable maintains its high level throughout its duration however.

e.g.    
 zanekepia rupihin uinoh 9.9.12   
 'In the path to our plantation.'

#### 4.15 Pitch Pattern Five

Less than 1% of the spans studied are referable to this pattern. It is invariably associated with questions, of which the first word is an interrogative. (Cf. chap. 13.3.)

Spans of this pattern consist of one foot of

high pitch followed by one or more feet each of which is lower in pitch than the one before. The final foot is generally of mid pitch, the pitch drop from the initial foot being spread more or less evenly over the intervening feet, unless the span has a large number of feet. *The pitch of such span-medial feet, therefore, cannot be described as either high or mid, but rather constitutes a cline between these levels.*

e.g.

A pitch contour diagram consisting of two horizontal lines. The top line starts at a high level and has four short horizontal dashes below it, each progressively lower in pitch. The bottom line is a constant lower level.

mai'i katu etnemu ranuhaw

9.5.13.

'What have you been saying?'

If the span has a large number of feet, the rate at which the pitch falls may become less steep after the first two or three feet, the level of the final foot being in some cases rather lower than a normal mid pitch.

e.g.

A pitch contour diagram consisting of two horizontal lines. The top line starts at a high level and has seven short horizontal dashes below it, each progressively lower in pitch. The bottom line is a constant lower level.

ma'e mehe etriruk atura'e nehe noh

4.19.37

'When will Riruk come?'

If the span is very short, the pitch of the final syllable may glide downwards, and in such cases this syllable may be somewhat prolonged. Its pitch does not generally fall below the mid range.

e.g.

A pitch contour diagram consisting of two horizontal lines. The top line starts at a high level and has a short horizontal dash below it. The bottom line is a constant lower level.

mo etumume'uh

'Who told you?'

9.16.6

4.16 Pitch Pattern Six

Less than 1% of the spans studied are referable to this pattern. It is invariably associated with questions, the first word of which is not an interrogative, (cf. chap. 13.3) and to which a simple 'yes' or 'no' answer may be given. It is in fact only the presence of this pitch pattern which formally identifies such a construction as a question rather than as a statement.

Spans of this pattern consist of one or more feet of mid pitch, followed by one foot of high pitch. This may be followed in turn by one or occasionally two feet, each lower in pitch than the one before. The pitch of the final foot is not however lower than mid level, and is not always as low as a normal mid pitch.

e.g.

The diagram consists of two horizontal lines. The top line is high and has three short horizontal dashes below it, indicating a high pitch span. The bottom line is lower and has three short horizontal dashes below it, indicating a low pitch span.

azeha romoete ra'ezək<sup>w</sup>əh

9.16.8

'Is that true, woman?'

If the foot which is of high pitch is not followed by any other foot, then its pitch will glide downwards sharply during its final syllable, though not necessarily as far as mid level.

e.g.

The diagram consists of two horizontal lines. The top line is high and has a short horizontal dash below it, followed by a downward-sloping line, indicating a high pitch span that glides down. The bottom line is lower and has a short horizontal dash below it, indicating a low pitch span.

azeha romoeteh

'Is that so?'

9.9.9.

#### 4.17 Pitch Pattern Seven

Less than 1% of the spans studied are referable to this pattern. It is invariably associated with Exclamation Sentences. (Cf. chap. 13.4.)

Spans of this pattern consist of one foot whose pitch starts at a level generally rather higher than mid, and glides downwards rapidly to low level.

e.g.

—  
  \  
—  
hoj

'Hello.' 12

At times this foot having downward gliding pitch may be preceded by one foot of mid pitch, but this is not very common.

e.g.

—  
— — \  
—  
ma'e ru'u'yah

'What is it?'

#### 4.18 High Pitch on Initial Foot of Spans

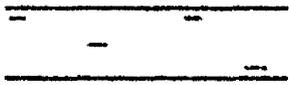
Spans of pitch patterns one to four may occur in alternate forms having high pitch on their initial foot. Such a foot is generally of rather longer duration

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12. This utterance and the next, which are not accompanied by a numerical reference, do not occur in the tape-recorded corpus on which this study is based. They are expressions frequently heard in conversation, and included here for completeness.

than those that follow it, and is always monosyllabic.<sup>13</sup>

e.g.   
 k<sup>w</sup>a umutyk zek<sup>w</sup>ehe pe pewəh 9.10.16  
 'Oh, they pulled it there.'

e.g.   
 o aze mehe pah 'Oh really.' 9.21.7

Span initial feet of high pitch are commonly found in spans in which a new topic occurs, or in which action is renewed after an interval or reaches a new stage. The frequency of such feet varies widely between five and twenty per cent of the total number of spans in a narrative. In almost every case a span initial foot which has such high pitch is classified grammatically as an Initial Particle. (Cf. chap. 12.1.)

These high pitch feet are not set up as spans in their own right because they do not occur alone, and are not potentially separated from the feet that follow them by indefinite pause. They could be regarded as

---

13. Some cases have been found in which the monosyllabic initial foot which occurs with high pitch has consisted of a vocalic sound other than those described below as the realisation of vowel phonematic units, (cf. chap. 7.2.) and in one case a syllabic bilabial nasal has been found. These instances are regarded as extra-systemic variation, and the sounds are referred to the vowel which is phonetically most similar.

prosodic inasmuch as they demarcate the beginning of spans. Within the present hierarchical framework it has been considered best that all aspects of pitch which are relevant to the span should be allocated to the one prosody, Tune, since these can be clearly described as variations of the pitch patterns which must be recognised in any case. This analysis conforms to the general theoretical approach of this study, which does not call for the abstraction of prosodies for unpredictable and occasional phenomena, (cf. sect. 4.23 and chap.7.33).

#### 4.2 Arrangement of Span Constituents

Spans have already been described as consisting of the prosodic feature, Tune, together with one or more feet. These feet will be described as consisting in part of syllables (cf. chap. 5), which in turn consist in part of consonants and vowels, (cf. chap. 6). In this section a special distribution of certain vowels and consonants at the end of spans is noted. Apart from this, no structurally significant restrictions or special distributions of any span constituents have been observed.

##### 4.21 Span Final Consonants

The phonematic units *h* and *'* are set up below, (cf. chap. 7.1), as members of the consonant class. These consonants do not occur as the final, coda, element of any span initial or medial syllables,

(cf. chap. 6.0 and 7.1). Either h or ' always occurs as the coda element of the final syllable of the span, however, if that span is followed by pause, and no other consonant occurs in span final position. No vowels therefore occur span-final preceding pause.<sup>14</sup>

e.g.

\_\_\_\_\_

    --    --

\_\_\_\_\_

uzewyr oho'                    'He came back.'                    9.9.6.

e.g.

\_\_\_\_\_

    --    --    --    --

\_\_\_\_\_

nezewe zek<sup>w</sup>ehe a'e meheh                    9.9.1.

'It was like this then.'

The consonant ' occurs much less frequently in span final position than the consonant h, some 15% of all spans followed by pause end in ' and 85% in h. The consonant ' is commonly associated with emphatic speech, and tends to focus additional attention upon a span because of its abrupt nature and relative infrequency.

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14. It is noteworthy that it is exceedingly rare for any consonant other than h or ' to occur span final. This is because particles frequently occur sentence final, (cf. chap. 8.21 and 12.4) and all final particles but one end in vowels. The consonant n is the only other consonant found, in the particle kyn, (cf. chap. 12.4). All other words which end in consonants have been found followed by the span-final vowel ə when they occur as the final grammatical units of a span, (cf. sect. 4.22). Members of the relator class (cf. chap. 11.31) also occur frequently in span-final position. The majority of these end in a vowel, and those which end in a consonant have always been followed by span-final ə as above.

It is often released audibly, and at such times may be followed by a brief voiceless rearticulation of the vowel which precedes it. The consonant h has no particular meaningful associations. It may be lightly voiced at times, in this position.

When the consonants ' or h occur span final, the sounds by which they are realised do not enter into contrastive grammatical relationship. This may also be expressed by saying that any morpheme which ends in a vowel when it occurs span medial, has variant forms with a final h or ' when it occurs span-final before pause. Such variant forms of morphemes have no grammatical relevance.<sup>15</sup>

A few instances have been found of the consonant n occurring span-final in an analogous manner to h and ', i.e. its realisation not entering into contrastive grammatical relationships. These instances display no correlation with any other grammatical factor and they are sufficiently rare that they are here regarded as extra-systemic variations, and are not set up parallel to the occurrence of ' and h.

#### 4.22 Span Final Vowel

The phonematic unit ə is set up below (chap. 7.2)

---

15. Other instances of phonematic units whose realisation does not enter into contrastive grammatical relationships are noted in sect. 4.22 and 5.2.



When occurring in this way, the vowel ə in most cases constitutes the entire final foot of the syllable, with or without the consonant h as coda. Such a foot has only been observed in spans of pitch patterns one and four. The sounds which are its phonetic realisation do not enter into contrastive grammatical relationships. (Cf. sect. 4.21.)

#### 4.23 Constituent Arrangement and the Hierarchy

. The special distribution of these span-final phonematic units raises a question for an overall hierarchical description, since although their special distribution may be said to demarcate the end of spans, and therefore warrant their abstraction as prosodic features of the span, yet the constituents themselves, i.e. the position and manner of the articulatory organs, are already assigned to other abstractions, in this case the phonematic units ə, ' and h. (Cf. chaps. 7. 1 and 2.) The compelling reason why the occurrence of these constituents should not be marked by the abstraction of prosodic features, leaving the constituents themselves to be referred also to phonematic units at a lower hierarchical rank, is that this would involve referring one aspect of the speech process to two abstractions at once.

Furthermore, this would involve employing the term 'prosodic feature' for abstractions of two quite different natures within this study. The features Tune, Stress and Pulsation refer to certain aspects of the speech process which are ultimate constituents, and which combine with other aspects (abstracted as the units

Foot, Syllable, Consonant or Vowel) to form structural units functioning at a certain hierarchical rank. If the occurrence of certain phonematic units at the end of a span were abstracted as, say, the prosodic feature of span closure, this feature would not be parallel to other prosodic features, for closure would mark the arrangement of constituents, not their presence. To assign the presence of these constituents as well as their arrangement, to a closure feature, would result in very awkward description of the constituents of the span-final feet and syllables.

Other aspects of the arrangement of constituents are included in the description of units or prosodic features because such aspects are conveniently handled when those units or features are set up. No such convenient point being available for the description of the arrangement of span-final constituents, they have been made the subject of a sub-section. Their arrangement is thus made an integral part of the description of the span as a unit, and is not abstracted as a feature with a place in the hierarchy. A somewhat similar aspect of the arrangement of constituents within the foot is treated in the same way, (cf. chap. 5.2).

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## CHAPTER 5 THE FOOT

### 5.0 The Foot as a Unit

The Foot is the unit next below the Span in the phonological hierarchy. (Cf. diagram on page 27.) All spans may be divided immediately and entirely into one or more feet, plus the prosodic feature of Tune described above.

A Foot consists of one or more syllables (cf. chap. 6), which are articulated with varying degrees of forcefulness and duration, and at a certain pitch. The occurrence of these phenomena is partially predictable within the foot, and they are together abstracted as the prosodic feature of Stress, described below in section 5.1. One aspect of the arrangement of constituents within the Foot is not accounted for in these two abstractions, and is described in section 5.2.

Feet commonly consist of from one to five syllables, and may have more, the highest number that has been observed being eight.

In the majority of cases the point of division between feet is also a point of division between grammatical units of one rank or another. In some cases a foot is exactly coextensive with a minimal grammatical unit such as a particle, or a noun or verb root, (cf. chaps. 9, 10 and 12) but often there is more than one minimal grammatical unit within a foot, and occasionally only a part of one. In almost every case, the final syllable of a nominal, verbal, adverbial or DRS phrase (cf. chap. 8) is also the final syllable of a foot. The final syllable of a foot is heavily stressed, as described below, and heavy stress is thus often present on the final syllable of words, (cf. chapter 3.2. F/note 7.) The final syllable

of an Aux. Vb. or of a Relational Phrase is however commonly not the final syllable of a foot, in the latter case the final syllable of the relatee element of the Relational Phrase generally being foot final, unless this element is manifested by a prefix. (cf. chap 11. 2 and 3.) The following example is written first with space indicating boundaries between feet, and then with space indicating boundaries between words, hyphens indicating intra-word morpheme breaks. (For the disappearance of foot initial ə in grammatical transcription, cf. sect. 5.2.)

e.g.    uruzur əzepe uruiko peipyr ənoh                    9.13.3.

      'Ve came with him, but in vain.'

uru-zur	zepe	uru-iko	pe pe	i-pyr	no
V.Phr.	Part	Aux Vb	Rel Phr	Rel Phr	Part

### 5.1    The Prosodic Feature of Stress

The term 'stress' as used in this study should not be confused with its usage in a less strictly defined sense to refer to the general prominence of one sound over others. It here refers to a composite of different phonetic phenomena which occur in a characteristic way within the foot in Guajajara, and which are together abstracted as one prosodic feature.

### 5.11 Degrees of Stress

For the description of this prosody three degrees of stress are recognised, Heavy, Medium and Light. All syllables may be classified as either heavily stressed (H.S.), medium stressed, (M.S.), or lightly stressed, (L.S.).

These degrees of stress are abstractions in their turn. They do not correspond to any absolute scale, but are wholly relative to each other. Their phonetic realisation may be described in general terms as follows: (see below sections 5.12 to 5.15 for a more detailed account of the phenomena here summarised).

H.S. syllables have a higher degree of forcefulness than the others, are more clearly articulated, are potentially long, and are of a different pitch from that of the syllable preceding them.

M.S. syllables are slightly less forceful and clearly articulated than H.S. ones, are potentially long, and are of a different pitch from that of the syllable preceding them.

L.S. syllables are short, softly and indistinctly articulated, and generally of the same pitch as the syllable preceding them.

Some utterances have been found in which it is hard to determine the degree of stress to which a

particular syllable should be referred. Such cases are quite infrequent however, and are often associated with emphasis, hesitation or correction. The vast majority of utterances are readily referable to one of the categories described here.

#### 5.12 Distribution of Stress within the Foot

The three degrees of stress are distributed throughout the foot in the following way. The final syllable of the foot, and it alone, is heavily stressed. If there are any other syllables, one of these is always medium stressed. More than one syllable may be medium stressed, but this is very rare, and generally confined to feet having a large number of syllables. All remaining syllables are lightly stressed.

The following is a typical example of a span, with all syllables marked according to their degree of stress. Here, and subsequently, foot boundaries are marked by word space, and syllable boundaries by a comma on the line. H.S. is marked by a subscript line, M.S. by a subscript dot and all unmarked syllables have L.S.

e.g.    u<sub>.</sub>,e,rur,    y<sub>.</sub>,wy,po, pe,    pe,wə<sub>.</sub>,ku,ryh,            9.10.2.

'They brought wood there then.'

When there are three or more syllables in a foot, the selection of which of the non-final ones should be

medium stressed appears to be determined by semantic factors, rather than to be the result of a predictable phonological pattern. The more vital a syllable is to the understanding of the semantic signal, the more likely it is to be medium stressed. On the other hand, syllables which are easily predictable from the grammatical or semantic context are more likely to be lightly stressed.

These degrees of stress may be said to be 'phonemic', in the sense that the occurrence of none of them is predictable from phonological criteria alone. Although Heavy Stress is predictable within the foot, it is not so within the span, since it is its occurrence which determines how the span shall be divided into feet.

### 5.13 Duration

The measurement of duration is not possible without recognition of points within the speech stream at which the units to be measured are said to begin and end. Since speech is in fact a continuing process including many aspects simultaneously, any such measurement points are arbitrary and somewhat artificial. In this section, unless stated otherwise, measurement extends from the point at which syllable pulsation reaches a peak, up to the next such peak point. (Cf. sect. 6.1.)

There is a marked tendency for each of the feet within a span to be of approximately equal duration,

(measured from the peak point of the final H.S. syllable back to the peak point of the H.S. syllable of the preceding foot). This may also be expressed by saying that H.S. syllables tend to follow one another within the span at fairly equal intervals, or in a regular rhythmic succession. The greater the number of syllables in a foot, therefore, the shorter each syllable will be. The duration of any one syllable is thus determined by the number of other syllables which occur with it in the stretch of sound from one H.S. to the next, - i.e. in the same foot. This general principle is modified in a number of ways, as outlined below.

Some of the phenomena already described as relevant to the span have over-riding rhythmic requirements which modify the length of particular feet. The two final feet in spans of pitch pattern two, for example, are generally short, (cf. chap. 4.12.) while span initial feet of high pitch are generally long, (cf. chap. 4.18). Similarly, feet may be prolonged by certain semantic factors such as emphasis and hesitation. (Cf. chap. 7.4.) A span final foot which is also a 'relator' from the grammatical point of view (cf. chap. 11.3), is commonly shorter than the other feet of the span.

In the absence of any such special factors as these however, the tendency to isochronous timing of successive feet is often very marked, (though feet containing a large number of syllables are not usually of exactly equal duration with those that contain one syllable only). In the following example for instance,

despite the fact that the number of syllables in different feet ranges from two to five, the peak points of final syllables of successive feet follow one another at virtually equal intervals of time.

e.g.

u, ru, zur, ə, zə, pe, u, ru, i, kə, pe, pə, i, pyr, ə, nəh,

'We came with him, but in vain.'

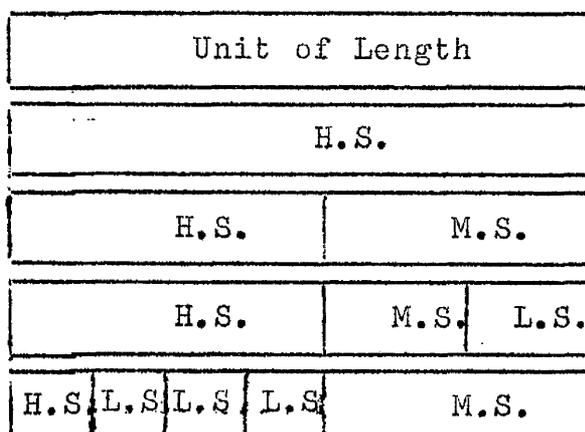
9.13.3.

This marked tendency towards overall equality in the duration of each foot constitutes one of the strongest justifications for the abstraction of the foot as a distinct unit in the phonological hierarchy. The total duration is not shared equally by each of the syllables of the foot however, but is distributed in the following way.

Let the total duration of a foot be expressed as one unit of length. A H.S. syllable which is followed immediately by another H.S. syllable (i.e. one in another foot,) then tends to occupy one complete unit, though it may be rather shorter. A H.S. syllable which is followed by a M.S. syllable, or a M.S. syllable which is followed by a H.S. syllable, each tends to occupy half a unit, though the H.S. one may be rather longer and the M.S. one rather shorter. A H.S. or M.S. syllable which is followed by one or more L.S. syllables tends to occupy half a unit together with the L.S. syllables which follow it. This half unit tends to be shared evenly between the H.S. or M.S. syllable and each of the following L.S. syllables, though the H.S.

or M.S. syllable is generally rather longer than any of the L.S. ones, and is always sufficiently long to permit clear articulation, (though L.S. syllables may not be clear).

This may be represented in diagrammatic form as follows. The duration of each box is one unit of length and the end points of the boxes correspond to the pulsation peak points of successive H.S. syllables (cf. chap. 6.1.). (It should be pointed out that these units of length are not necessarily coextensive with a foot, cf. below.) The diagram therefore relates to the duration of syllables following their pulsation peak points, and does not take account of the length of pre-peak portions of syllables.



etc.

The following examples indicate the lapse of time during specific utterances. The superscript line is divided into major sections, (closed boxes), representing a unit, and minor ones representing half a unit of length respectively.

e.g.

\_\_\_\_\_

u, ru, zur, ə, ze, pe, u, ru, i, ko, pe, pe, i, pyr, ə, noh,

'We came with him, but in vain.'

9.13.3

\_\_\_\_\_

ty, hu, e, ri, hih,

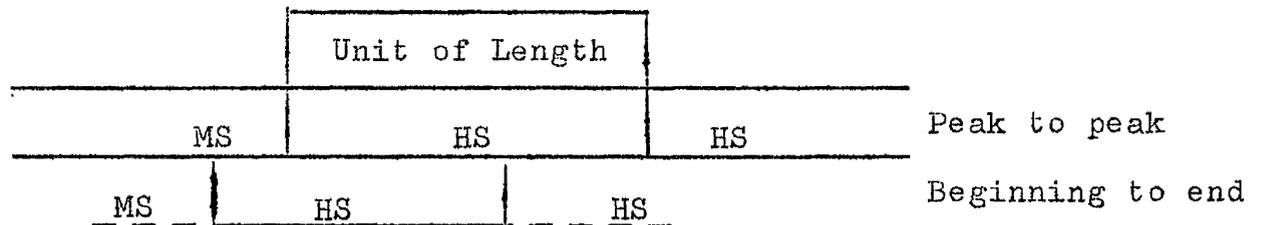
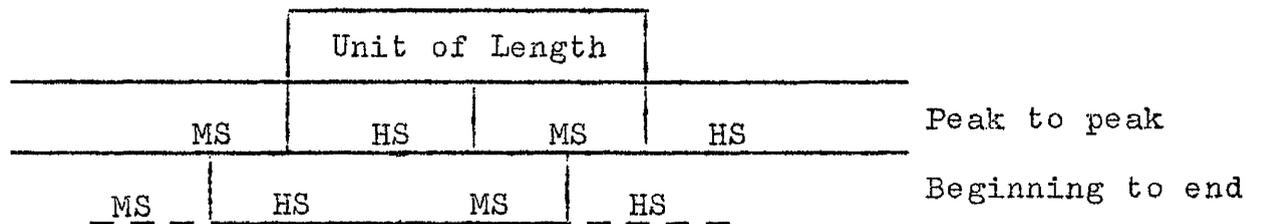
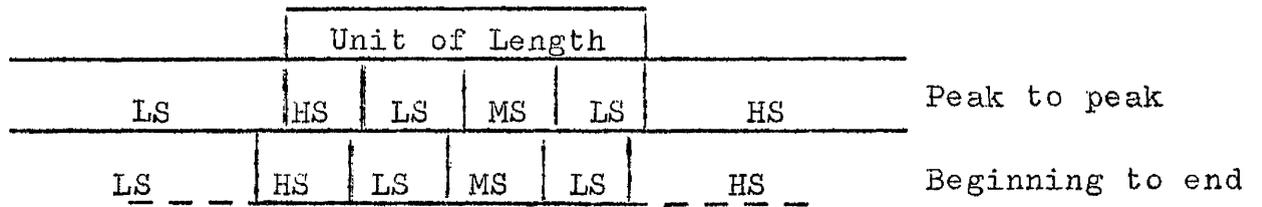
'It was still deep.' 2.75.17.

It will be noted that the duration of both H.S. and M.S. syllables is determined by the degree of stress enjoyed by the syllables which follow them, irrespective of whether or not these are in the same foot. For discussion of alternative analysis, making the foot co-extensive with the unit of length, cf. section 5.3.

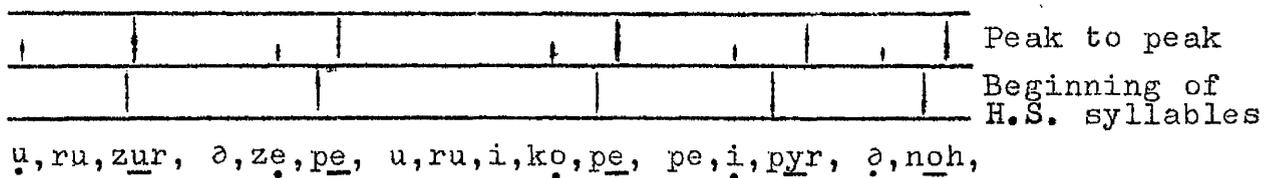
Every span closes with a H.S. syllable, whose duration is not determined by any following syllables. In spans of pitch pattern two, this syllable is usually short. In all other spans it is usually long, and may be considerably longer than other syllables in the span, (cf. chap. 4.1.). Many spans open with a M.S. syllable which is generally rather shorter than half a unit of length in this position. The occurrence of one or more L.S. syllables as the first element of a span, and therefore with no preceding H.S. or M.S. syllable, is not uncommon. Such syllables are always very short.

Duration, as described so far, has referred entirely to the lapse of time from the pulsation peak point of one syllable to the same point in the next, (cf. chap. 6.1). The pre-peak portion of any L.S. syllable, and of any H.S. or M.S. syllable preceded by a L.S. one is always of very brief duration. The pre-peak period of a H.S. or M.S. syllable preceded by another H.S. or M.S. syllable is generally longer, especially when a H.S. syllable is preceded by a H.S. syllable (i.e. one in another foot) or when emphasis is present, (cf. chap. 7.41). The duration of the syllable which precedes such a long pre-peak period is reduced by the amount of time by which that period is lengthened. The amount of time involved may be as much as half the time from the pulsation peak of the preceding syllable to that of the syllable with the long pre-peak period, but is generally rather less. The actual point at which the articulation of one syllable may be said to cease, and the next to begin is of course, very difficult to determine. The pre-peak period of a syllable may be consonantal or vocalic, cf. chap. 6.1.

This may be represented in diagrammatic form as follows. The duration of syllables is indicated first as measured from peak to peak, and directly underneath, as measured from beginning to end.



The following example indicates the lapse of time in a specific utterance.



u, ru, zur, ə, ze, pe, u, ru, i, ko, pe, pe, i, pyr, ə, noh,

'We came with him, but in vain.'

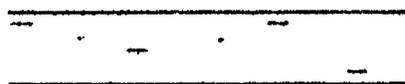
9.13.3.

5.14 Pitch

A distinction must be pointed out between what has been referred to in chapter 4 as 'the pitch of the foot', and what is here described, namely the pitch of the individual syllables within the foot. 'The pitch of the foot' is always that of the final syllable of the foot, and this is determined by the pitch pattern which the span has, (cf. chap.4.1.). The internal pitch pattern of feet may be stated in terms of the degree of stress that the syllables enjoy.

The pitch of a H.S. syllable is always that required by the pitch pattern of the span. When a H.S. syllable is not of the same pitch as the preceding H.S. syllable, the pitch of any intervening M.S. syllable is generally about midway between the pitch levels of the two H.S. syllables. The pitch of any L.S. syllables is generally much the same as that of the syllable it follows, though it may be slightly higher or lower (when the next H.S. is higher or lower respectively).

e.g.



o, a, ze, me, he, pah,      'Oh, really'      9.21.14.

When a H.S. syllable is of the same pitch as the preceding H.S. syllable, there is a slight fall of pitch before the second H.S. syllable, and the original pitch is

resumed with that syllable. The fall is generally of between a semitone and a tone in extent.<sup>16</sup> If no other syllable occurs between two such syllables, then the pitch fall occurs as a glide at the end of the first H.S. syllable.

e.g.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

wa, na, pe, za, 'a, ka, peh,

9.9.2.

'To the fork of their path'.

If one or more other syllables occur between two such H.S. syllables, the pitch fall occurs on the intervening M.S. syllable, any intervening L.S. syllable being of the same pitch as the syllable that precedes it.

e.g.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

u, ze, 'eŋ, ze, k<sup>w</sup>e, he, tu. pən, i, ko, tyh,

9.2.11.

'Long ago Tupan spoke'.

The pitch of M.S. and L.S. syllables in span initial feet is slightly lower than that of the H.S. syllable they precede, cf. above examples.

---

16. As stated above in chapter 4.1, there is often a slight alternation in the absolute pitch level of successive H.S. syllables classified as being of mid pitch. Such syllables generally pattern as being of different pitch, so far as the pitch level of other intervening syllables is concerned.

### 5.15 Forcefulness of Articulation

The overall forcefulness of syllables tends to be greater for H.S., somewhat less for M.S. and in many cases very considerably less for L.S. syllables. The diminution of forcefulness which is thus often present following a H.S. syllable is generally gradual, but the increase of forcefulness present with the commencement of a H.S. syllable is generally much more abrupt.

There is also a variation in the comparative clarity of articulation of syllables, and such clarity is similarly greater for H.S., somewhat less for M.S. and very considerably less for L.S. syllables. For further treatment of this reduction in the clarity of articulation of L.S. syllables, see chapter 6.2.

### 5.16 Modification due to Grammatical Dependence

When a grammatical unit of high rank, (such as the verbal or nominal phrase, cf. chaps. 9 and 10) extends over a stretch longer than one foot, there is generally to be observed a slight diminution of the overall degree of stress on the foot or feet which are not final, and a slight increase on the overall degree of stress on the foot which is final for that grammatical unit. (As already noted, sect. 5.0 the final syllable of any such grammatical unit is almost always also the final syllable of a foot.) All the factors which are noted above as together constituting the stress prosody may be slightly modified in this way. Grammatical

units of high rank are commonly marked off from each other in this way to a small extent, and may be so marked off to a greater extent in order to emphasise grammatical boundaries which would otherwise be ambiguous.

## 5.2 Arrangement of Foot Constituents

No restrictions have been observed upon the arrangement of consonants and vowels within the foot, but one special distribution is noted as follows. The vowel ə occurs as the nucleus of a syllable having neither coda nor onset (cf. chap. 6) under either of the following conditions:<sup>17</sup>

1. Following the consonant r functioning as a syllable coda, and preceding any consonant functioning as a syllable onset.

e.g.    zə,ne,k<sup>w</sup>er, ə,zə,hə,kaw,

          'A bath belonging to our people'

9.21.1.

---

17. The vowel ə may of course occur as the nucleus of any syllable, similarly to any other vowel. The present description is of a special additional occurrence, predictable according to given phonological conditions.

2. Following the consonants t, k, m, n, ŋ, and w functioning as syllable codas and preceding any consonant functioning as the onset of a H.S. syllable.<sup>18</sup>

e.g. waza, hak, ə, wəm ə, tyh

'For them to bathe.'

9.21.2.

When the vowel ə occurs in this way, its realisation does not enter into grammatical relationships (cf. chap. 4.2). The first condition is very commonly fulfilled at the boundary between two feet, and the second condition generally is. The vowel ə under such circumstances is therefore in most cases the first syllable of a foot. Its occurrence is not abstracted as a prosodic feature of the foot however for the reasons outlined in chapter 4.23.

### 5.3 Alternative Analysis

The foot has been set up in this study as a unit whose final syllable is heavily stressed. This involves the description of the length of certain syllables as dependent upon the presence or absence of other syllables in a contiguous foot, (cf. sect. 5.13). If, however,

---

<sup>18</sup>. Some few instances have been found when these conditions have been fulfilled, but the vowel ə has not occurred. Such instances have usually proved to be close-knit grammatical sequences of frequent occurrence, and are therefore regarded here as extra-systemic variations. One or two cases have also been observed in which ə has preceded an onset consonant of a MS syllable, following t k m n ŋ or w as a coda. In some cases this vowel appears to form a CV syllable together with the consonant that precedes it.

the foot were set up as a unit whose first <sup>syllable</sup> ~~foot~~ was heavily stressed, this would make it possible to describe the length of all syllables in terms of the remaining syllables of the same foot. The following example is written first in terms of the chosen analysis, and then again in terms of the possible alternative one. The lapse of time is marked by the superscript line, measurement being from one H.S. syllable peak to the next.

e.g.

--	--	--	--	--	--

u, ru, zur, ə, ze, pe, u, ru, i, ko, pe, pe, i, pyr, ə, noh,

--	--	--	--	--	--

u, ru, zur, ə, ze, pe, u, ru, i, ko, pe, pe, i, pyr, ə, noh

'We came with him, but in vain.'

9.13.3.

The main reason why the second analysis is not adopted here is readily to be observed in the above example. Any M.S. or L.S. syllables which occur before the first H.S. syllable of a span must constitute some other unit which is different in structure from the feet found in the middle of the span. So also must the final span of the foot, which is obligatorily composed of only one H.S. syllable. The analysis which has been preferred recognises only one structural pattern for the foot, to which all feet may be readily referred. It permits any span to be divided up into successive feet without either residue or incomplete feet.

It is also of interest to note that the analysis which has been chosen achieves maximum congruence between phonological and grammatical units, since it is the final syllable of most grammatical units which is stressed, if any. The alternative division would assign parts of many grammatical units to more than one foot, whereas the chosen analysis does this in only a very few cases. The grammatical constituents of the above example are as follows:

uruzur zepe uruiko pe pe ipyr no

space indicates word boundaries, (cf. sect. 5.0).

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## CHAPTER 6 THE SYLLABLE

### 6.0 The Syllable as a Unit

The Syllable is the phonological unit next below the Foot. All feet may be divided immediately and entirely into one or more syllables, plus the prosodic feature of stress described above.

In a few cases the syllable is co-extensive with a minimal grammatical unit of some kind, but the majority of grammatical units consist of more than one syllable.

Syllables consist of a vowel which may be preceded and/or followed by a consonant, (cf. chap.7) the whole being articulated with a rise and fall of forcefulness. This rise and fall of forcefulness is abstracted as the prosodic feature of Pulsation, described below in section 6.1.

Consonants and vowels are classes of phonematic units which are abstractions realised as various manners and positions of the articulatory organs, and are fully described in chapter 7. They occur within the syllables in a structural pattern which may conveniently be expressed by the recognition of three syllable elements, the nucleus, the onset and the coda. The vowel of the syllable then may be said to manifest the nucleus, an initial consonant to manifest the onset, and a final consonant, the coda.

The syllable is the only phonological unit which has a structural pattern which involves the temporal succession of units which belong to different classes, and at which

it is therefore potentially helpful to distinguish between the lower ranking units of which it consists and the function of these units within the higher-ranking structural unit. This distinction is useful only in so far as it serves to express the two ways in which consonants may function within the syllable, and as a reference point in the consequent sub-classification of consonants, (cf. chap.7.1). The distinction is recognised however, both for this purpose and in order to state clearly similarities and differences between the phonological and grammatical hierarchies, (cf. chap.15) .

The structural pattern of the syllable may be stated as an obligatory nucleus element, which may be preceded by an onset element and/or followed by a coda element. Consonants and vowels may therefore occur in any of the following sequences: V, CV, VC, CVC. Some 80% of syllables in the data examined were of the pattern CV, some 12% of the pattern V, some 6% of the pattern CVC and some 2% of the pattern VC. VC and CVC syllables have been found lightly stressed only very rarely.

Consonants function as syllable codas only at the end of words.<sup>19</sup> In normal fast speech however, it is possible for a consonant which is at the end of a word to be a syllable onset, combining with an initial vowel of the following word to form a syllable. The following

---

19. For a definition of the word as a grammatical entity cf. chap. 3.2.

example is written first with space marking boundaries between words, and then in the phonological conventions of the previous chapters.

e.g. uzahak oho a'e

u,za,ha, ko,ho,a,'eh, 'He went to bathe.' 9.21.15.

### 6.1 The Prosodic Feature of Pulsation

Pulsation is abstracted and set up as a prosodic feature in order to account for the rise and fall in forcefulness which is characteristic of the syllable in Guajajara.

The phonetic realisation of pulsation is a rise to a peak of the forcefulness with which a syllable is uttered, followed by a diminution in this forcefulness. The rise is generally fairly sharp, but the fall far more gradual especially in its initial stage. The rise is less sharp however when the pre-peak of a syllable is long, (cf. chap. 5.13).

This rise and fall extends across the whole of the syllable, including any onset and coda. When the consonant functioning as a coda or an onset is a continuant sound, the rise or fall may be fairly readily distinguished in slow speech. When such a consonant is a stopped sound, the rise or fall is not of course distinguishable during the duration of the consonant, but is shown by the relative forcefulness of continuant sounds upon either side.

Whenever two consonants occur together, the first is a coda and the second an onset. A consonant followed by a vowel is in most cases an onset followed by a nucleus, but it may be a coda followed by a nucleus. In the former case, there is a rise of forcefulness during the consonant, and in the latter case, there is a fall. If the consonant is a stopped sound, the syllable boundary can be distinguished because of the release of the consonant and the initial articulation of the vowel. If the consonant is a coda, it will have a lenis release, and the vowel will begin softly and increase rapidly in forcefulness. If the consonant is an onset, it will have a fortis release, and the vowel will be forceful from the beginning.

The overall forcefulness of any syllable is determined by the degree of stress which it enjoys, (cf. sect. 5.11). The degree by which the forcefulness of L.S. syllables will rise is naturally much less than that for H.S. and M.S. syllables.

In the following example, forcefulness is indicated by the superscript line, the degree of increase being indicated by the height of the line.

e.g.      $\wedge$   $\wedge$   $\wedge$   $\wedge$       $\wedge$   $\wedge$   
           o, u, e, cak, o, ho',     'He went and saw it.' 9.9.4.

## 6.2 Pulsation in L.S. Syllables

As stated in chapter 5.1 lightly stressed syllables are spoken very quickly and softly, especially when two

or more occur together. In such cases it is often difficult for the ear to perceive whether or not Pulsation is present. The general pattern which seems to be present on the slower and clearer examples of such syllables is taken to justify the present analysis whereby the L.S. syllables are referred to the same abstraction as H.S. and M.S. ones. Syllables with little or no perceptible pulsation may conveniently be referred to as 'reduced', and in the following examples 'reduced' vowels will be written raised above the line.

In some cases in rapid speech, lightly stressed syllables occur in which the onset consonant is released straight into the onset consonant of the following syllable, or so released with only the slightest vocalic transition. In such cases the phonetic realisation of the onset of the 'reduced' syllable may include articulatory features which are characteristic of the reduced vowel, though that vowel may not be independently articulated. In the following example, the 'n' of wan<sup>u</sup>pe has lip rounding, though the lips appear to close in the articulation of the following 'p' without the tongue being released from its alveolar position.

e.g. i,k<sup>w</sup>e,he, wa,n<sup>u</sup>,pe. 'He said to them.' 9.21.3.

In many such cases some degree of pulsation may be perceived upon the onset of a reduced syllable, which frequently enjoys most or all of the duration which would be expected for a non-reduced L.S. syllable in a foot of that composition.

No additional abstraction is made in this study to which reduced L.S. syllables should be referred. Nor are such 'reduced' elements considered as being part of contiguous syllables. The reasons for this are as follows.

To analyse such 'reduced' elements as forming syllables in combination with contiguous sounds would produce syllables of new patterns. In the sequence  $i, k^w^e, \underline{h}e$ , for example, the reduced vowel  $e$  does not have independent articulation, and its articulatory characteristics are present only in the realisation of contiguous consonants. This might be considered grounds for denying the presence of  $e$  as a phonological unit. The consonant  $k^w$  however, cannot be analysed as belonging to the preceding syllable without setting up a new pattern, for  $k^w$  does not occur as a coda. Nor can it be analysed as belonging to the following syllable without setting up a new pattern with a consonant cluster as the syllable onset. The syllables which are contiguous upon each side already conform to the pattern set up, and to ignore this seems perverse.

Such 'reduced' elements enter to a large extent into the normal pulsation patterns of syllables. In the examples  $i, k^w^e, \underline{h}e$ , and  $w\underline{a}, n^u, \underline{p}e$ , the vowel of the preceding syllables in each case dies away into a state of low forcefulness such as is normal for syllable final nuclei. The consonantal elements  $k^w$  and  $n$  are in each case of increasing forcefulness, rather than decreasing, though the latter would be normal for a coda. Though

the vocalic nucleus of the reduced syllable is not fully released, yet the duration of the syllable approaches what would be expected if it were.

It would be possible to recognise syllables as being of the structure C (in addition to those structures already recognised, i.e. V, CV, CVC and VC). The present analysis is preferred however because it preserves a reference to articulatory movements typical of vocalic sounds, which remain present in the pronunciation of the syllable, even though the nucleus may not be realised as a vowel having full pulsation. The present analysis extends to rapidly articulated syllables the pattern which is quite clear in more slowly articulated ones.

Another problem is posed by lightly stressed V syllables with little or no pulsation. When such syllables follow another vowel, they may fuse with it to form a diphthong, rather than being set apart from it by any pulsation.

e.g. a,<sup>i</sup>,po, 'Maybe.' 6.33.9

It is only when this reduced vowel is 'i' or 'u' that the diphthong is really close knit. In fact the consonants 'w' and 'j' are both recognised below as syllable codas, and the phonetic realisation of these consonants is virtually the same as that of 'i' and 'u' in such 'reduced' V syllables.

To analyse these 'reduced' vowels as being the

coda of the preceding syllable would however involve an extension to the tolerated occurrence of codas. As previously stated, these only occur at the end of words. All examples of i and u as reduced V syllables occur word-medial, and would, if analyzed as the coda of the preceding syllable, result in word-medial consonant clusters, which do not otherwise occur, cf. sect. 6.0 above.

Furthermore, the present analysis may be confirmed as an extension to rapidly articulated syllables of the pattern which is clear in more slowly articulated ones. A Guajajara speaker, if asked to repeat more distinctly an utterance containing a 'reduced' V syllable, generally does so in such a way that the syllable in question may be clearly perceived to have pulsation. For these reasons, such reduced vowels are regarded as nuclei rather than codae, even though this means that phonetically similar phenomena are treated differently when they occur in syllables of different patterns.

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CHAPTER 7 CONSONANTS AND VOWELS7.0 Consonants and Vowels as Units

Consonants and vowels are classes of phonematic units, and constitute the lowest rank of the hierarchy, that next below the syllable. All syllables may be divided immediately and entirely into consonants, and vowels, plus the prosodic feature of Pulsation described above.

Consonants and vowels contrast with other phonological units in their nature because they have no structural pattern and are abstractions of classes whose members share a common function. Only one ultimate constituent is accounted for in their abstraction, namely that of Position. Just as the occurrence of the constituents Pitch, Duration and Forcefulness is accounted for in the abstraction of the prosodic features Tune, Stress and Pulsation, so the occurrence of the constituent Position is accounted for in the abstraction of consonants and vowels. The latter are classes of phonematic units, each characteristic position of the articulatory organs, (including the manner of their articulation) being referred to one member of these classes. They are said to be phonematic rather than prosodic because the exponents of which they are abstractions may be regarded as following one another in temporal succession and not as extending over or having relevance to stretches of speech potentially composed of more than one minimal unit.

Phonematic units are assigned to the two classes consonant and vowel solely on the basis of their occurrence within the syllable, vowels always functioning as a syllable nucleus and consonants as either a syllable onset or coda. There is also a fundamental difference in the character of the articulatory manners and positions which are employed in the exponents of these classes. Consonants are almost invariably realised by exponents in whose articulation the voice sound is modified by closure or constriction, generally by the tongue or lips, whereas in the case of vowel exponents, no such constriction or closure is present.

### 7.1 Consonants

The consonant class comprises those phonematic units which function as the Onset or Coda elements in syllables, and has the following members,

p, t, k, k<sup>w</sup>, c, m, n, ŋ, ŋ<sup>w</sup>, r, z, h, w, j.

The class may be sub-divided into the following four sub-classes, on the basis of restrictions on their occurrence as certain syllable elements.

Sub-class one, functioning as the onset or coda of syllables,

t, k, m, n, ŋ, r, w.

Sub-class two, functioning as the onset of any syllable and the coda of span-final syllables only,

ʻ, h.

Sub-class three, functioning only as the onset of syllables,

p, k<sup>w</sup>, c, ŋ<sup>w</sup>, z.

Sub-class four, functioning as the coda of syllables,

j.

Two different consonant systems may be set up, the first operating at the onset element of syllables, and the second at the coda element. The members of these systems are as follows,

System One, operating at syllable onset position,

p, t, k, k<sup>w</sup>, c, m, n, ŋ, ŋ<sup>w</sup>, r, z, h, w.

System Two, operating at syllable coda position,

t, k, m, n, ŋ, r, w, j.

An additional sub-system might be set up to cover consonants operating at span-final coda position, which would comprise the members, n, ʻ, h. It is thought, however, that there is no structural reason why other consonants of system two might not operate at this position, though owing to lexical factors none have been found.

It should be pointed out that the above systems are not of great significance to an overall description of Guajajara phonology since though the potential of contrast is markedly different between the two, yet the position of the articulatory organs is identical in the exponents of consonants, whatever system they may be operating in, and it is only this position which is abstracted in the phonematic unit.

The phonetic realisation of the exponents will now be described.

#### 7.11 Plosives

All plosives are generally voiceless and unaspirated, Plosion is not very forceful, except sometimes in emphatic speech, and the voicing of the syllable nucleus follows immediately upon plosion. In rapid speech plosives occurring between two vowels are occasionally lightly voiced.

p is bilabial. The shape of the lips is the same as that during the following vowel, (spread before i, e, a, y, ə, fairly rounded before o, u,) and so is the position of the tongue. (c.f. sect. 7.33 for a possible extraction of lip and tongue position as prosodic features, in this and other consonants.)

t is dental. The shape of the lips, and the degree to which they are open, is the same as that during the following vowel, when functioning as a syllable onset. When functioning as a coda, this is the same as the preceding vowel, though this changes during articulation to that of the following vowel if the following syllable has no onset consonant, (and so for other codas).

k is velar. When functioning as a syllable onset, the shape of the lips and the degree to which they are open is the same as that during the following vowel. The position of the tongue varies slightly according to the following vowel, the point of contact being slightly advanced before the front vowels, and slightly retracted before back vowels, though without approaching the limits of the velar area. When functioning as a coda, the position of the tongue may vary slightly according to the preceding vowel, in the same way as indicated above for onsets. (cf also t as a coda, above.)

k<sup>w</sup> is labio-velar, a fair degree of lip rounding occurring simultaneously with velar closure. The position of the tongue varies slightly according to the following vowel similar to the case of k.

ʔ is glottal. The shape of the lips and the position of the tongue vary according to their position and shape during the following vowel. Closure may be incomplete in L.S. syllables. (Cf. sect. 7.17)

#### 7.12 Affricate

c consists of an alveolar stop with an alveolar fricative release. It is voiceless and unaspirated, like the plosives. The position of the lips is the same as that during the following vowel, and

the position of the tongue varies as follows:  
 invariably before i, and occasionally before a heavily stressed e, the place of closure and friction is palato-alveolar: elsewhere it is alveolar. The tongue tip is always up.

### 7.13 Nasals

All nasals are voiced and the position of the lips and of the tongue vary according to contiguous vowels in just the same way as in the case of plosives at comparable points of articulation, for both onsets and codas.

m is bilabial.

n is alveolar.

ŋ is velar.

ŋ<sup>w</sup> is labio-velar: velar closure with a fair degree of simultaneous lip rounding.

### 7.14 Flap

r is voiced, with momentary contact at the alveolar. At times contact is not completed by the sides of the tongue, resulting in a sound something between a true flapped r and a flapped lateral. This incomplete contact does not appear to be conditioned by any phonetic factors, and is more common in the speech of some speakers than others.

It is therefore regarded as a free variant of r in this study. The position of the lips in syllable onsets is the same as during the vowel of the syllable nucleus. For syllable codas any such variation is very slight, (cf. t and k).

#### 7.15 Fricatives

z is voiced, with friction varying between alveolar and palato-alveolar place without conditioning factors. The tongue is always well up, sometimes to the point of being slightly retroflexed, but this retroflexion is not conditioned. The position of the lips is the same as during the following vowel.

h is voiceless, with friction at the glottis. The position of the tongue and of the lips is the same as during the following vowel or the preceding vowel, when functioning as a coda. Some voicing may be present in L.S. syllables, (cf. sect. 7.17), or when functioning as a span-final coda, (cf. chap. 4.21).

#### 7.16 Semi-Vowels

w is a voiced labio-velar frictionless continuant. When functioning as a syllable onset, both the shape of the lips and the position of the tongue vary according to the following vowel: the lips

are more rounded before o and u than before other vowels, though they always remain fairly rounded, even before i and y. The tongue is in a more advanced velar position before i and e than before other vowels, though it rarely, if ever, attains a palatal position. When functioning as a coda, articulation is very similar phonetically to the vowel u, especially when followed by pause.

j is a voiced palatal frictionless continuant. The phonetic realisation may be very similar to that of the vowel i, but varies to a rather closer position. The position of the tongue is slightly retracted following back vowels.

### 7.17 Consonant Articulation and Stress

In lightly stressed syllables, a tendency to lax articulation is sometimes present with any consonant. This is particularly noticeable for those two that have glottal articulation, i.e. ' and h. In such cases the glottal closure of ' is commonly incomplete, or so momentary that the ear perceives a diminution of the preceding vowel followed by a sudden onset to the second vowel, rather than a total cessation of sound between them. Similarly the glottal friction of h may not be completely voiceless though some glottal constriction and reduction of voicing is present compared to the preceding and following vowels. Such lax articulation

is particularly common when the same vowel precedes and follows these two consonants.

As described above, the duration of syllables is determined by their distribution within the foot and abstracted as part of the prosodic feature of stress. Any consonant functioning as an onset may be long, if the pre-peak portion of the syllable is long, (cf. chap.5.13). Such duration is not relevant to the abstraction of phonematic units, but is here mentioned for the sake of completeness.

## 7.2 Vowels

The vowel class comprises those phonematic units which function as the Nucleus element of syllables, and comprises the following members,

i, e, a, y, ə, u and o.

As noted below, section 7.31, a does not occur preceding nasal consonants as a syllable coda, and ə does not occur preceding oral consonants as a syllable coda. There is, therefore, neutralisation of the a/ə contrast in syllables having codas. Two different vowel systems might be set up, the first operating in open syllables and having seven terms, and the second operating in closed syllables and having six terms. The articulatory positions abstracted as the vowels a and ə do both occur in closed syllables however, though they are not there in contrast. The recognition of the

two vowel systems is therefore regarded as of only minor importance for the present description.

The phonetic realisation of the exponents of vowels will now be described.

### 7.21 Vowel Qualities

- i Close front unrounded, but not quite as close as cardinal one. When followed by  $\eta$  as a coda, it is slightly retracted and lowered, but it has no gross perceptible variations of position correlating with any other contiguous sound.
  
- e Half-open, front unrounded, just a little higher and generally a little more retracted than cardinal three. When followed by  $r$  as coda, the tongue is raised slightly to a position rather nearer cardinal two than cardinal three, but it has no gross perceptible variations of position correlating with any other contiguous sound.
  
- a Open front unrounded, but appreciably more retracted than cardinal four. It has no gross perceptible variations of position correlating with any contiguous sound.
  
- y Close central unrounded, but not fully close. Following  $t$ , the tongue is considerably advanced and raised, and the same tendency is present to a

lesser extent following n as an onset, and before j as a coda. It has no gross perceptible variation of position correlating with any other contiguous sound.

- ø Mid central unrounded, about halfway between half-close and half-open positions. When followed by ŋ as a coda, the tongue is lowered as far as the half-open position or slightly further, but it has no gross perceptible variation of position correlating with any other contiguous sound.
- u Close back rounded, rather nearer to cardinal eight than cardinal seven. It has no gross perceptible variation of position correlating with any contiguous sound.
- o Open back rounded, rather nearer to cardinal six than cardinal five. It has no gross perceptible variation of position correlating with any contiguous sound.

## 7.22 Vowel articulation and stress

As with consonants, so the duration of vowels varies according to the distribution of syllables within the foot, (cf. chap 5.13). In L.S. syllables a tendency to lax articulation is sometimes present with any vowel, but the distinctions of quality between the seven vowels remain, even though they may be harder to distinguish

because of the brevity of the syllable.

### 7.3 Restrictions of Occurrence and Vowel Harmony

#### 7.31 Restrictions of Occurrence

The following restrictions have been observed on the co-occurrence of Phonematic Units.

j never precedes a vowel, but always another consonant or pause.

z never precedes a consonant or pause.

t never precedes i.

c never precedes y or ə.

k<sup>w</sup> and ŋ<sup>w</sup> never precede i, y, o or u.

o and u never precede w functioning as a syllable coda.

i never precedes j functioning as a syllable coda.

a never precedes nasal consonants as syllable codas.

ə never precedes oral consonants as syllable codas.

It will be observed, from the first two restrictions, that j and z are in mutually exclusive distribution, and may be regarded as 'sub-members of the same phoneme', for the purpose of phonemic analysis. Since the present

analysis is prosodic in character, two phonematic units are set up, there being no reason in such analysis to identify two units which share certain characteristics when they always operate in different systems.

The following restrictions on the occurrence of phonological elements in terms of grammatical units are also worthy of note here.

Syllable codas only occur word final. (For definition of a word, cf. chap. 3.2.)

$\eta$  and  $\eta^w$  never occur word initial.

The following vowel clusters only occur across morpheme boundaries:

a and e, y and ə, u and o, and repetitions of the same vowel.

No monosyllabic words begin with a vowel, and ' never occurs in word initial position in multisyllabic words. Heavy stress generally occurs on the final syllable of nouns, verbs and adverbs, (cf. chaps. 9,10, and 11.2).

### 7.32 Vowel Harmony

There is evidence of very limited vowel harmony in certain utterances, and this seems to be associated in most cases with particular morphemes or allomorphs of morphemes. The verbalizer  $\mu$  (cf. chap.9.211) and the pronominal prefixes for the 3rd

person and 2nd person plural each have allomorphs including only the vowel o, and these forms occur only with stems that include the vowel o, (cf. chap. 9.122). The nominal suffix -uhu 'big', (chap.9.133), often occurs with alternate forms of stems which have one or more vowels ə (when the other form has vowel(s) a.)

### 7.33 Other Possible Prosodies

Some or all of the above restrictions or harmonic co-occurrences might be made the basis for the abstraction of further prosodic features, or the recognition of sub-systems relevant to particular sections of the data. Thus vowel harmony in some forms, or some aspects of the realisation of certain phonematic units, e.g. the position of the tongue or of the lips, might be regarded as prosodic because they extend temporarily over more than one phonematic unit. Further sub-systems of vowels and consonants might be set up to mark restrictions of occurrence in addition to those noted above for syllables of different patterns in sections 7.1 and 7.2. Such rather microscopic examination of restricted portions of the data has not been attempted in the present study because the main purpose of the description has been to present an overall statement of the major phonological patterns of the language, which may then be considered together with the major grammatical patterns, rather than to describe phonological minutiae which relate to a sub-section only of the data. The inter-relation of phonology and grammar remains relevant in such sub-sections, but the focus of this study is upon hierarchical structures

having wide relevance rather than upon sub-structures having narrow relevance.

#### 7.4 Occasional Distribution of Constituents

The four ultimate phonological constituents, Pitch, Duration, Forcefulness and Position, (the latter including manner as well as position of articulation), have now been fully described in terms of their obligatory occurrence, phonological units being abstracted to account for the patterns of such occurrence. Certain additional variations of pitch, duration and forcefulness may occur, and these will now be described. Such variations are associated in varying degrees with grammatical or semantic factors and are most conveniently described in sub-sections corresponding to these factors.

It would be possible to account for the occasional variations of pitch, duration and forcefulness in the same way as for the regular distribution of such constituents, i.e. by the abstraction of prosodic features. Such features might be regarded as occasionally combining with other factors to form units such as feet or spans. This has not been done, however, because the temporal extent or relevance of these variations does not necessarily coincide with any of the units span, foot or syllable, nor do they necessarily occur at a fixed point demarcative of such units. It therefore seems arbitrary to assign them to any one such unit, and instead they are stated here, following the description

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of all other abstractions, in terms of their potential occurrence in relation to them. In a sense they are abstractions parallel to the prosodic features of tune, stress and pulsation, but they are not assigned a place in the hierarchy. Some justification for this extra-systemic treatment may be found in the fact that they cannot be regarded as terms in systems without wide recognition of zero terms in those systems, which zero terms would occur in the majority of utterances. Their occasional and unpredictable occurrence is better reflected in extra-systemic description.

#### 7.41 Emphasis

Emphasis may occur on any part of the speech stream, and is generally associated with semantic emphasis. It is realised by an increase of forcefulness and duration, and/or raised pitch. The degree of increase or pitch rise varies according to the degree of emphasis which occurs, which may be small or great. In some cases of emphasis upon one foot within a span, that foot is more than twice the duration of the other feet of the span, with the pitch of the voice approaching the extreme limits of the speaker's normal voice range.

Emphasis often occurs upon one foot only within a span, and in such cases the final syllable of the foot has the increased forcefulness and duration, though this is shared by preceding and following syllables to a limited extent in some instances. If the foot is of

mid or high pitch, according to the pitch pattern of the span, its pitch is raised; if it is of low pitch, it is unchanged. The pitch of any foot following one which is emphasized may be of somewhat higher pitch than normal for the pitch pattern.

e.g.

\_\_\_\_\_

\_\_\_\_\_

ka'ate peuruiko a'e mehepah 9.11.8.

'We lived right in the forest then.'

It is unusual for the final feet of spans to be emphasized except in spans of pitch patterns two or seven. Stretches of longer than a foot may be emphasized, in which case the overall pitch of the whole stretch is higher than that of the preceding and following stretches. Increased duration and forcefulness is however generally confined to one foot within the emphasized stretch. Complete spans may be emphasized in this way.

#### 7.42 Hesitation and Correction

Hesitation consists of a slowing down of the stream of speech in mid span, occasionally to the extent of producing a pause of up to a second in length. The pitch of the span is not however affected. Hesitation has only been observed on feet of mid-pitch. It does not generally result in complete cessation of the stream of speech, but is more often realised by the prolongation of the final syllables of one foot.

In many cases a special 'hesitation form' occurs in association with phonological hesitation as above described. This hesitation form is realised as ma'e, a form which is homophonous with a noun, ma'e -'unspecified object', (cf. chap.10). When this sequence occurs as a hesitation form however, it does not enter into grammatical relationships and is generally accompanied by the phonetic phenomena outlined above.

Correction consists of a short pause, sometimes commencing abruptly, followed very quickly by resumption of speech with a little emphasis upon the next foot. It frequently occurs in the middle of a grammatical unit. It may follow hesitation or occur independent of it.

#### 7.43 Dependence and Parenthesis

##### 7.431 Dependence within a Span

Grammatical units within the span, especially nominal and verbal phrases, when these extend over stretches longer than one foot, are commonly marked by a slight increase in the forcefulness and the duration of the final syllable, and a slight rise in its pitch. For further details see chapter 5.16.

##### 7.432 Dependence between Spans

Grammatical or semantic dependence of one span

upon another which has preceded it is usually accompanied by slightly lower overall pitch for the dependent span or spans. The internal pitch relationships of the dependent span are not affected. Normal pitch level is resumed with the occurrence of the next independent span.

More than one dependent span may follow one independent one, and this is often the case when an extended sentence occurs in which more than one satellite clause is present. In such a case, all the dependent spans share the same slightly lower overall pitch level. (cf. chap. 14.1.)

Stretches of speech semantically in parenthesis to the main stream are generally marked by a similar slight lowering of pitch.

Within a series of spans which is already of rather low overall pitch, dependence may be marked by a slight rise of overall pitch.

Spans which are dependent upon a following span rather than upon a preceding one, are generally of pitch pattern four, (cf. chap. 4.14).

#### 7.44 Change of topic

A change of topic within a stretch of speech is often associated with an upward change of pitch. This

is commonly realised by both a drop of pitch on the final feet of the last span of the old topic, and a rise of pitch on the initial feet of the first span of the new topic. In many cases the initial foot of the new topic is of high pitch, (cf. chap. 4.18), and final span of the old topic is of pitch pattern three, (cf. chap. 4.13.).

The lowering of pitch associated with topic-final spans may affect the last two or three feet of the span. These may each be of successively lower pitch or each of the same low overall pitch in relation to previous spans. In some cases the last few feet of the last two or three spans of a topic may display a falling away of pitch within the span.

The regaining of pitch associated with topic-initial spans may also be spread over the first two or three feet of the first span, each being successively higher than the preceding foot.

In short, well-defined topics, there is sometimes to be noted a progressive falling of pitch throughout the entire stretch of speech which the topic occupies. Such well-defined short topics are not common, and the losing and regaining of pitch is therefore in most cases to be observed only at the point of topic change.

#### 7.45 Constructions larger than the Span

. The modification of spans associated with dependence and change of topic may seem to provide grounds for the recognition of some phonological unit larger than the span.

It is true that a number of spans may sometimes be recognised as linked together by the phonological factors outlined above, and may therefore be regarded as some kind of entity within the total phonology. They are not here set up as phonological units with a place in the hierarchy because they do not exhibit any kind of structural pattern.<sup>20</sup>

The only phenomena which might be abstracted as prosodic features of such a higher unit are those which mark its terminal points, but these are not obligatory phenomena capable of definition and measurement in the same way as other prosodies, but are rather tendencies which may or may not be present. The largest stretches of speech, such as narratives, cannot be divided entirely into any such higher units, and most shorter stretches do not include any. Nor can the distribution of lower ranking units within such high ranking units be stated in any but the most general terms. For these reasons, no phonological units higher than the span are set up, though the occasional grouping together of spans to form entities additional to the present hierarchy is not denied.

#### 7.5 Summary and Comparison with Phonemic Type Statement

The full inventory of the abstractions which together constitute the phonological hierarchy may be summarised as follows.

---

20. For definition of a unit, cf. chap.3.0.

- 3 prosodic features: Tune, Stress and Pulsation  
 3 structural units: The Span, the Foot and the Syllable  
 2 classes of phonematic unit: 15 consonants and 7 vowels  
 4 ultimate constituents: Pitch, Duration, Forcefulness  
 and Position (Position and manner).

It may be of interest to compare the above summary with a statement along the lines of 'unitary' phonemic analysis. Such a phonemic statement might comprise.

Consonants (14 in number)

/p/	[p ]	
/t/	[t <sup>o</sup> ]	when followed by an onset consonant of a H.S. syllable
	[t ]	elsewhere
/k/	[k <sup>o</sup> ]	as /t/
	[k ]	elsewhere
/k <sup>w</sup> /	[k <sup>w</sup> ]	
/ʔ/	[partial glottal closure]	in L.S. syllables
	[full glottal closure]	elsewhere
/c/	[tʃ]	before close front vowels
	[ts]	elsewhere
/m/	[m <sup>o</sup> ]	as /t/
	[m ]	
/n/	[n <sup>o</sup> ]	as /t/
	[n ]	
/ŋ/	[ŋ <sup>o</sup> ]	as /t./
	[ŋ ]	

/ŋ <sup>w</sup> /	[ŋ <sup>w</sup> ]	
/r/	[r <sup>o</sup> ]	when followed by any consonant
	[r]	elsewhere
/z/	[j]	before a consonant or pause
	[z]	elsewhere
/h/	[h]	with light voicing in L.S. syllables
	[h]	elsewhere
/w/	[w <sup>o</sup> ]	when followed by an onset of a H. S. syllable,
	[u]	otherwise as a coda
	[w]	elsewhere

## Vowels (7 in number)

/i/	[ɪ]	before /ŋ/ as coda
	[i]	elsewhere
/e/	[ɛ]	before /r/ as coda
	[e]	elsewhere
/a/	[a]	
/y/	[ɨ]	following /t/ and /n/ and before /z/ as coda.
	[ɨ]	elsewhere
/ə/	[ə]	before /ŋ/ as coda
	[ə]	elsewhere
/u/	[u]	
/o/	[ɔ]	

Stress. Three degrees - heavy, medium and light.

Pitch. Three levels - high, mid and low.

Additional submembers of all vowels might be recognized to account for the occurrence of ' and h span-final, (cf. chap. 4.21), and also further submembers of all consonants and vowels to account for the occurrence of ə span-final, (cf. chap. 4.22).

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## CHAPTER 8. THE SENTENCE

### 8.0 The Sentence as a Grammatical Unit

The Sentence is the largest unit which is set up in the grammatical hierarchy. All utterances may generally be divided into one or more sentences, which must conform to one or other of the patterns described below, and in chapter 13. Any residual stretches of speech which do not conform to such patterns are regarded as incomplete or interrupted sentences, or else as extra-systemic communication such as the imitation of non-speech sounds.

The majority of sentences are coextensive with the phonological unit 'The Span', for which see chapter 4. In every case they have the potential of indefinite pause following them, and some degree of pause is present in most but not all cases.

The sentence, as the largest grammatical unit, is defined primarily in terms of its structural pattern i.e. by the statement of its constituent elements and their arrangement. The function of the sentence is less crucial to its definition, since it does not manifest an element in a higher-ranking unit as do other units. For a statement of ways in which sentences may be linked together, though not so as to form a larger unit within the hierarchy, see chap. 14. In addition to this, see chapters 10.2 and 11.4 for a statement of ways in which down-ranked sentences manifest elements in lower-ranking units in the hierarchy. The primary function

of the sentence, however, is to occur independently in utterances.

Certain semantic relationships generally subsist between the constituent elements of sentences, as for example that of subject, verb and object. These relationships will be noted as the elements are described, but they are not regarded as definitive of the sentence in any sense since they are semantic in character, while the sentence and its elements are grammatical entities, formally defined. There may be some semantic dependence between sentences, and this is described in chapter 14.

The majority of sentences conform to one structural pattern, and this is abstracted under the name of 'The Favourite Sentence'. The elements of which such sentences are composed are described in the present chapter, and the grammatical units which manifest the elements are described in chapters 9 to 12. A number of other structural patterns occur less frequently, and these are described as Non-Favourite Sentences, in chapter 13.

## 8.1 The Favourite Sentence

### 8.11 Constituent Elements

The favourite sentence consists of some or all of the following elements:

Verbal Phrase	(VPh)
Subject	(Subj)
Object	(Obj)
Auxiliary Verb	(AV)
Adjunct	(Adj)
Particle	(Pt)

Of these, the VPh is the only element which must obligatorily be present, though it is very unusual for a Favourite Sentence to consist of this element alone. It is also quite general for sentences to include one or more Particles. Not more than one VPh, Subj or Obj may occur in one Favourite Sentence, but up to six particles, and up to three Adjuncts are quite common, while two Auxiliary Verbs have been found in a very few instances. The number of particles and adjuncts which may occur is determined by stylistic rather than by structural factors, and it is structurally possible for more than six and three of them to occur, respectively.

There also appears to be a stylistic limit upon the total number of elements of which a sentence may consist. Very few sentences have been found which have more than five elements, exclusive of particles. See chapter 14.1, the Extended Sentence, for a construction by which a larger number of elements may be expressed, linked with a single verbal phrase.

## 8.12 Order of Elements

The relative order of these elements is fairly rigidly fixed, but certain alternative orders are permitted. The most common order of the elements, exclusive of Particles, may be stated in formula as follows; (for the order of Particles, see below.)

VPh    Subj    Obj    AV    Adj

The most common alternative order is for the VPh to follow the Subject and/or the Object. It may not occur between them, however, and when both Subject and Object occur in the same sentence, the former always precedes the latter. Occasionally, an adjunct may occur immediately following the Subject or Object, and it is then closely linked semantically with the element it follows.

Particles may occur in any of four places, initially, post initially (after the first element, whatever that may be), medially (after any AV, but before any post-verbal Adj.), or finally. Each particle has its own fixed place or places of potential occurrence, see chapter 12 for details. Initial place in the sentence confers a slight degree of emphasis upon the element which occupies it.

The following are some examples of favourite sentences, illustrating this potential difference of order. In these, as all other examples of grammatical constructions which will be cited, a space is left

between words, and intra-word morpheme breaks, when relevant, are marked by a hyphen on bound forms. (For a definition of the word in Guajajara, see chap. 3.2.) An additional space or spaces may be left between grammatical units in all parsed examples, so that the parsing of each unit commences immediately beneath the first letter of each unit. A dash above a word indicates that its translation is not possible in isolation.

e.g. 'They say that Tupan was having a garden made.'

make	cause	report	Tupan	garden	being	-	
uzapo	kar	zekwehe	tupøn	ko	iko	ty	6.17.13.
VPh		Pt	Subj	Obj	AV	Pt	

'The toad was walking along there.'

toad	be	along	there	walking	-	
kururu	uiko	kwez	rupi	uata pø	no	6.10.13.
Subj	VPh	Adj		Adj	Pt	

'It was I who first came from there.'

I	first	I-come	there	from	
ihe	røqøz	azur	pe	wi	3.23.2.
Subj	Adj	VPh	Adj		

### 8.13 Restrictions on Co-occurrence of Elements

The following restrictions on the co-occurrence of sentence elements have been observed, and are regarded as being of structural significance.

1. The Verbal Phrase is described as consisting (in part) of a Head element which may be manifested by

a Verb or Verbal Piece which is either Transitive, Intransitive or Stative, (cf. chap. 9.2 and 3.) The Object element may occur only when the Verb or Verbal Piece is Transitive.

2. No Object element occurs when the VPh contains one of the following pronominal prefixes, he-, zane-, ure-, ne-, pe-, uru-, apu-, urupu-, (cf. chap.9.121)<sup>21</sup>

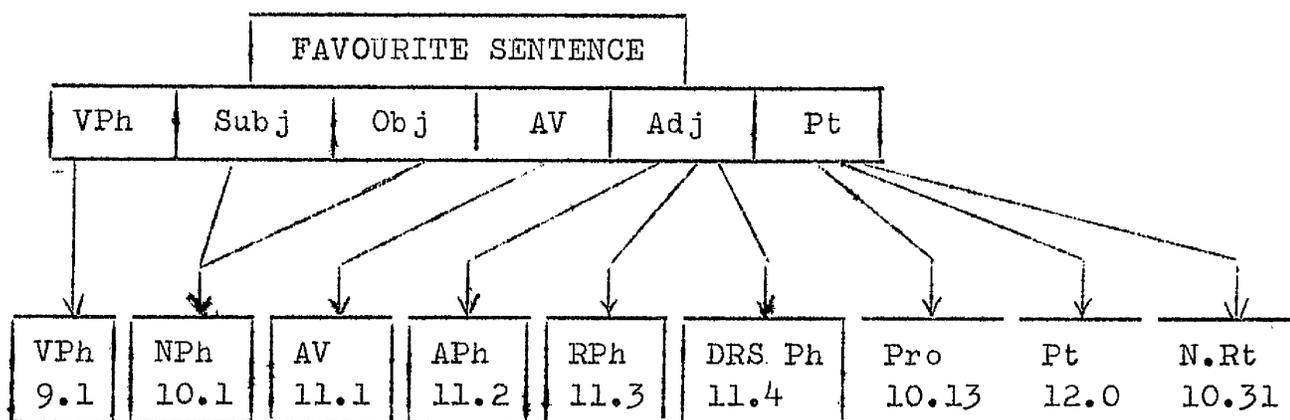
3. No Subject element generally occurs when the VPh contains one of the following pronominal prefixes, a-, he-, ci-, za-, zane-, uru-, ure-, ere-, ne-, pe-, (cf. chap.9.121.)<sup>22</sup> If a Subject element is present, it is always a NPh whose Head element is manifested by a pronoun (cf. chap. 10.13), and such a pronoun must display concord with the pronominal prefix of the VPh.

#### 8.14 Manifestation of Elements

The manifestation of the elements of the Favourite Sentence may be represented by the following diagram. Boxed manifestors represent units of complex

- 
21. These pronominal prefixes refer to the goal or object of the action expressed by the sentence, when this object is first or second person.
22. These pronominal prefixes refer to the actor or topic about which the statement is made, when this actor or topic is first or second person.

structure, unboxed ones represent units which are not complex, i.e. classes. (For a statement of the other relationships of these units, see the diagram of the complete grammatical hierarchy in chapter 3.21.)



This diagram is to be interpreted as follows.

The Verbal Phrase is manifested by a unit of the same name, (cf. chap. 9.1).

The Subject and Object are each manifested by a unit named the Nominal Phrase, (cf. chap. 10.1).

The Auxiliary Verb is manifested by a unit of the same name, (cf. chap. 11.1).

The Adjunct is manifested by any of the following units:- the Adverbial Phrase, (cf. chap. 11.2), the Relational Phrase, (cf. chap. 11.3), or the Down Ranked Sentence Phrase, (cf. chap. 11.4).

The Particle is manifested by any of the following units:- the Pronoun, (cf. chap. 10.13), the Particle, (cf. chap. 12.0) or the Noun Root, (cf. chap. 10.31).

## 8.2 Criteria for Recognition of Elements

The structural pattern of the favourite sentence is thus described in terms of six elements, and the same elements are used for the description of non-favourite sentences also, (cf. chaps. 13). . . . Each element is set up in recognition of its having a different function within the sentence from that of the others. That is to say that to have recognised fewer or more elements would have been to obscure the pattern which the sentence, as a unit, is set up to represent. Alternative analyses are of course possible, and the following is an amplification of the reasons for the present division in cases where alternatives seem worth consideration.

The Subject is distinguished as a different element from the Object for the following reasons.

1. The Subject always precedes the Object when both occur.
2. The Subject always displays concord of person with the pronominal prefix of the VPh, but the Object does not necessarily do so.
3. The NPh which manifests the Subject may have a pronoun as its Head element, (cf. chap. 10.1), but the NPh which manifests the Object may not.

It should be pointed out, however, that when the VPh has a transitive verb or verbal piece as its Head element, (cf. chap. 9.1) and only one NPh occurs with

it, it is not always formally clear whether this is manifesting the element Subject or Object. There is therefore often semantic ambiguity in such cases, though this is generally relieved by the context of speech or situation.

The three units, the Adverbial, Relational and Down Ranked Sentence Phrases, are each analysed as manifesting the element Adjunct because there is no difference in their function within the sentence. They may each occur following any medial particle and preceding any final particle. They may also occur as part or all of the satellite clause of an extended sentence (cf. chap.14.1) or as the initial element of an inverted sentence (cf. chap. 13.1). The Auxiliary Verb is not analysed as manifesting the same element because it occurs preceding any medial particle. It does not occur in satellite clauses of extended sentences, or in initial place in an inverted sentence. It is therefore considered to have a different function in the sentence.

The Particle is recognised as an element of equal status with the other elements, even though it is manifested by units which are classes having no structure, because its function within the sentence cannot be identified with that of any other element. No particle can be analysed as part of any of the other elements because in each case they may occur in their characteristic position within the sentence regardless of which particular elements they may follow or precede.

### 8.3 Semantic Relationship of Elements

The semantic relationships which generally subsist between the elements of the favourite sentence, or the semantic categories to which they generally correspond, are as follows.

The Verbal Phrase indicates the action or state which may be regarded as the kernel of the information conveyed by the sentence.

The Subject indicates the actor or topic about which the statement is made.

The Object indicates the direct goal or object of the action.

The Auxiliary Verb qualifies or amplifies the action or state, usually with reference to position or direction.

The Adjunct qualifies or amplifies the action or state with reference to location, time, purpose, manner, indirect goal, etc.

The Particles are associated with a number of semantic categories which do not readily come under one heading. These include, tense, emphasis, plurality, contingency, lack of success, sex of speaker and addressee, and many others. In some cases it is very difficult to express the meaning of particles in isolation, cf. the individual descriptions in chapter 12.

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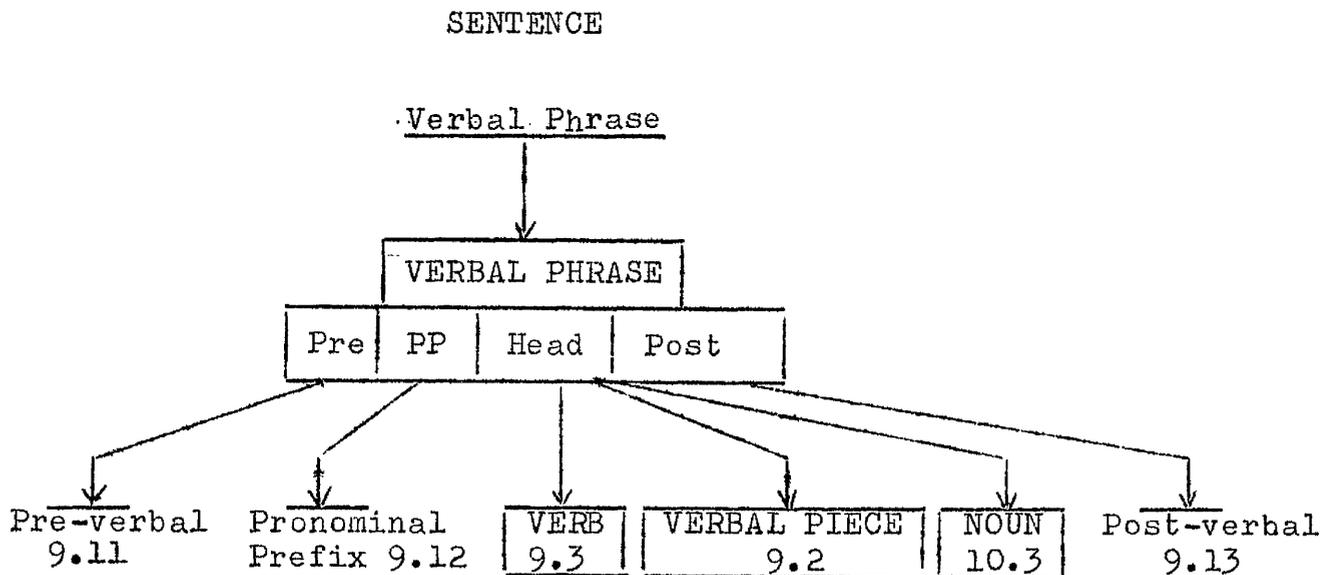
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CHAPTER 9. VERBAL UNITS

9.1 The Verbal Phrase

The Verbal Phrase (VPh) is a unit which has the single function of manifesting the element of the sentence which has the same name. As regards structural pattern, it consists of some or all of the following elements:- Pre-verbal (Pre), Pronominal Prefix (PP), Head, and Post-verbal (Post). Of these, the PP and the Head are obligatorily present. Up to three post-verbals have been found in one VPh, but not more than one each of the other elements. They always occur in the order in which they are listed above.

The function and structure of the VPh may be represented in the following diagram: (cf. also the comprehensive diagram in chap. 3.21.)



As indicated on the diagram, the pre-verbal, the pronominal prefix and the post-verbal are always manifested by classes which have the same names. These are fully described below, in the sections as listed. The head element may be manifested by any of the three units, verb, verbal piece or noun. These units are also fully described below in the sections as listed, but some examples of verbal phrases manifested by these units may be helpful at this point.

e.g. 'He wasn't at all able to'

not	he	able	little	not	
n-	u-	-puner	a'i	kwaw	3.41.8.
pre	PP	Head	post	post	
		Vb			

he	embark		'He embarked'	3.53.4.
u-	-zeru'ar			
PP	Head			
	Vpi			

he	shirt		'He has a shirt'	2.91.20
i-	kamir			
PP	Head			
	Nn			

Verbal phrases in which the head element is manifested by a noun are not very common, but there seems to be no structural restriction upon any noun which may be prefixed by a PP functioning in this way. The semantic reference is generally to possession, as in the above example. Such a form is not always different

in its structural pattern from a nominal phrase, but is potentially so, (cf. chap. 10.1). There is also potential ambiguity as to its function, cf. the declarative sentence, chapter 13.2.

### 9.11 The Pre-Verbal

The pre-verbal class consists of one member,  
na- 'negative'

(This morpheme has three alternate forms, as follows.

na'- occurs preceding the form i- '3rd person pronom. prefix.  
n- occurs before vowels in other forms.  
na- occurs before consonants.)

e.g. \*napeker:<sup>23</sup> not you sleep 'You are not sleeping'  
na- pe- -ker  
pre PP Head

\*nuker: not he sleep 'He is not sleeping'  
n- u- -ker  
pre PP Head

\*na'ikəŋ: not he strong 'He is not strong'  
'na'- i- -kəŋ  
pre PP Head

---

23. These examples are not taken from the corpus of the data which is the basis of the present analysis, but are made up according to the grammatical patterns here described, for the sake of illustration. All such examples will lack a reference number, and will be preceded by an asterisk.

The pre-verbal is often accompanied by either of two post-verbals which also have the meaning 'negative', -z and kwaw. These are described as members of sub-class four of the post-verbals, (cf. sect. 9.13).

This class functions as the pre-verbal element of the verbal phrase.

#### 9.12 The Pronominal Prefix

The pronominal prefix is a small closed class of affixes. The class might be divided into a number of smaller sub-classes, marking the different functions of the various members. Functions are so diverse, however, that no attempt is here made to set up such classes beyond the charting of the occurrences of each member in the following diagram. Instead the paradigm of the various forms which may occur as elements in particular structures will be listed when that element is described.

Because of limitations of space, full details of the meaning of these prefixes are not included in the chart. Further particulars are included with the paradigms listed for each element. (See below for occurrence in the verbal phrase, chapter 11.1 for the auxiliary verb, chapter 11.4 for the down ranked sentence, see chapter 10.1 for the nominal phrase and 11.3 for the relational phrase.) Certain apparent semantic gaps may be observed in the chart. These will also be accounted for when the paradigms for particular elements are listed.



9.122 Alternate Forms of Pronominal Prefixes

Many of the pronominal prefixes have two or more alternate forms. These may be set out, in part, in the following chart.

Basic Member		Alternate forms: occurring with		
Form	Meaning	Class H V initial stems	Class H C initial stems	Class I <sup>24</sup> stems
he-	1st sg	her-	here-	he-(but cf. below.)
zane-	1st pl incl	zane-	zanere-	zane-
ure-	1st pl excl	urer-	urere-	ure-
ne-	2nd sg	ner-	nere-	ne-
uru-	do	urur-	urure-	uru-
pe-	2nd pl	pen-	pene-	pe-
urupu-	do	urupur-	urupure-	urupu-
apu-	do	apur-	apure-	apu-
i-	3rd sg/pl	h-	he-	i-(but cf. below.)
wa-	3rd pl	wan-	wane-	wa-
te-	3rd unspec	t-	te-	
re-	3rd spec	r- h-	re- he-	occur generally occur occasionally, without conditioning factors.

24. All forms which may occur with these pronominal prefixes fall into two classes, according to the set of allomorphs of these prefixes with which they occur. These classes are labeled H and I, corresponding to the form of the 3rd sg/pl prefix, cf. section 9.31 and chapters 10.31 and 11.31.

Other pronominal prefixes have alternate forms as follows:

a-	1st sg	ə- before stems with first vowel ə. a- elsewhere.
he-	1st sg	ihe- before the relator pe (cf. chap. 11.31) he- elsewhere
te-	1st sg	t- before vowels te- before consonants
uru-	1st pl excl	oro- before stems having only vowel o. uru- elsewhere.
u-	3rd sg/pl	o- before stems having only vowel o. ue- before consonant r. u- elsewhere
i-	3rd sg/pl	iz- before i, u and y, in class I stems i- elsewhere, in class I stems.

### 9.123 Paradigm of P.P.s functioning in Verbal Phrase

Three different paradigms are set up, according to whether the head element of the phrase is manifested by a transitive, intransitive or stative structure. Verbs and verbal pieces are classified as transitive, intransitive or stative because they fall into three such sub-classes which are mutually exclusive in membership, and because of their occurrence with these sets of pronominal prefixes. In addition, transitive structures may occur with the sentence element 'object' while intransitive and stative ones may not.

The following occur with Stative Verbs and Verbal Pieces, and also with all Nouns functioning as the Head element of a Verbal Phrase. The reference of the pronominal prefix is always to the actor or topic about which the statement is made.

he-	1st sg
zane-	1st pl inclusive of speaker and person(s) addressed
ure-	1st pl exclusive of person(s) addressed
ne-	2nd sg indicative or imperative <sup>25</sup>
pe-	<del>2nd</del> 2nd pl
i-	3rd sg or pl

It should be noted that substantially similar paradigms to the above occur with Transitive Verbs and Verbal Pieces (see below), Transitive AVs (chap.11.1), Transitive DRS (chap.10.201) the Nominal Phrase (chap.10.1) and the Relational Phrase (chap. 11.3).

The following occur with Intransitive Verbs and Verbal Pieces. The reference of these pronominal prefixes is always to the actor or topic about which the statement is made.

---

25. The imperative is only marked by a different pronominal prefix in the case of second person singular forms occurring with transitive and intransitive verbs. For commands and exhortations with first and third person forms see the particles *tue* and *tomo* (cf. chap. 12. 1 and 2.).

a-	1st sg
za-	1st pl inclusive (as above)
uru-	1st pl exclusive (as above)
ere-	2nd sg indicative
e-	2nd sg imperative
pe-	2nd pl indicative or imperative
u-	3rd sg or pl

It should be noted that similar paradigms to the above occur with Intransitive AVs in some cases, (cf. chap. 11.112) and with Transitive Verbs and Verbal Pieces except for the 1st person plural inclusive, (cf. below).

The following occur with Transitive Verbs and Verbal Pieces. They refer at the same time to both the actor and the goal or object of the action, as follows.

<u>PP</u>	<u>Actor</u>	<u>Goal of Action</u>
a-	1st sg	3rd sg or pl
ci-	1st pl incl	do
uru-	1st pl excl	do
ere-	2nd sg	do indicative
e-	2nd sg	do imperative
pe-	2nd pl	do indicative or imperative
u-	3rd sg or pl	do
he-	3rd sg or pl	1st sg
zane-	do	1st pl incl
ure-	do	1st pl excl
ne-	do	2nd sg
pe-	do	2nd pl

<u>PP</u>	<u>Actor</u>	<u>Goal of Action</u>
uru-	1st sg or pl	2nd sg
apu-	1st sg	2nd pl
urupu-	1st pl	2nd pl
he-	2nd sg or pl	1st sg (when post-verbal 'pe' occurs)
ure-	2nd sg or pl	1st pl ( do cf. sect. 9.13)

The double reference of these pronominal forms, to both actor and goal of action, may be clearly seen in the following examples. It may be noted that they are each potentially complete sentences, and that in the case of all but the first, no object element may occur in such a sentence.

*a-petek	'I beat him.'
*he-petek	'He beats me.'
*uru-petek	'I beat you.'
*he-petek pe	'You beat me.'

It should be noted that the paradigm of forms referring to a 3rd person goal is the same as that occurring with Intransitive Verbs and Verbal Pieces except in the case of the 1st plural inclusive form (cf. above). The paradigm of forms referring to a 3rd person actor with non-3rd person goal is the same as that occurring with Stative Verbs and Verbal Pieces, except that it lacks a 3rd person form, (cf. above). Substantially similar paradigms occur with Nominal Phrases (cf. chap. 10.1), Relational Phrases (cf. chap. 11.3) and Transitive Auxiliary Verbs and Down Ranked Sentences (cf. chap. 11. 1 and 10,201).

The following occur with Transitive, Intransitive and Stative verbs in the non-favourite sentence type, 'Inverted Sentence', (cf. chap. 13.1).

i- 3rd sg actor (any object must be 3rd sg or pl)  
 wa- 3rd pl actor ( do )

Reflexive action is indicated within the verbal phrase by the use of a verbal piece with the verbalizer -ze-, plus the paradigm as for intransitive verbs, (cf. sect. 9.213).

As already pointed out in chapter 8.13, the object element of the sentence is never present when there is a pronominal prefix referring to the goal of an action which is second or first person. Similarly, the subject element is rarely present, and if present must have a Pronoun as its Head, if there is a pronominal prefix referring to a first or second person actor or topic.

### 9.13 The Post-Verbal

The Post-Verbal class manifests four elements as follows: the post-verbal in the verbal phrase, (cf. sect 9.1)  
 the post-nominal in the nominal phrase, (cf. chap.10.1)  
 the post-adverbial in the adverbial phrase (cf. chap.11.2)  
 the post-relational in the relational phrase (cf. chap.11.3).  
 Sub-classes of the members of this class might be set up on the basis of such occurrences, but as this does not yield a clear pattern with only a few sub-classes, the potential for such occurrence is noted here, and a full list is given when the elements in question are described.



9.132 Sub-class Two

sole member      tar      'putative, future'

(The alternate form putar occurs occasionally, without conditioning. This form is homophonous with a verb root meaning 'to desire'. It occurs most often in deliberate speech style, or when an utterance is repeated for clarification.)

e.g.	I	go	will	'I will go'	6.11.21.
	a-	-ha	tar		
	PP	head	post		
			sc 2		

9.133 Sub-class Three

The members are as follows. Their diverse potential of functioning as elements in different units is represented in the following chart. It is thought that with continued study, examples might be found which would fill in many of the gaps in the chart.

Form	Meaning	Function - as the element			
		post Vbl	post Rel	post Adv	post Nom
purəŋ	beautiful <sup>26</sup>	x			
wi	again	x			
e	only	x		x	
a'u	more	x	x	x	
ete	almost	x	x	x	
we	still	x	x	x	
etete	many times	x			x
uhu	large	x			x
ahy	painful/very much	x	x	x	x
a'i	little	x	x	x	x
katete	very much	x	x	x	x
katu	good/very much	x	x	x	x

The following members have alternate forms:

wi	again	i	occurs sometimes following consonants
		wi	occurs in any environment
we	still	ywe	occurs sometimes following consonants
		we	occurs in any environment
uhu	large	hu	occurs sometimes following vowels
		uhu	occurs in any environment

26. This sub-class of post-verbals refers to concepts expressed in English by means of adjectives or adverbs. Such 'adjectival' type concepts may also be expressed in Guajajara by a Noun unit having a verb root for its formant element (cf. chap. 10.3) or more commonly as independent sentences with stative verbs. 'Adverbial' type concepts may be expressed by Adverbial or Relational Phrases, (cf. chap. 11. 2 and 3.).

It may be noted that the forms, uhu, purəŋ, katu and ahy are each homophonous with forms analysed as members of the verb root class.

The following are some examples of members of this sub-class:

it	heavy	very much	'It was very heavy'	6.12.5.
i-	-puhyz	katu		
PP	Head	post		
		sc 3		

we	do	again	'We did it again'	6.35.3.
uru-	-zapo	wi		
PP	Head	post		
		sc 3		

it	dawn	much	almost	'It was almost dawn'	2.48.1.
u-	-zekwa	ahy	ete		
PP	Head	post	post		
		sc 3	sc 3		

#### 9.134 Sub-class Four

The members are as follows:

zo	'prohibition'	(Alternate forms: o occurs sometimes after consonants zo occurs in any environment)
rəm	'desiderative'	
pe	'2nd person actor (with 1st person goal of action)	
-z	'negative'	
kwaw	'emphatic negative'	

Neither of the members meaning 'negative' may occur unless the pre-verbal is also present, (cf. sect. 9.11.). The form -z only occurs following a vowel, but the form kwaw may follow either a vowel or a consonant. If the verbal phrase (including any post-verbals of sub-classes one to three) up to this point ends in a vowel, the form -z is generally present whenever the pre-verbal occurs, unless kwaw occurs.

The form pe only occurs when the pronominal prefix he- or ure- also occurs, and the meaning as stated above is attributed equally to the prefix and the post -verbal (cf. sect. 9.123). Compare the following verbal phrases.

\*he- -petek            'He beats me'  
PP head

\*he- -petek pe        'You beat me'  
PP head            post

The following are some examples of post-verbals of this sub-class:

you pl	go out	cause	prohibition	'Don't make it	
pe-	-muew	kar	o	go out'	
PP	head	post	post		6.8.7.
		sc 1	sc 4		

not	he	able	little	not	'He was not able to'
n-	u-	-puner	a'i	kwaw	
pre	PP	head	post	post	3.41.8.
			sc 3	sc 4	

we	leave	want		'We want to leave'	9.11.18.
za-	-hem	rəm			
PP	head	post			
		sc 4			

not	I	hear	well	not	'I didn't hear well'	
n-	a-	-enu	katu	.-z		2.45.12.
pre	PP	head	post	post		
			sc 3	sc 4		

me	help	little	you	'You help me a bit'	
he-	-azutar	a'i	pe		4.6.9.
PP	head	post	post		
		sc 3	sc 4		

#### 9.135 Sub-Class Five

An additional sub-class may be set up, marking the different function of its sole member, -n. This form must occur immediately after the head element, if this ends in a vowel, in the non-favourite 'Inverted Sentence', (cf. chap. 13.1). No other post-verbal may occur following the head in such constructions, and if the head ends in a consonant, no post-verbal occurs. This form does not appear to carry a semantic signal, but rather to be of grammatical significance only.

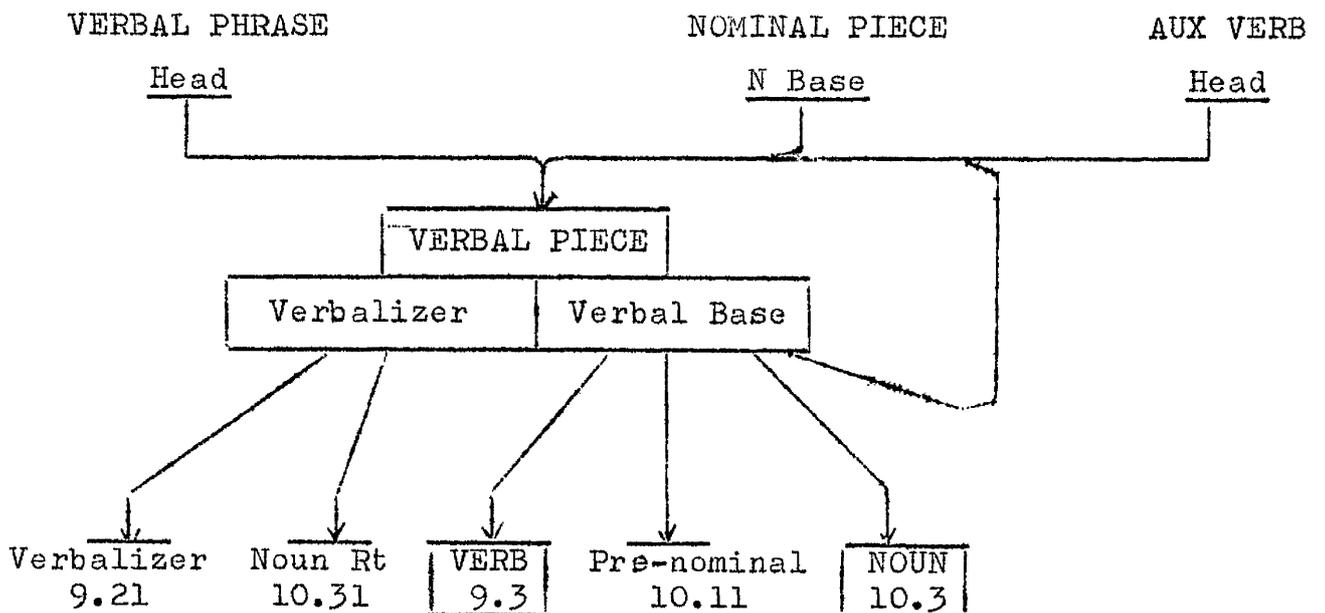
he	go	-		'He goes'	2.72.24.
i-	-ho	-n			
PP	head	post			

This form only occurs when the VPh has a third person pronominal prefix, (cf chap. 13.1).

## 9.2 The Verbal Piece

The Verbal Piece is a unit whose most common function is to manifest the head element in a Verbal Phrase. It also functions as the head element of an Auxiliary Verb, (cf. chap. 11.1), as the nominal base element of a nominal piece, (cf. chap. 10.2), and within itself as the verbal base element of a verbal piece, cf. below.

As regards structural pattern, the verbal piece consists of the two obligatory elements the verbalizer and the verbal base. These relationships may be represented in the following diagram: (cf. also the comprehensive diagram in chapter 3.21.)



All verbal pieces may be classified as being either Transitive, Intransitive or Stative, according to the paradigm of pronominal prefixes with which they may occur, (cf. sect. 9.123). The class is determined in each case by the verbalizer, as is described below.

Verbal pieces may also be cross-classified as belonging to either class H or class I, according to the allomorphs of the pronominal prefixes with which they occur, (cf. sect. 9.122). This division into classes H and I operates in the case of all stems which can occur with pronominal prefixes, i.e. verb roots and bases, noun roots and bases, and relators, (cf. sect. 9.3 and chaps. 10.2 and 3, 11.3).

#### 9.21 Verbalizers<sup>27</sup> and Verbal Bases

The verbalizer element may be manifested by either the class Verbalizer or the class Noun Root, (cf. chap. 10.3 and sect. 9.215). The members of the

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27. The term Verbalizer, as employed in this study, is strictly a label for an element, and for a unit which manifests that element. As fully stated below, it is not necessarily associated with forms which might be described as derivational affixes, but may be associated with noun roots. Furthermore it is not restricted to occurrence with forms that are non-verbal in class membership, but may occur with forms which are already verbal in class. Despite this somewhat unconventional reference, the term seemed the one best suited as a label for the present element.

class Verbalizer are: -mu-, -ru-, -ze-, -wer, -puru-, and -hez. They are described below.

The verbal base element may be manifested by either the unit Verb (cf. sect. 9.3), the unit Noun (cf. chap.10.3), the class Pre-nominal (chap.10.11) or the unit Verbal Piece, here described. Restrictions in terms of verbalizers are described below. The following are examples of these units functioning as this element.

I	self	see	'I was born'	6.31.13.
a-	-ze-	-cak		
PP	VPI			
	Vzr	base:Vb		

I	make	medicine	'I administer medicine'	
a-	-mu-	muhəŋ		1.86.13.
PP	VPI			
	Vzr	base:Nn		

I	make	not	'I erase'	2.49.5.
a-	-mu-	nəŋ		
PP	VPI			
	Vzr	base:pre-nom		

u-	-mu-	zuru	-peka	'He opened it'	3.30.8.
PP	VPI				
	Vzr	base:VPI			
		Vzr	base		
		NRt	Vb		

9.211 The Verbalizer -mu-

The morpheme -mu- has two alternate forms:

-mo- occurs before bases which have only the vowel o  
-mu- occurs elsewhere.

It occurs with transitive, intransitive and stative verbs and verbal pieces, with nouns, and with the pre-nominal. The resulting verbal piece is transitive, and of class I.

e.g.	he	make	yawn	'He opened it' 3.30. 8.
	u-	-mu-	zurupeka	
	PP	VPi		
		Vzr	base:	
			Int VPi	

	you	make	burst	'You burst it' 3.30.13
	ere-	-mo-	-pok	
	PP	VPi		
		Vzr	base:	
			Int Vb	

	he	make	dump	'He dumped it' 3.42.3
	u-	-mu-	-tyk	
	PP	VPi		
		Vzr	base:	
			Tr Vb	

9.212 The Verbalizer -ru-

The morpheme -ru- occurs with intransitive verbs and verbal pieces. The resulting verbal piece is transitive and of class H.

e.g.	he	make	return	'He brought it 3.42.4
	ue-	-ru-	-zewyr	back'
	PP	VPi		
		Vzr	base:	
			Int VPi	

9.213 The Verbalizer -ze-

The morpheme *-ze-* occurs with transitive, intransitive and stative verbs and with transitive and intransitive verbal pieces. The resulting verbal piece is intransitive and of class I. It is often used with a reflexive or 'middle voice' sense, of doing something for one's own benefit, and it is in fact the only way of stating reflexive actions.

e.g.	I	self	see	'I was born'	6.31.13
	a-	<i>-ze-</i>	cak		
	PP	V <sub>Pi</sub>			
		V <sub>zr</sub>	base:		
			Tr V <sub>b</sub>		

	he	-	drummed	'He played the	3.24.1
	u-	<i>-ze-</i>	ma'emupu	drum'	
	PP	V <sub>Pi</sub>			
		V <sub>zr</sub>	base:		
			Int V <sub>Pi</sub>		

9.214 The Verbalizers -wer and -hez

The morphemes *-wer* and *-hez* both occur with intransitive verbal pieces and stative and intransitive verbs. The resulting verbal piece is stative and may be either of class H or I, according to the class of the verb which is functioning as the verbal base. Both these verbalizers have the meaning 'to desire', but *-hez* is generally restricted to desiring something in order to eat it.

e.g.	he	white	want	'He wants to be	3.64.5
	i-	-zuahy	-wer	white'	
	PP	VPI			
		base:	Vzr		
		St Vb			

	he	thing-eat	want	'He is hungry'	1.6.6
	i-	ma'u	-hez		
	PP	VPI			
		base:	Vzr		
		Int VPI			

### 9.215 The Verbalizer -puru, and Noun Roots

. Any noun root may function as a verbalizer with a transitive verb or verbal piece. The resulting verbal piece is intransitive, and remains class H or I according to the class of the noun root.

e.g.	he	mouth	open	'He yawned'	2.72.11
	u-	zuru	peka		
	PP	VPI			
		Vzr	base:		
		NRT	Tr Vb		

The noun root which functions as a verbalizer in this way always refers to the goal or object of the transitive verb which it precedes.

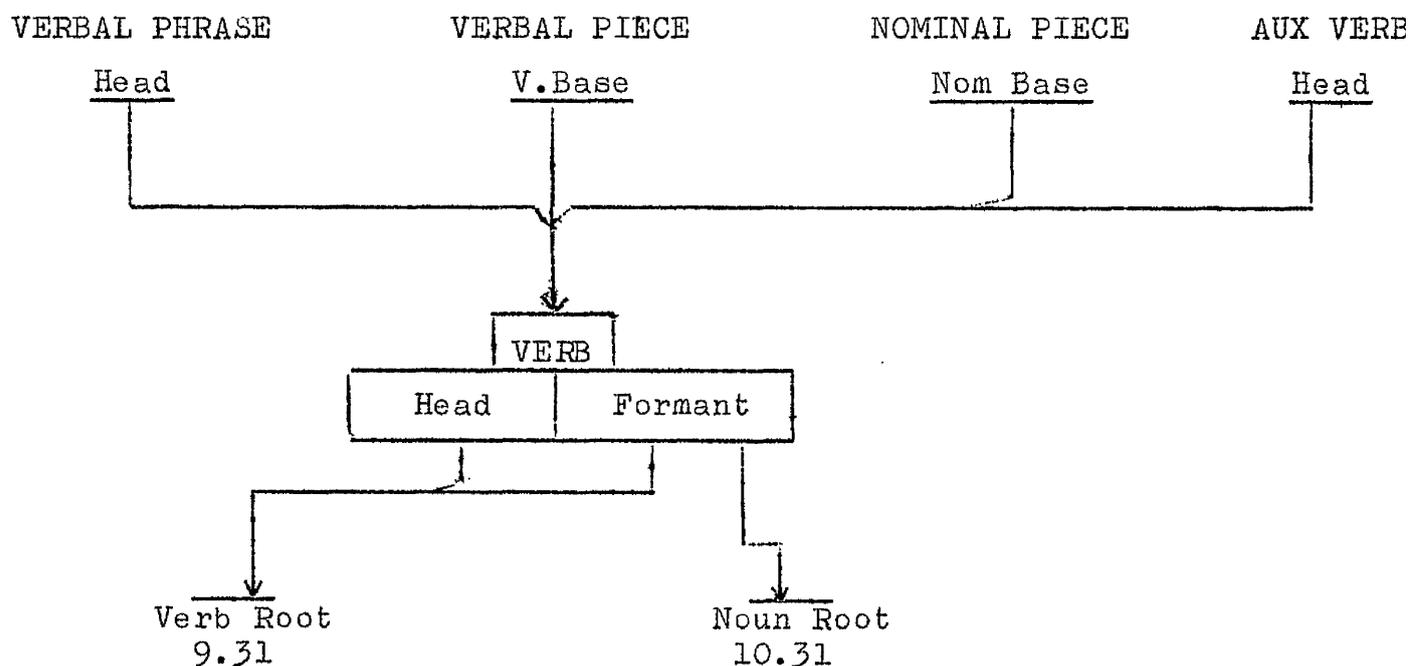
The verbalizer -puru- acts in just the same way as the above mentioned noun roots, preceding transitive verbs or verbal pieces, to form an intransitive verbal piece, in this case of class I. The meaning of -puru- is 'unspecified person(s)', and it always refers to the goal or object of the verb which it precedes.

e.g.	he	people	quarrel with	'He quarreled with people'
	u-	-puru-	mutyry'ym	
	PP	VPi		3.31.5
		Vzr	base:	
			Tr VPi	

### 9.3 The Verb

The Verb is a unit whose most common function is to manifest the head element in a verbal phrase. It also functions as the head element of the Auxiliary Verb (cf. chap. 11.1), as the verbal base of the verbal piece, (cf. sect. 9.2), and as the nominal base element of the nominal piece, (cf. chap. 10.2).

As to structural pattern, the verb consists of two elements, the head and the formant. Only the former is obligatory. These relationships may be represented in the following diagram, (cf also the comprehensive diagram in chapter 3.21).



As with verbal pieces, so all verbs must be classified as either transitive, intransitive or stative, and as either of class H or class I, according to the pronominal prefixes, and their allomorphs, with which they occur.

The head element is always manifested by the verb root class. The formant element may be manifested either by a verb root, (cf. sect. 9.31), or by a noun root (cf. chap. 10.31).

The verb root functioning as formant may be the same verb root as that functioning as the head element, in which case the formant comes first. If the verb root functioning as formant is of more than two syllables, only the first two occur. If the

second syllable (or the only syllable in mono-syllabic roots) finishes in a consonant, this also does not occur. This construction generally refers to repeated action.

e.g.	he	grasp	grasp	'He grasped	4.11.8
	u-	-pyhy	-pyhyk	repeatedly'	
	PP	Vb			
		Fmt	Head		
		Vrt	Vrt		

When the formant is manifested by a noun root, this always comes first, and the head is never a transitive verb root.

e.g.	lip	speak		'to whistle'	1.58.6
	temy	-ze'eŋ			
	Fmt	Head			
	NRt	Vrt-Int			

When the formant is manifested by a verb root which is not a repetition of the root functioning as the head element, there are not always formal grounds for deciding which is functioning as head and which as formant. When the two roots belong to different classes (e.g. the first transitive, the second stative,) then that root which is of the same class as the resulting compound form is taken to be the head element, and that which is different to be the formant. Since in such cases the first root is generally the head, then by analogy, in ambiguous cases the first root is also assumed to be the head.

e.g.	put	good		'to keep safe'	1.54.17
	-mono	-katu		Transitive verb	
	Hd	Fmt			
	Tr V Rt	St V Rt			

In some cases roots functioning as either the head or formant element occur in alternate forms which consist of fewer <sup>phonemic units</sup> ~~phonemes~~ than are present when that root functions as another element.

e.g. the roots -ecak, to see, and -katu, to be good, occur together in the form -ecakatu, to be surprised at.

This appears to be the result of the phonological rule that syllable codas occur only word final, (Cf. chap. 7.31). It is not possible to predict which of two consonants which would otherwise be contiguous, will not occur under these conditions.

### 9.31 The Verb Root

The verb root is an open class of forms which function most commonly as the head element in the Verb unit. The class functions also as the verb formant element in the Verb, (cf. sect. 9.3), and the noun formant element in the Noun, (cf. chap. 10.3).

As previously indicated, all verb roots must be classified as either Transitive, Intransitive or Stative (according to the paradigm of pronominal prefixes with which they may occur, cf. sect. 9.123.) and as either class H or class I, (according to the allomorph of the pronominal prefix with which they occur, (cf. sect.9.122)).

No further description of this class is attempted though it might be divided into a number of small sub-classes e.g. to mark forms which may occur as the head element of the Auxiliary Verb, etc. Specimen lexicon listing, including mention of the six sub-classes specified above, might be as follows.

Form	Meaning	Sub-class
-u <sup>28</sup>	to eat	Tr/I
-ahy	to be painful	St/H
-ecak	to see	Tr/H
-ho	to go	Int/I
-katu	to be good	St/I
-ur	to come	Int/H

### 9.32 Alternate Forms

Some verb roots (and other roots) have alternate forms which occur when they are accompanied by particular affixes. Individual cases which cannot be stated as generalised rules, (similar to the alternate form of the English noun child, before the plural suffix,) are not exhaustively listed in this description,

- 
28. Whenever verb roots function within the units Verbal Phrase or Auxiliary Verb, they are invariably prefixed. Under certain circumstances, e.g. when functioning within a Down Ranked Sentence, roots of class I may occur without a prefix (cf. chaps. 10.2 and 11.4.). These instances are very rare, and it has therefore been felt better to treat all verb roots as bound, since they are so in the vast majority of their occurrences.

though some of them are noted in passing when they occur in examples. The following however is a general statement of certain alternate forms which occur widely among both verb and noun roots.

All roots which begin or end with a vowel have alternate forms without that vowel when they are affixed by forms which end or begin respectively with the same vowel.

e.g. the verb root -apyk, to sit down, when prefixed by the 1st singular pronominal prefix a- occurs in the form -pyk, the complete form being apyk 'I sit down'.

Verb roots which begin with the vowel e have alternate forms without that vowel following the pronominal prefix 'ci- (1st plural inclusive).

e.g. -ecak, to see, but cicak, we inclusive see .  
 Certain verb roots which begin with the consonant z have alternate forms without that consonant following affixes ending with the vowels i or u.

e.g. -zuka, to break, but ciuka, we inclusive break.

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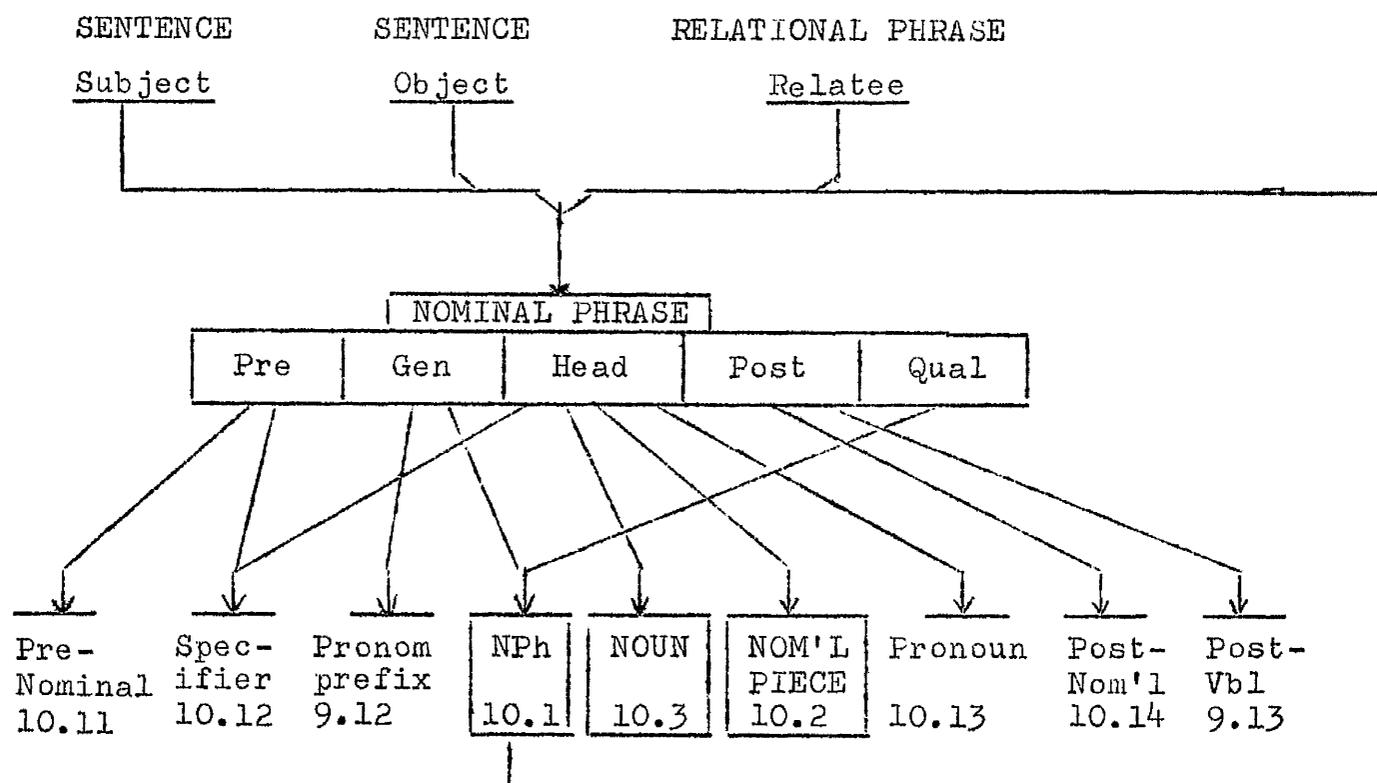
CHAPTER 10    NOMINAL UNITS

10.1    The Nominal Phrase

The Nominal Phrase, (NPh), is a unit whose most common function is to manifest the Subject and Object element of the Sentence, (cf. chap.8). It also functions as the Relatee element in the Relational Phrase (cf.chap.11.3), and as the Genōtival or the Qualifier element within the nominal phrase itself.

As to structure, it consists of one or more of the following elements: Pre-nominal, Genōtival, Head, Post-nominal and Qualifier. Of these, only the head element is obligatorily present. Two pre-nominals and two post-nominals have been found in a few NPhs, but no more than one of the other elements, except of course for the potential of infinite inclusion allowed by the possible occurrence of a nominal phrase as an element within itself, cf. below. The order in which these elements occur is always that in which they are listed above.

The function and structure of the NPh may be represented in the following diagram: (cf. also the comprehensive diagram in chapter 3.21.)



### 10.101 The Pre-Nominal Element

The pre-nominal element may be realised by either the pre-nominal class (cf. sect. 10.11) or by the specifier class, (cf. sect. 10.12). There is thought to be no structural restriction upon the occurrence of both together in one NPh, but no examples have been found of this.

### 10.102 The Genitival Element

The genitival element may be realised by either a pronominal prefix, (cf. chap. 9.12) or by a nominal phrase.

The following is a paradigm of the pronominal prefixes which may occur. See chapter 9.122 for alternate forms of each prefix.

he-	1st	sg	
zane-	1st	pl inclusive of speaker and person addressed	
ure-	1st	pl exclusive of person addressed	
ne-	2nd	sg	
pe-	2nd	pl	
u-	3rd	sg or pl reflexive	
i-	3rd	sg other than actor or topic of sentence	
wa-	3rd	pl other than actor or topic of sentence	
te-	3rd	sg or pl unspecified, class H only	
re-	3rd	sg or pl specified, class H only	

e.g.	*he-	mukaw	my gun
	*u-	mukaw	his own gun
	*i-	mukaw	his (the other person's) gun
	*te-	mi'u	(somebody's) food
	*mane re-	mi'u	Mancel's food

It should be noted that the first five forms of this paradigm are identical in form and meaning with those of the paradigm that occurs with the stative verb as actor, the transitive verb as 3rd sg/pl actor, transitive auxiliary verb and down-ranked sentence, and the relational phrase, (cf. chap. 9.121). Differences in the meaning of the forms u- and i- from their meaning in other paradigms should also be noted.

The pronominal prefixes and the nominal phrase are in most cases mutually exclusive in their manifestation of the genitival element.

e.g.	my	parafin		'My parafin'	2.48.8
	her-	-atainy			
	Gen	Head			
	PP				
	ant	hole		'Hole of ant'	6.23.20
	tahyw	kwar			
	Gen	Head			
	NPh				

When the head element of the NPh is of class H and a nominal phrase is manifesting the genitival element, then the pronominal prefix re- 'specified 3rd person' must also occur prefixed to the head. The PP wa- '3rd pl' may also occur prefixed to the head following a NPh of either class H or I functioning as the genitival element. When the prefixes occur in this way they are regarded as part of the same genitival element which then has a 'double' manifestation.

e.g.	mother	her	pet	'Mother's pet'	2.3.13
	mamaz	re-	-imaw		
	Gen		Head		
	NPh	PP			
	monkey	their	path	'The path of the	
	ka'i	wan-	ape	monkeys'	4.10.2
	Gen		Head		
	NPh	PP			

The nominal phrase which functions as the genitival element may have its own pronominal and genitival elements, but no instances have been found of the elements qualifier or post-nominal in such a down-ranked NPh. The head element of such a NPh must be manifested

by either a noun or a nominal piece. An infinite series of such included, down-ranked NPHs is regarded as structurally possible, but no instances have been found of more than three such genitival elements in one NPh.

e.g. Mair their food bone 'A bone from the  
 mair wane- -mi'u kaŋwer food of Mair  
 Gen Head (and his party)'  
 NPh  
 Gen Head 6.1.1  
 NPh PP  
 Head

'The food of that particular parrot' 6.19.5  
 that certain parrot its food  
 kwez omo arar re- -mi'u  
 Gen Head  
 NPh PP  
 pre pre Head

In such an example as the second, there is no formal indication whether either or both of the pre-nominal elements should be analysed as referring to the main head of the phrase, (-mi'u), or to the genitival element (arar). In such ambiguous cases, phonological emphasis is the only factor which can give resolution, (cf. chap.5.16). In the above case they are both analysed as within the NPh which is functioning as a genitival element.

The semantic category associated with the genitival element is generally that of attribution or possession. It may be noted that there is no necessary formal distinction between two NPhs, the first genitival to the second within one element, and two NPhs, each a different element of the sentence, (though the PP re- or wa- may

occur between the two phrases, in the former case.)  
Phonological or semantic factors generally relieve potential ambiguity however, (cf. chap. 5.16.).

### 10.103 The Head Element

The head element may be realised by a specifier (cf. sect. 10.12), a noun (cf. sect. 10.3), a nominal piece (cf. sect. 10.2), or a pronoun (cf. sect. 10.13). Specifiers and pronouns functioning as head may not be accompanied by genitival or qualifier elements, but may be accompanied by pre-nominal and post-nominal elements. Nouns and nominal pieces may be accompanied by any of the other elements, and it is thought to be structurally possible for all five elements to occur in one phrase, though no examples of this have been found. The following are some examples of different head elements.

e.g.	not ni'i pre	your ne Gen	mother hy Head Nn	'Not your mother'	3.26.9
	I ihe Head Pronoun	the one ae post		'I, (as previously indicated.)'	6.11.10
	some omo Head spec	ones - ŋwer post		'Some'	6.3.4

e.g.	pig	bathing place	2.76.21
	kure	zahakaw	
	Gen	Head	
		NPi	

#### 10.104 The Post-Nominal Element

The post-nominal element may be manifested by either or both the post-verbal class (cf. chap. 9.13) and/or the post-nominal class, (cf. sect. 10.14). The members of the post-verbal class which may occur are the following, (cf. chap. 9.133).

a'i	'little'
ahy	'very'
etete	'many'
katete	'very real'
katu	'good'
uhu	'big'

e.g.	'Little thing to use as his hammock'	6.6.7	
his	hammock	as	little
i-	kyhaw	wəm	a'i
Gen	Head	post	post
		nom	vbl

#### 10.105 The Qualifier Element

The qualifier element must be manifested by a down-ranked nominal phrase, whose head element is manifested by a nominal piece or a noun. The latter is only rarely found functioning in this way. Such a down-ranked NPh may have its own post-nominal element, and it is thought that there is no structural

restriction upon the occurrence of the pre-nominal and genitival elements as well, but no examples have been found. No qualifier element however may occur in such a down-ranked NPh functioning as a qualifier. The following are some examples.

e.g.	mother	pet	chicken	'Mother's pet. i.e. a	
	mamaz	reimaw	zapukaz	chicken'	2.3.13
	Gen	Head	Qual:NPh		
			Head Nn		
	child	dead ones	little	'little dead	
	ta'yr	mənoʔwer	a'i	children'	9.11.3
	Head	Qual:NPh			
		Head:NPi	post		

#### 10.11 The Pre-Nominal Class

The pre-nominal class most commonly functions as the pre-nominal element in the nominal phrase. It may also function as the base element in a verbal piece, (cf. chap. 9.2) as the pre-adverbial element in the adverbial phrase, (cf. chap. 11.2), or as the pre-relational element in the relational phrase, (cf. 11.3). It consists of two members:

nan	'not'
ni'i	'not, not even'

The following is an example.

e.g.	not	your	mother	'not even your	3.26.9
	ni'i	ne-	-hy	mother'	
	pre	gen	head		

### 10.12 The Specifier Class

The specifier class most commonly functions as the pre-nominal element in the nominal phrase, and it may also function as the head element in that phrase. It comprises the following members.

omo	'a certain'
ma'e	'some, any'
pitei	'one'
mokoz	'two'
mārən	'a few'
kwez	'this/that, remote'
ko	'this/that, near'
'əŋ	'this/that, low'
'aw	'this/that, high'
'az	'emphatic, exclamative'
na	'emphatic, exclamative'

Any Portuguese numeral may also function as a member of this class. They are not included in this study, because they are unassimilated loan words. It may be noted that there are no other Guajajara numerals than those listed above.

Two specifiers may occur in a NPh, the following combinations have been found: kwez preceding omo, and na or 'az preceding kwez, ko, 'əŋ or 'aw.

The following are some examples of this class.

e.g.	two	monkey-young	'Two young monkeys'	4.11.8
	mokoz	ka'ia'yr		
	pre	head		
	that	certain	parrot	'That particular
	kwez	omo	arar	parrot'
	pre	pre	head	6.19.5

10.13 The Pronoun Class

The pronoun class most commonly functions as a particle element in sentences, (cf. chap. 12.41), but it may also function as the head element of a NPh. It comprises the following members.

ihe	1st sg
zane	1st pl, inclusive of the speaker and person addressed
ure	1st pl, exclusive of person addressed
ne	2nd sg
pe	2nd pl
a'e	3rd sg or pl

It may be noted that the first person plural and the second person pronouns are of identical lexical transcription to the corresponding pronominal prefixes. They are not homophonous however, because being words, not affixes, they are often foot-final, and enjoy a greater degree of stress, (cf. chap. 4)

It may also be noted that pronouns are not used regularly to refer to an actor or goal of action which is clear from the context but not otherwise indicated within a sentence, as is the case in English. Rather when they function as the head element of a NPh, they are emphatic in character. Their use as a particle is emphatic only to a very slight degree, and is more stylistic in significance. The same pronoun may occur as both the head element of a NPh and as a particle in the same sentence.

e.g.	'It was I myself who came'					6.11.10
	I	myself	came	I	-	
	ihe	ae	azur	ihe	no	
	subj		VPh	pt	pt	
	NPh					
	Head	post				
	pronoun					

#### 10.14 The Post-Nominal Class

The post-nominal class functions most commonly as the post-nominal element in the nominal phrase. One member of the class, rən 'similar to', may also function as the post-adverbial or post-relational element in those phrases respectively (cf. chap.11.2 and 3). The class comprises the following members, listed with their meanings and examples of their usage.

ae	'emphatic'	ihe ihe ae	'I' 'I myself'
amyr	'deceased'	heru heru amyr	'my father' 'my late father'
aŋaw	'experimental'	ta'yr ta'yr aŋaw	'son' 'adopted son'
ete	'real'	ze'eŋ ze'eŋ ete	'speech' 'the Guajajara a language'
-kwer	'former'	kaŋ kaŋwer	'bone (while in body)' 'bone (apart from body)'

(alternate forms:

- ŋwer following z, replacing m, and generally following forms containing the vowel ə
- wer following ŋ and k
- er following other consonants
- kwer following other vowels.)

-kwer	'collective'	awa awakwer	'man' 'mankind'
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(has alternate forms as for -kwer 'former' above.)

mymaw	'domesticated'	zawar	'beast'
		zawar mymaw	'dog'
por	'dweller in'	ka'a	'forest'
		ka'a por	'forest dweller'
rən	'similar to'	arapuha	'deer'
		arapuha rən	'goat'
-romo	'functioning as'	hekuzar	'substitute'
		hekuzaromo	'thing used as substitute'

(alternate forms:

-omo occurs generally following consonants  
-romo occurs anywhere)

wəm	'intended'	cirur	'trousers'
		cirur wəm	'cloth for trousers'
ywar	'dweller beside'	pinare	'the river Pindaré'
		pinare ywar	'Pindaré bank dweller'

These forms are mutually exclusive in their manifestation of the post-nominal element, but they may be followed by a member of the post-verbal class, also manifesting the post-nominal element.

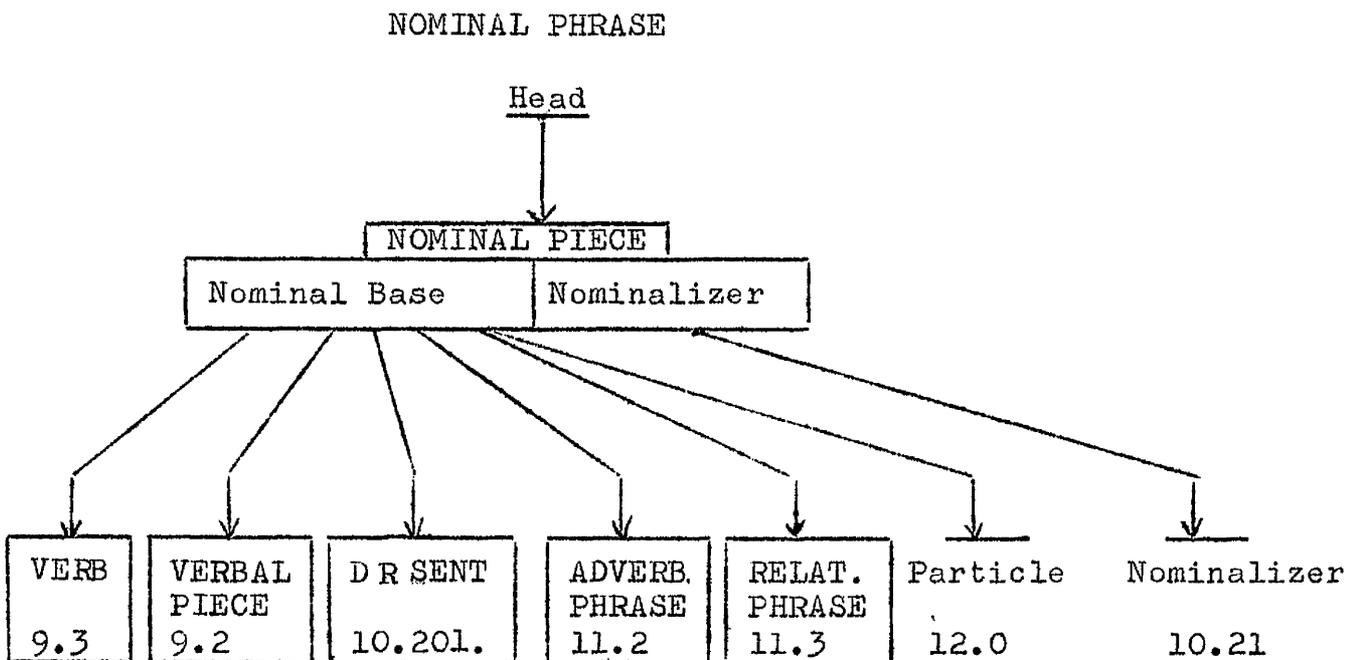
e.g.	'Little thing to use as a hammock'			6.6.7
	hammock	as	little	
	kyhaw	wəm	a'i	
	Head	post	post	
		nom	vbl	

Three members only of this class are regarded as affixual, namely, -kwer, -kwer and -romo. These are classed as affixes because they combine with the noun they follow to make close-knit phonological sequence, and the final syllable of that noun does not usually enjoy heavy stress (cf. chap. 4 for stress and chap. 3.2. footnote No. 7, for phonological criteria and the recognition of the word.) The other forms do not exhibit such close phonological fusion with the preceding noun, and are therefore regarded as separate words.

## 10.2 The Nominal Piece

The nominal piece is a unit whose only function is to manifest the head element of the nominal phrase. As to structural pattern, it consists of the two elements the nominalizer and the nominal base, both of which occur obligatorily.

The structure and function of the nominal piece may be represented in the following diagram: (cf also the comprehensive diagram in chap. 2.31.).



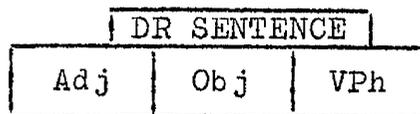
Nominal pieces must be classified as belonging to either class H or class I, according to the allomorph of the pronominal prefixes with which they may occur, (cf. chap. 9.122). This classification may be determined

by either the nominalizer or the nominal base element and will be noted as each nominalizer is described.

#### 10.201 The Down Ranked Sentence

A down ranked sentence is a unit which exhibits relationships typical of sentences, and is composed of some of the same elements as a sentence, but is functioning as an element in a unit at a lower rank, i.e. either as the base element in a nominal piece, or as the head element in a DRS Phrase, (cf. chap. 11.4). A down ranked sentence never includes the elements Subject, Auxiliary Verb or Particle, but it always has a Verbal Phrase, and may have an Object (when the verb is transitive) and one or more Adjuncts (which however may not be DRS Phrases). A full description is given below of any additional restrictions upon down ranked sentences as they occur with particular nominalizers: see also chapter 11.4.

The structural pattern of a down ranked sentence, with the elements in their most common order, may be represented in the following diagram. Such a sentence is not assigned a separate place within the hierarchy however, since it is only a particular form of the unit 'Sentence', and as such is included in that unit in the statement of its relations within the hierarchy.



The paradigm of pronominal prefixes which may occur within the verbal phrase in a down ranked sentence is as follows.

With transitive verbs or verbal pieces, referring to the goal or object of the action expressed by the verb.

he-	1st sg	
zané-	1st pl	inclusive of speaker and person addressed
ure-	1st pl	exclusive of person addressed
ne-	2nd sg	
pe-	2nd pl	
i-	3rd sg	
wa-	3rd pl	
re-	3rd sg	specified, class H only.

It should be noted that there is considerable similarity between this paradigm and that which occurs with the stative VPh and with the transitive VPh with 3rd person actor (cf. chap.9.123), with the transitive AV (cf. chap. 11.111), the NPh (cf. sect.10.102) and the RPh (cf. chap.11.302), the forms for the first and second person being identical in each case. For alternate forms of prefixes, see chapter 9.122.

As with the favourite sentence no object element may occur in the DR Sentence when first or second person pronominal prefixes occur within the verbal phrase, (cf. chap. 8.13). The 3rd singular form i- may not co-occur with an object element, but the 3rd singular specified form, re-, must co-occur with an object element when the verb is of class H. The 3rd plural form, wa-, may co-occur with an object

element with a verb of either class H. or I. (Compare also the co-occurrence of these prefixes with a genitival element within the NPh, sect. 10.102.)

With intransitive and stative verbs and verbal pieces there is no corresponding full paradigm of forms for all persons, (see chapter 9.121 for a chart showing the forms that occur.) Instead, details of forms that occur with particular nominalizers, etc. will be given as these are described below. A pronominal prefix does not occur obligatorily within the stative and intransitive verbal phrases when these function as an element in a down ranked sentence.

#### 10.21 Nominalizers and Nominal Bases

The nominalizer element must be manifested by the class nominalizer. This class consists of the following members, which are described below:

-mi-, -har, -arar, ma'e, -haw, -awer, wəm, pyr, pyrer, and -kwer.

The nominal base element may be manifested by either the verb unit, (cf. chap. 9.3), the verbal piece unit, (cf. chap. 9.2.), the particle class, (cf. chap. 12.0), the adverbial phrase unit, (cf. chap. 11.2), the relational phrase unit, (cf. chap. 11.3), or a down ranked sentence (cf. sect. 10.201). Restrictions in terms of nominalizers are described below.

10.211 Nominalizer -mi-

The form -mi- may only occur prefixed to a transitive verb or verbal piece, and results in a nominal piece which is of class H. Such a nominal piece is always preceded by a genitival element within the NPh in which it occurs. The reference of this construction is always to the goal or object of action expressed by the verb or verbal piece.

e.g.	his	thing	marry	'His wife'	4.4.2
	he-	-mi-	-reko		
	Gen	Head:NPi			
		Nzr	base:tr vb		

				'Their former dance-rattle'	6.30.19
	their	thing	dance-with	former	
	wane-	-mi-	-ruzemuici	-kwer	
	Gen	Head:NPi		post-nom	
		Nzr	base:Tr VPi		

10.212 Nominalizers -har and -arer

The forms -har and -arer have a common distribution, (the form -arer is taken to be a joint representation of forms otherwise -har plus -kwer 'former' cf. 10.14). They may occur with a relational phrase (cf. sect. 10.3), an adverbial phrase, (cf. chap. 11.2), a particle, (cf. chap. 12) or a down ranked sentence containing a transitive verbal phrase (cf. sect. 10.201). The meaning of the construction may be summarised as 'agentive'.

The only particles which have been found functioning as verbal bases are tue and aze, and it is not known whether other particles may function in this way. A considerable number of adverbs have been found in adverbial phrases which are functioning as nominal bases, and it is therefore assumed that there is no structural restriction upon all members of this class doing so. Any relational phrase may so function. Examples include the following.

e.g.	true	one		'A true/real one'	6.32.14
	aze	-arer			
	pt	nzr			

				'The one who lives in the sky'	6.10.5
	in sky	one			
	ywate	-har			
	Aph	nzr			

						'The one that still has its husk'	2.95.11
	his	husk	with	yet	one		
	i-	-apirer	rehe	we	-har		
	Rel Ph				nzr		

The down ranked sentence which may function with -har and -arer as a nominal base consists of the following sentence-level elements; an obligatory transitive verbal phrase, an optional object, and an optional adjunct. The object always precedes the VPh and any adjunct generally precedes both the other elements, but in a few cases has been found following the VPh.

e.g. 'The one who had killed him' 6.29.24

him	kill	one	
i-	-zuka	-arer	
N Base		nzr	
DRS			
VPh	tr		

'The one who told the white men' 6.33.4

white-man	pl	tell	one
karaiw	wa-	-mume'u	-har
N Base:DRS			nzr
obj		VPh	tr

'The one who had planted the banana there' 3.68.17

there	at	banana	plant	one
a'e	pe	pako	tym	-arer
N Base:DRS				nzr
Adj		obj	VPh	tr

A nominal piece in which the nominalizer is -har or -arer may not be preceded by a genitival element in the nominal phrase.

### 10.213 The Nominalizer ma'e

The form ma'e may occur only with a down ranked sentence containing an intransitive or stative verb. The meaning of the construction may be described as 'agentive'.

The down ranked sentence which functions as a nominal base preceding ma'e consists of the following sentence-level elements: an obligatory intransitive or stative verbal phrase and an optional adjunct. Any adjunct generally precedes the VPh.

In most cases, a pronominal prefix occurs with the verb or verbal piece in this construction. This may be either u- or i- for both stative and intransitive forms. Some instances have been found in which no such prefix is present. Such a prefix is regarded as part of the VPh. The following are examples.

e.g.	big	good	one	'One that really is big'
	uhu	katu	ma'e	
	N Base:		nzr	
	DRS			2.76.6
	VPh	st		

	'The one who talks to him'				6.26.17
	him	to	he	talk	one
	iz-	upe	u-	ze'eŋ	ma'e
	N Base:	DRS			nzr
	Adj		VPh	int	

A nominal piece in which the nominalizer is ma'e may not be preceded by a genitival element in the nominal phrase.

#### 10.214 The Nominalizers -haw, -awer and wəm

The forms -haw, -awer and wəm have a similar distribution. (The form -haw has two alternate forms: -aw following a consonant, -haw following a vowel. The form -awer is taken to be a joint representation of forms otherwise -haw plus -kwer 'former', cf. 10.14. It may be pointed out that a form homophonous with wəm is classified as a post-nominal, cf. 10.14.)

These forms occur with a down ranked sentence having transitive, intransitive or stative verbal phrases. The form -haw has also been found with an adverbial phrase, the one adverb, nezewe, having been observed to function in this way.

e.g.	thus	thing	'A thing like this'	6.26.21
	nezewe	-haw		
	Adv Ph	nzr		

The most common meaning of constructions including -haw and -awer may be summarised as 'instrumental' referring to an object used during action, but reference may also be to the action itself, or its results. Constructions including wəm have a similar meaning, but generally refer to actions in the future.

The down ranked sentence which functions as a nominal base preceding -haw, -awer or wəm must consist of a verbal phrase, and if this is transitive, an object may occur preceding this. It is thought that an adjunct may also occur in such a down ranked sentence, parallel to such forms as are found preceding -har and -arer.

If the verbal phrase is transitive, a pronominal prefix must be present as part of the verbal phrase and the paradigm of forms which may occur is listed in section 10.201. In such cases, no genitival element may precede the nominal piece within the nominal phrase.

e.g. 'the fact of his being killed' or 'the killing of him' 6.23.5

him kill fact  
i- -zuka -haw  
N.Base:DRS nzs  
VPh tr

'The fact that my gun was carried' or 'the carrying of my gun' 2.95.18

my gun it carry fact  
hemukaw he- -raha -awer  
N Base:DRS nzs  
Obj VPh tr

If the verbal phrase is intransitive or stative, the nominal piece containing the DRS as its base element may be preceded by a genitival element. This may

take the form of a down ranked NPh or of a pronominal prefix, (cf. sect. 10.102). In such cases the verbal phrase has no pronominal prefix element.

e.g. pig bathe thing 'Bathing place of pigs' 2.76.21  
kure zahak -aw  
Gen Head:NPi  
NPh Base:DRS nzs  
VPh int

my remove hair thing 'My sissors' 1.52.19  
here- zepin -aw  
Gen Head:NPi  
Base:DRS nzs  
VPh int

In other cases a pronominal prefix occurring immediately preceding a DRS may be analysed as part of the verbal phrase within that DRS, on the basis of its apparent semantic reference.

e.g.	he	go	thing/future	'The place	
	i-	-ho	wəm	where he will	
	NBase:DRS		nzr	go'	
	VPh				7.23.2
	PP	Head			

If the pronominal prefix is i- 3rd person, there is no formal indication whether it is to be analysed as the pronominal prefix element of the verbal phrase within the DRS, or as the genitival element of the NPh within which the DRS occurs, since this prefix may occur in either situation. No ambiguous cases have been noted with other prefixes.

#### 10.215 The Nominalizers pyr and pyrer

The forms pyr and pyrer may occur with transitive verbs and verbal pieces. (pyrer is taken to be a joint representation of pyr plus -kwer 'former' cf. sect.10.14.) The construction always refers to an object which has undergone or will undergo the action of the verb or verbal piece.

e.g.	'something which has been beaten'		
	beat	thing	
	*petek	pyrer	
	N Base	nzr	
	Vb	tr	

A nominal piece containing pyr or pyrer may not be preceded by a genitival element within the nominal phrase, nor be followed by a qualifier element. Such a construction generally functions as a down-ranked nominal phrase which

is manifesting the qualifier element in another nominal phrase.

e.g. 'Rice, which is to be planted'

rice	plant	thing
*acapo	tym	pyr
Head	Qual:NPh	
	Head:NPi	
	Base	nzr
	Vb tr	

#### 10.216 The Nominalizer -kwer

The form -kwer occurs with intransitive and stative verbs and intransitive verbal pieces. -kwer has the following alternate forms:

-ŋwer	following z, replacing m, and generally following forms containing the vowel ə
-wer	following ŋ and k
-er	following other consonants
-kwer	following other vowels

The form is homophonous with two forms analysed as post-nominals in section 10. 14. but is distinct in meaning and function.

-kwer refers to an entity of which the action or state of the verb or verbal phrase is predicated.

e.g.	die	thing	'thing that has died: a corpse'
	məno	-ŋwer	
	NBase	nzr	9.11.3
	Vb int		

	beautiful thing	'a beautiful thing'
* purəŋ	-wer	
NBase	nzr	
Vb st		

10.216

A nominal piece containing -kwer may not be preceded by a genitival element within the NPh, nor be followed by a qualifier element. Such a construction generally functions as a down ranked nominal phrase which is manifesting the qualifier element in another NPh.

e.g.	'A broken piece of wood'				2.48.11
	certain	wood	break		thing
	omo	ywyrā	'ar		-er
	pre	Head	Qual:NPh		
			Head:NPi		
			N Base		nzr
			Vb int		



Nouns fall into three groups, according to whether they must, may or may not occur with a genitival element within the nominal phrase. It is found convenient to label these groups Class M, Class N, and Class O, respectively, for ease of reference. Nouns of classes M and N must be further cross-classified into classes H and I, according to the allomorphs of the pronominal prefixes with which they may occur, (cf. chap. 9.122).

The head element is always manifested by the Noun Root class. The formant element may be manifested by either the noun root class or the verb root class, (cf. chap. 9.31).

The noun root which is functioning as the head element may also occur as the formant element, in which case the first occurrence is regarded as that of the formant. If the root is of more than two syllables, only the first two occur when it functions as a formant. If the second syllable, (or the only one if it is a monosyllabic root) ends in a consonant, this also does not occur when it functions as a formant. In this respect the noun unit is parallel to the verb unit, (cf. chap. 9.3.). Such a construction generally refers to a group of the entities in question.

e.g.	animal	animal	'A group of animals'	3.61.2
	mia	miar		
	Fmt	head		
	Nrt	Nrt		

When the formant is a verb root, it always occurs in second place.

e.g.	wood	flat	'board'	1.54.18
	wyra	-pew		
	Head	Fmt		
	Nrt	Vrt		

When the formant is a noun root different from that of the head element, there are not always formal grounds for deciding which is functioning as head and which is formant. The class of the noun (i.e. as either class M, N or O, and H or I,) is always the same as that of the first noun root, and for this reason, the first is analysed as head and the second as formant.

e.g.	palm nut	kernel	'palm nut kernel'	
	wəhu	'yz		
	Head	Fmt		1.11.14
	N Rt	N Rt		

In some cases either the root or the formant may be manifested by a root in an alternate form which has fewer <sup>phonematic units</sup> ~~phonemes~~ than are present when the root functions as another element. e.g. the roots, kyhaw, 'hammock' and -həm, 'cord', occur together in the form:

hammock	cord	'hammock cord'	1.17.5
kyhə	-həm		
Head	fmt		

Compare also the verb unit for a similar phenomenon<sup>gn</sup>, (cf. chap. 9.3).

### 10.31 The Noun Root

The noun root is an open class of forms which function most commonly as the head element in the noun unit. The class also functions as the formant element in the noun unit, as the particle element

in the sentence (cf. chap. 12.4), as the verb formant element in the verb unit, (cf. chap. 9.3), and as the verbalizer element in the verbal piece unit, (cf. chap. 9.2).

As previously indicated, all noun roots may be classified into three classes as follows.

Class M: must occur with a genitival element in the NPh

Class N: may occur with a genitival element in the NPh

Class O: may not occur with a genitival element in the NPh

The choice of labels for these classes is purely arbitrary.

Roots of classes M and N may be further cross-classified into the two classes H and I, according to the allomorphs of the pronominal prefixes with which they occur, (cf. chap. 9.122). The majority of roots of class M are also of class H and the majority of roots of class I are also of class N.

Roots of class O include the names of people, places and many natural objects, especially birds, animals, etc. The notion of possession, normally indicated by the genitival element within the nominal phrase, is in such cases indicated as follows. The class O root functions as the qualifier element in the NPh, and the preceding head element is manifested by a root of class N or M, which refers to the generic group of which the class O root is a member. The notion of a chicken possessed by a mother, for example, is found expressed as follows:

e.g.	'Mother's domestic animal, a chicken'		2.3.13
	mother	domestic animal	chicken
	mamaz	reimaw	zapukaz
	Gen	Head	Q:al

If the group O root is not a member of a generic group the form ma'e 'unspecified object' (class N/I) may be used. A number of noun roots are classed as O since they have not been found with genitivals, but this may in some cases be due to semantic factors, rather than structural ones, as for example, the roots, kwarahy 'sun', and ywytu 'wind'.

No further description of noun roots is attempted though they might be divided into a number of small sub-classes to mark differences in potential distribution, e.g. those which may occur as the particle element in the sentence, (cf. chap. 12.41). Lexical listing would include reference to the above-mentioned sub-classes.

e.g.	Form	Meaning	Sub-class
	zapukaz	chicken	O
	mukaw	gun	N/I
	ci	nose	M/I
	zepehe	griddle	N/H
	-ha	eye	M/H

Roots of class M/H are morphologically bound, since a pronominal prefix functioning as the genitival element must precede them. Class M/I however are syntactically bound since the genitival element in their case may be a nominal phrase.

Some nominal roots have alternate forms, but no attempt is made to list these here. The reader is referred to chapter 9.31 for a general statement of alternate forms which have a wide distribution.

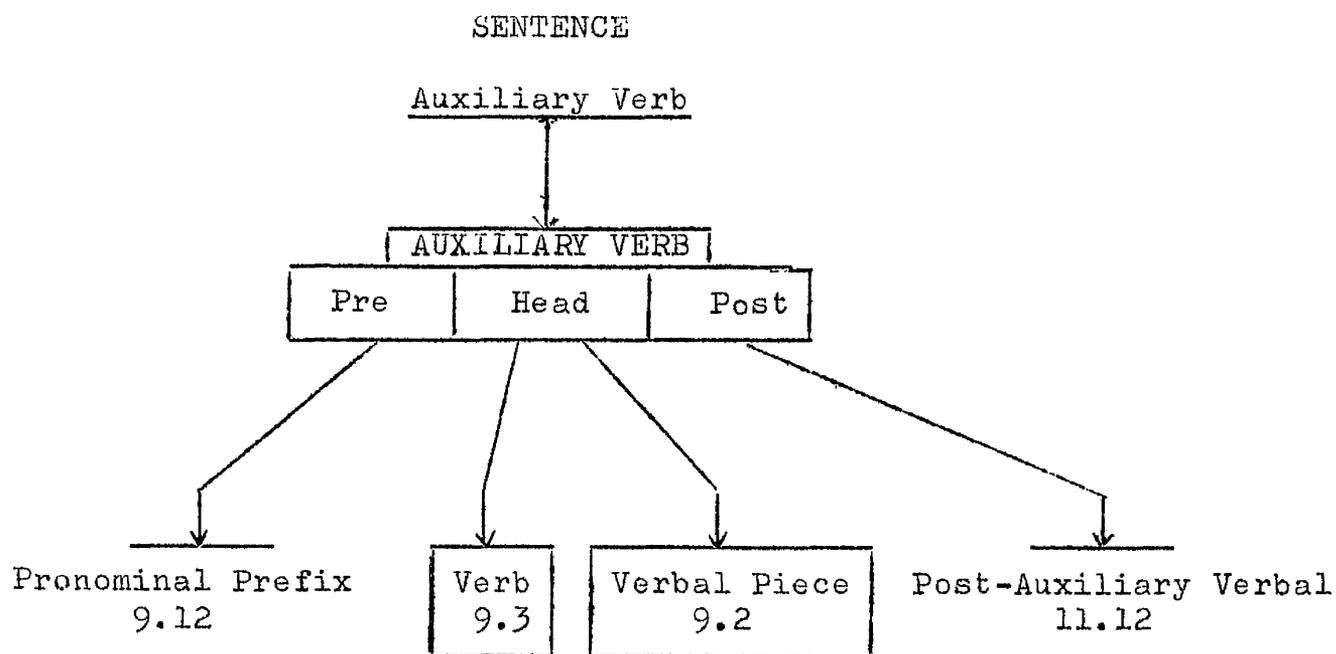
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CHAPTER 11 OTHER UNITS OF PHRASE RANK

11.1 The Auxiliary Verb

The Auxiliary Verb is a unit whose sole function is to manifest the element in the sentence of the same name. As to structural pattern, it consists of the elements Pre-Auxiliary Verbal, Head and Post-Auxiliary Verbal. They must occur in that order, the first two elements being obligatorily present. Its structure and function may be represented by the following diagram, (cf. also the comprehensive diagram in chap. 3.21.).



The semantic relationship of the AV to the other elements of the sentence is quite loose. Often it modifies the VPh element of the sentence, referring to the same action and stating its direction or position.

In such cases, and with intransitive and stative verb roots, the pre-AV element may display concord with the pronominal prefix of the VPh in the sentence. In other cases, it refers to some other action, generally **but** not necessarily associated with the actor or the goal of the action of the sentence.<sup>29</sup> The following two examples demonstrate the diverse relationships.

e.g.	I pull	I go	'I go and pull'	3.2.1
	anuhem	aha		
	VPh	AV		

	I miss	it go	'I missed it as it went'	
	azawy	iho		
	VPh	AV		2.74.19

When the auxiliary verb displays concord with the verbal phrase, it may be formally identical with such a phrase functioning as the VPh element of the sentence. In such cases it is only the relative order of the two forms within the sentence which indicates how they should be analysed.

#### 11.11 Pre-AV and Head Elements

The Head element of the Auxiliary Verb is manifested by a small sub-class of verbs and verbal pieces, (cf. chap.9.2 and 3).

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29. R.H. Robins reports a somewhat similar loose semantic relationship between elements of the sentence in his description of Yurok, cf. *The Yurok Language*, Berkeley. 1958, p.17. 'The Independent Subject'. Cf. also chap. 12.41. Pronouns Functioning as Particles, for a comparable relationship.

The pre-AV element is manifested by a sub-class of the pronominal prefix class, (cf. chap. 9.121). Each verb and verbal piece is now listed, together with the paradigm of pronominal prefixes with which it may occur when manifesting this element.

### 11.111 Transitive Auxiliary Verbs

The following transitive verbs and verbal pieces occur,

-mono	'put, away from speaker'
-muŋwaw	'cause to move, pass or fall'
-mur	'pull, towards speaker'
-raha	'carry, away from speaker'
-reko	'possess'
-rur	'carry, towards speaker'

When functioning as the head element in the AV, both -rur and -mur occur in alternate forms, -ruə and -muə respectively.

Each of the above verb roots occurs with the following paradigm of pronominal prefixes.

hc-	1st sg
zane-	1st pl incl
ure-	1st pl excl
ne-	2nd sg
pe-	2nd pl
i-	3rd sg
wa-	3rd pl

It may be noted that this paradigm is substantially similar to that which occurs with stative VPh, and Transitive VPh with 3rd person actor, (cf. chap. 9.123), with Transitive DRS (cf. chap. 10.201), Nominal Phrases (cf. chap. 10.102), and Relational Phrases (cf. sect. 11.302.) For alternate forms of prefixes, see chapter 9, 122. The reference of these pronominal prefixes is to the goal or object of the action expressed by the verb functioning as the head element of the AV. This is not necessarily the goal or object of the action expressed by the VPh element of the sentence but generally it is.

e.g. 'I kill it, by pulling it' 3.42.2

I kill	it	pull
azuka	i-	-muə
VPh	AV	
	pre	head

'I'll kill you, making you fall' 2.46.4

I-you	kill	you	make-fall	-
uru-	-zuka	ne-	-muŋwaw	pə
VPh		AV		
		pre	head	post

### 11.112 Intransitive Auxiliary Verbs

The following intransitive verbs occur,

-iho	'go, away from speaker'
-iko	'be, in motion or without specification of position'
-in	'be, sitting'
-kwaw	'pass by'
-zur	'come, towards speaker'

These verbs have the following alternate forms.

-ho	'go'	-ha	following pronom prefix a-
		-ho	elsewhere
-zur	'come'	-zuə	when functioning as AV
		-uə	or -ur respectively after
			pronom prefix u-
		-zur	elsewhere
-iko	'be'	-ko	after pronom prefix te-
		-iko	elsewhere
-in	'be'	-n	after pronom prefix te-
		-in	elsewhere

The roots, -ho 'go', -zur 'come' and -iko 'be' each occur with a full paradigm of pronominal prefixes, as follows. This paradigm is identical with that which occurs with Intransitive VPh, (cf. chap.9.123).

a-	1st sg
za-	1st pl incl
uru-	1st pl excl
ere-	2nd sg indicative
e-	2nd sg imperative
pe-	2nd pl
u-	3rd sg or pl

except that -zur and -iko occur with te- for the 1st sg instead of a-, and -iko occurs with either i- or wa- for 3rd sg and pl respectively, instead of with u-. When these prefixes occur there is always concord with the pronominal prefix of the VPh in the sentence. The root -ho may also occur with the prefix i-, and this does not necessarily display concord with the VPh.

e.g. 'It got dark for us as we went' 4.4.20

we got dark	we	go
urekaruk	oro--	ho
VPh	AV	
	pre	head

'I missed it as it went' 2.74.19

I miss	it	go
azawy	i-	-ho
VPh	AV	
	pre	head

The root, -in 'be, sitting' has been found only with the pronominal prefixes te- '1st sg' and i- '3rd sg or pl'. The former of these always displays concord with the pronominal prefix of the VPh, the latter may do so.

The root -kwaw 'pass by' has been found only with the prefixes i- and u-, both '3rd sg or pl'. Either prefix may display concord with the prefix of the VPh.

### 11.113 Stative Auxiliary Verbs

The following stative verbs occur,

-'əm	'be, standing'
-'yz	'be, scattered over an area'
-upə	'be, lying on the ground'

The root -'yz has the alternate form, -zi'yz, occurring after the pronominal prefix wa-, -'yz occurring elsewhere.

These roots have been found with pronominal prefixes as follows:

'əm te- '1st sg', i-and u- '3rd sg or pl'  
 -'yz i- '3rd sg and wa-'3rd pl'  
 -upə te- '1st sg' and u- '3rd sg or pl'

e.g. 'A very few fell, and were on the ground' 3.24.12  
 it fell little it be on ground  
 ukuza'ia'i u- -upə  
 VPh AV  
 pre head

#### 11.12 The Post-Auxiliary Verbal

The post-auxiliary verbal is a small closed class which functions only as the post-AV element in the auxiliary verb unit. It comprises the following members.

'aw occurs sometimes following the roots -'əm 'be, standing' and -'yz 'be, scattered'  
 'əŋ occurs sometimes following the root -in 'be sitting'  
 pə occurs invariably following the roots -kwaw 'pass by' and -muŋwaw 'cause to move, pass or fall'.

It is not possible to translate the meaning of these forms in isolation. They appear to be of grammatical relevance but no semantic significance. The following are some examples.

e.g. 'It is sitting there rotting' 4.10.7  
 it is rotting it sit -  
 inem i- -in 'əŋ  
 VPh AV  
 pre head post

'He left and passed by' 6.11.6  
 he left he pass -  
 uhem u- -kwaw pə  
 VPh AV  
 pre head post

## 11.2 The Adverbial Phrase

The Adverbial Phrase is a unit whose most common function is to manifest the Adjunct element in a sentence. It may also function as the nominal base element in a nominal piece, (cf. chap. 10.2). As to structural pattern, it consists of the following elements, a Pre-Adverbial, an Adverb and a Post-Adverbial. These must occur in the order listed, and only the adverb is obligatory. Two post-adverbials may occur, but the other elements may not occur more than once.



### 11.201 Pre-Adverbial Element

It is thought that the pre-adverbial element is not restricted in its occurrence with particular adverbs. The following is an example.

e.g.	not	to-day	just	'Certainly not to-day'	6.1.6
	nan	kwetəri	e		
	pre	Adv	post		

### 11.202 Post-Adverbial Element

Only one member of the post-nominal class has been found functioning as a post-adverbial, namely rən 'similar to', (cf. chap. 10.14). This form has only been found following the adverb ce 'here', and the resulting construction has the meaning 'very close'by'.

e.g.	he-carry-it	close-by	pl	'They carried it a	
	ueraha	ce rən	wə	little way'	
	VPh	AV	pt		4.11.4
		Adv Post			

The following members of the post-verbal class have been found functioning as the post-adverbial element, (cf. chap. 9.133).

ahy	'painful'	There does not seem to be any structural restriction upon the occurrence of these forms with particular adverbs.
a'i	'little, very'	
a'u	'more'	
e	'only, just'	
ete	'almost'	
katete	'very much'	
katu	'good, very'	
we	'still'	

The post-adverbial element may occur twice in an Adverbial Phrase. Two post-verbals may occur, or a post-nominal may be followed by a post-verbal, but not vice versa.

e.g.	dusk	almost	very	'Just at sundown'	2.45.4
	karuk	ete	a'i		
	Adv	post	post		
		Vbl	Vbl		
	here	like	very	'Very close by'	2.75.21
	ce	røn	a'i		
	Adv	post	post		
		nom	vbl		

### 11.21 The Adverb

The adverb is a fairly small class which functions most commonly as the adverb element in an adverbial phrase. It may also function as the relatee element in relational phrases, (cf. sect.11.302). It should probably be regarded as an open class, and the following are the members found in the data examined.

awyze	'next, at once'
ce	'here'
karuk	'at dusk'
kwehe	'long ago'
kwetəri	'to-day'
or kytəri	
mewe	'slowly'
moite	'far away'
muek	'later'
na'arew	'without delay'

nezewe	'thus'
nərəŋ	'quickly'
paw	'entirely'
pe	'there'
picik	'almost'
pitei	'once'
purəŋ	'well'
pyhewe	'tomorrow'
pyhaw	'at night'
rəŋəz	'first'
te'enahy	'without purpose or cause'
təri	'now'
ywate	'in the sky'
ywywy	'on the ground'
ywyzez	'secretly'
zityk	'alone'
zi'ite	'very early'
zuapyr	'a second time'

Of the above, the following constitute a sub-class, because they may function as the relatee element in a relational phrase.

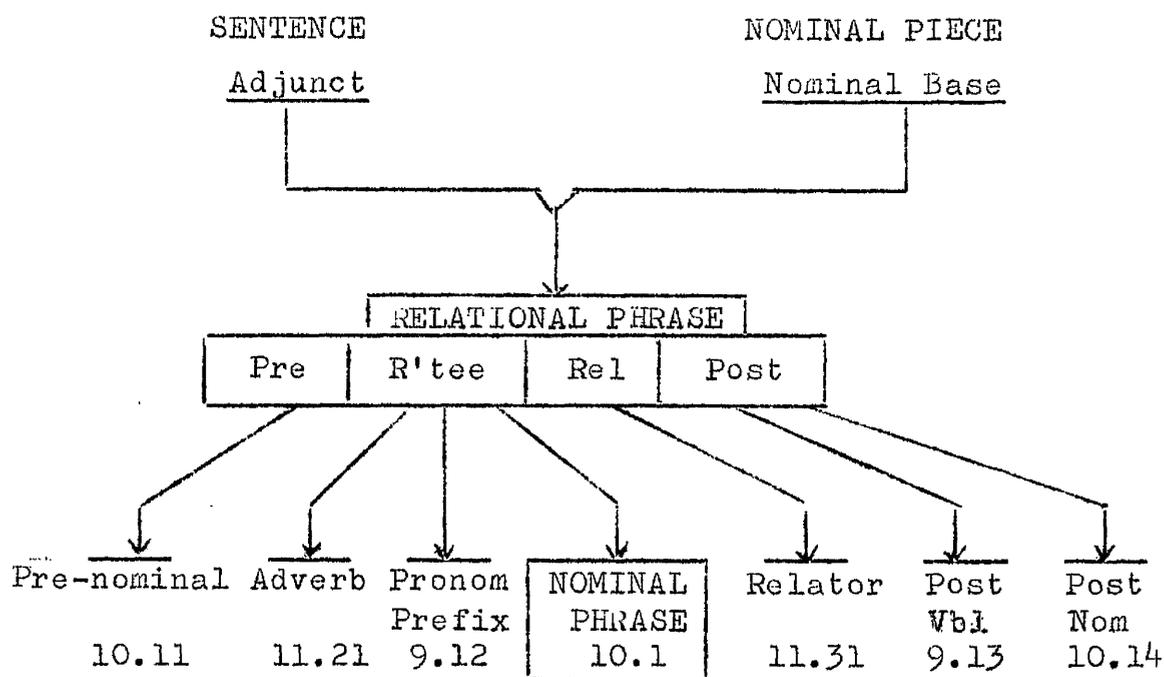
ce	'here'
karuk	'at dusk'
kwehe	'long ago'
nezewe	'thus'
pe	'there'

It is thought that further study would yield examples of other adverbs functioning in this way.

### 11.3 The Relational Phrase

The Relational Phrase is a unit whose most common function is to manifest the Adjunct element in a sentence. It may also function as the nominal base element in a nominal piece, (cf. chap.10. 2). As to structural pattern, it consists of the following elements: a pre-relational, a relatee, a relator, and a post-relational. These must occur in the above order, and both the relatee and the relator elements are obligatorily present, while the others are not. In a very few instances, the post-relational element has been found to occur twice, but none of the other elements occur more than once.

The structure and function of the relational phrase may be represented in the following diagram (cf. also the comprehensive diagram in chap. 3.21).



The following are some examples:

e.g.	enter	go	sack	in	'He got into the sack'
	uice	oho	icak	pupe	
	VPh	AV	Adj:RPh		6.10.17
			R'tee	Rel	

	said	toad	to		'He said to the toad'
	i'i	kururu	pe		
	VPh	Adj:RPh			6.10.11
		R'tee	Rel		

### 11.301 Pre-Relational Element

It is thought that there is no structural restriction upon the occurrence of this element with particular relators. It is always manifested by the pre-nominal class, cf. chap. 10.11. The following is an example.

e.g.	not	my	wish	it	with	'Against my own wish'
	nan	here-	-mimutar	r-	-upi	
	pre	R'tee	NPh		Rel	2.94.6

### 11.302 Relatee Element

The relatee Element may be manifested by either an adverb, a pronominal prefix or a nominal phrase. The paradigm of pronominal prefixes which may occur is the following. (Cf. chap. 9.121)

he-	'1st sg'
zane-	'1st pl incl'
ure-	'1st pl excl'
ne-	'2nd sg'
pe-	'2nd pl'
i-	'3rd sg'
wa-	'3rd pl'
re-	'3rd sg or pl specified with class H'

heze-	'1st sg reflexive'
zaneze-	'1st pl incl reflexive'
ureze-	'1st pl excl reflexive'
heze-	'2nd sg reflexive'
peze-	'2nd pl reflexive'
uze-	'3rd sg reflexive'
waze-	'3rd pl reflexive'

It may be noted that the paradigm of non-reflexive forms is substantially similar to that which occurs with the stative VPh, and the transitive VPh with 3rd person actor (cf. chap. 9.123), the transitive AV (cf. chap. 11.111), the transitive DRS (cf. chap. 10.201), and the nominal phrase (cf. chap. 10.102). For alternate forms of prefixes see chapter 9.122.

These pronominal prefixes are mutually exclusive with nominal phrases in their function as the relatee element, except that with relators of class H, either the form *re-* or *wa-* must precede the relator whenever the relatee is manifested by a NPh, and the form *wa-* must so occur with relators of class I when a NPh relatee is semantically plural. Such a pronominal prefix is analysed as part of the relatee element, along with any preceding NPh. The following are examples.

e.g.    it    in                    'In it'            2.42.16  
          i-    pupe  
          R'tee rel(c1 I)  
          PP

         Guajajara    them    to            'To Guajajaras'  
          tenetehar    wan-    upe  
          Rtee                    Rel (c1 I)            6.17.13  
          NPh                    PP

         force        it    with            'forcefully' 6.26.21  
          haihaw        r-    -upi  
          Rtee                    Rel (c1 H)  
          NPh                    PP

The following adverbs have been found functioning as the relatee element, (cf. sect. 11.21).

         ce                    'here'  
          karuk                'at dusk'  
          kwehe                'long ago'  
          nezewe               'thus'  
          pe                    'there'

e.g.    here    from                    'From here'    3.23.1  
          ce        wi  
          Adv      Rel

A nominal phrase which has a pronoun other than a'e '3rd sg' as its head element or contains a qualifier element may not function as the relatee in a relational phrase. Other types of NPh occur freely, including those with down-ranked NPhs functioning as genetical elements.

e.g. 'To get Urupe's gun' (along the path of the gun of Urupe.) 4.4.14

Urupe	gun	path	it	along
urupe	mukaw	par	r-	-omo
Rtee				Rel (cl H)
Nph				
Gen		Head		
NPh		Nn		
Gen	Head			
NPh	Nn			
Head				
Nn				

### 11.303 Post-relational Element

The post-relational element may be manifested by either a post-nominal or post-verbal class member. The only member of the post-nominal class which has been found is rən, and this occurs only following the relator pe.

e.g. there at like more 'More over there'

pe	pe	rən	a'u	
Rtee	Rel	post	post	6.11.23
Adv		nom	vbl	

The following members of the post-verbal class have been found functioning as the post-relational element:

ahy	'painful, very'
a'i	'little, very'
a'u	'more'
ete	'almost'
katete	'very much'
katu	'well, very'
we	'still'

When the post-relational element occurs twice, there may be two post-verbals, or a post-nominal followed by a post-verbal. The following are some examples of post-verbals.

e.g.	source	at	almost	very	'Almost at the very source'
	iapy	pe	ete	a'i	
	Rtee	Rel	post	post	6.31.13
			vbl	vbl	

	skin	with	yet		'With the skin still on'
	iapirer	rehe	we		
	Rtee	Rel	post		2.95.11
			vbl		

### 11.31 The Relator

The relator is a closed class whose sole function is to manifest the relator element in a relational phrase. Its members must belong to either class H or class I, according to the allomorphs of the pronominal prefixes with which they may occur. Membership is as follows.

Class H	-he	'concerning'
	-nune	'in front of'
	-omc	'like, functioning as'
	-uake	'near'
	-upi	'along with, instead of'
Class I	ai	'like'
	iwyr	'beside'
	mehe	'at the time of'
	nən	'among'
	pe	'to, at, for'
	pupe	'within, by means of'
	pyr	'with, towards a person'
	wi	'from'
	'ym	'without'
	zəwe	'like'

The following members have alternate forms.

pe	me	following certain nouns, e.g. typyz me 'to tthe house'
	pe	following most forms
	-we	following the pronom prefixes ihe-, zane-, ure- and ne-
	-me	following the pronom prefix pe-
	-upe	following the pronom prefixes i- and wa-
wi	-ui	following the pronominal prefixes i- and wa-
	wi	elsewhere

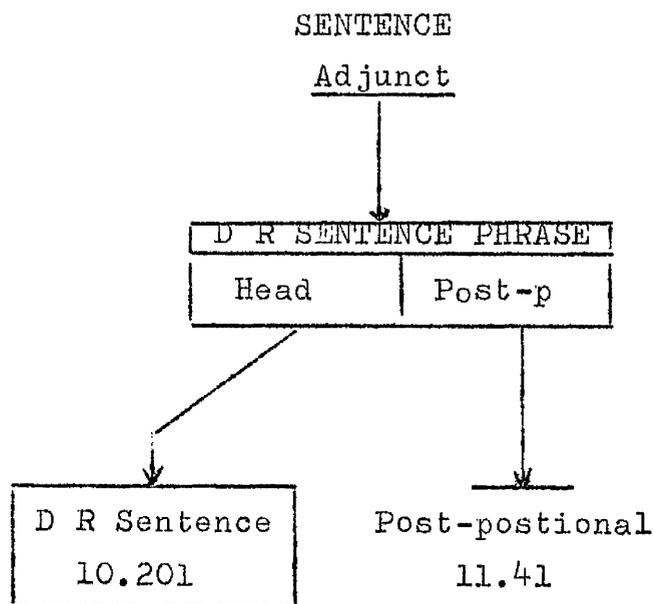
(The pronominal prefix wa- 3rd pl, occurs in the alternate form wan- before the relators pe and wi.)

Members of the class H must always be preceded by a pronominal prefix, whether or not there is also a NPh functioning as the relatee element. They are thus morphologically bound forms. Members of class I may not be preceded by both a pronominal prefix and a NPh as the relatee element, except in the case of the prefix wa- which must co-occur with a NPh which is semantically plural. (cf. sect. 11.302)

#### 11.4 The Down Ranked Sentence Phrase

The down ranked sentence phrase is a unit which has the sole function of manifesting the adjunct element of a sentence. As to structural pattern, it consists of a head element, which must occur obligatorily, and may be followed by a post-positional element.

The structure and function of this phrase may be represented in the following diagram, (cf. also the comprehensive diagram in chapter, 3.21.)



The structural pattern of down ranked sentences is described in chapter 10.201, and those which occur as the head element of a DRS Phrase conform to the description given there.

The following are some examples of down ranked sentence phrases, within sentences.

e.g. 'Its owner went to see it' 3.16.6

went	owner	see	it
oho	izar	hecak	
VPh	subj	Adj	
		DRSPh	
		Head	
		DRS	
		VPh	

'He went to break palm nuts' 4.5.5

went	palm-nut	break	-
oho	wəhu	ika	pə
VPh	Adj		
	DRSPh		
	Head		post-p
	DRS		
	Obj	VPh	

'He hears me when I speak' 2.94.14

hear-me	I-speak	time
herenu	heze-eŋ	mehe
VPh	Adj	
	DRSPh	
	Head	post-p
	DRS	
	VPh	

No instances have been found of pre-nominal or qualifier elements occurring as part of nominal phrases functioning as object in a DRSPh.

The paradigm of pronominal prefixes which may occur in the VPh of a DRSPh is the same for transitive verbs and verbal pieces as that listed in chapter 10.201. A few instances have been found in which the prefix i-

3rd sg, has occurred before a VPh of class I, even though an object element also occurs,

e.g. palm-nut it break 'to break palm-nuts' 4.5.5.  
 wəhu i- -ka  
 obj VPh

The following pronominal prefixes have been found with intransitive verbs,

he-	1st sg
i-	3rd sg
wa-	3rd pl
u-	3rd sg or pl

with stative verbs,

i-	3rd sg
wa-	3rd pl

When such prefixes occur with either intransitive or stative verbs, they appear to refer to the actor in the action expressed by the verb to which they are prefixed. Because of this, it is thought that there is no structural restriction upon the occurrence of other prefixes referring to first or second person subjects. In some cases, intransitive and stative verbs occur in a DRSPH without any pronominal prefix at all, but this is not common. The following are some examples of DRSPHs with and without pronominal prefixes.

e.g. 'It went to speak to Tupan' (lacking pronominal prefix)

it go	Tupan	to	speak	
oho	tupən	pe	ze'eŋ	
VPh	Adj			6.16.17
	DRSPH			
	Head			
	DRS			
	Adj		VPh	
	RPh			
	Rtee		Rel	

'I saw it as it was standing' 3.33.5  
 I-saw-it it stand time  
 aecak i- -'əm mehe  
 VPh Adj  
 DRSPH  
 Head post-p  
 DRS  
 VPh  
 PP vb st

'Its owner went to see it' 3.16.6  
 went owner it see  
 oho izar he- -ecak  
 VPh subj Adj  
 DRSPH  
 Head  
 DRS  
 VPh  
 PP vb tr

It is possible for a DRSPH to be formally identical with an AV (cf. sect. 11.1) but in fact no cases of ambiguity have arisen in the data examined.

#### 11.41 The DRSPH Post-positional

The post-positional is a small closed class with the sole function of manifesting the element of the same name in the down ranked sentence phrase. It comprises the following members.

ire 'action finished'

e.g. 'When they had finished tapping rubber'

rubber tap finish  
 ciriŋ 'ok ire  
 Head post-p  
 DRS  
 Obj VPh

mehe 'time'

e.g. 'When bringing it here to the house' 2.73.3  
 here house to it bring time  
 ce typyz me he- -rur mehe  
 Head post-p  
 Adj Adj VPh  
 adv RPh PP vb tr

pə 'intention'

e.g. wood split to 'to split wood' 4.4.19  
 ywyrā ra pə  
 Head post-p  
 Obj VPh

'ym 'without doing'

e.g. 'without carrying that cloud' 6.16.3  
 that cloud it carry without  
 omo pytun he- -raha 'ym  
 Head post-p  
 Obj VPh  
 pre head PP Vb tr

The form ire 'action finished' generally occurs in the alternate form re following vowels.

e.g. it kill finish 'When he had killed it'  
 \* izuka re

The form pə 'intention' occasionally occurs in two alternate forms, tə and mə. The former generally occurs following the consonant z, and the latter generally occurs following forms containing central vowels y or ə. It is not possible however to regard them as wholly phonologically conditioned.

The following are examples.

kə'ərupə mə 'clearing undergrowth' 4.6.12

muŋaz tə 'tapping it' 6.31.24

There does not appear to be any structural restriction upon the occurrence of these forms with any features in the head of the down ranked sentence phrase.

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CHAPTER 12 THE PARTICLE

12.0 The Particle as an Element of the Sentence

The particle is set up as an element of the sentence parallel to the other elements, the Verbal Phrase, Subject, Object, Auxiliary verb, and Adjunct. All other elements are manifested by units which are potentially complex in structure, and are therefore assigned to the phrase or piece rank in the hierarchy. The particle is manifested only by units which are monomorphemic in structure and are therefore assigned to the lowest rank of the hierarchy.

The particle element is generally manifested by a class of the same name, but may also be manifested in particular positions within the sentence, by the pronoun class, (cf. chap. 10.13) or by a sub-class of noun roots (cf. chap. 10.31). The particle class itself is divided into four major sub-classes, and some additional minor ones, on the basis of the particular positions within the sentence in which members may be found. There are four fixed positions in which particles may occur, as follows:

Initial: (as the very first element)

e.g.	suppose	deer	comes	'suppose a deer comes'
	aze	arapuha	ur	
	pt	subj	VPh	3.16.1

Post Initial: (immediately following the first element)

e.g. 'They say that he arrived here' 6.26.6  
 arrive they say go there at  
 uðhem ze oho pe pe  
 VPh pt AV RPh

Medial: (following any VPh, Subj. Obj. and AV, but preceding any Adj.)

e.g. 'He went and split some firewood' 3.7.3  
 firewood split go past  
 zepe'aw umu'i oho kwez  
 obj VPh AV pt

Final: (as the very final element)

e.g. 'We arrived there (coming)' 6.35.17  
 we arrived come there at -  
 uruðhem uruzuð pe pe no  
 VPh AV RPh pt

The reason why the particle is not analysed as forming part of some lower ranking unit than the sentence, but is said to manifest a sentence element immediately, is its occurrence in the above positions. These positions are fixed in relation to the sentence, but variable in relation to the other sentence elements, since some of these may or may not occur, and when they do, they may be in different relative orders, (cf. chap. 8.12). Thus particles in Post-Initial position may occur following any of the elements Particle, Subj. Obj. or VPh; particles in Medial position may occur following any of these plus the element AV; and particles in final position may follow any element.

The class Particle is therefore set up to include all forms which cannot be regarded as functioning within any lower ranking unit than the sentence, and the element Particle is set up to account for their occurrence within the sentence. Members of this class do not all belong to the same semantic category, but are very diverse in their meanings. In some cases a single member has more than one area of meaning, while in other cases it is difficult to express any meaning at all for the member in isolation. Some indication of the meaning of each form is given when its function is described, but this is not attempted in an exhaustive fashion, since this study is primarily of formal syntactic relationships.

### 12.1 Particles occurring in Initial Position

The following members of the particle class may be said to constitute the sub-class 'Initial' because they always, or most commonly, occur in initial position within the sentence. The meanings indicated are only general approximations, since usage is often idiomatic.

awyze	'next'
aze	'suppose, perhaps' (when the condition might be fulfilled)
azem	'suppose, perhaps' (when the condition is known to be unfulfilled)
erekatu	'Go on!' (urging to do something)
eruə	'I don't know'
eru'u	'Is that so?'
hoz	'Hello'
kwa	'Oh, ...'

met	'liar!'
mo	'Yes'
nan	'No'
nərəm	'Not desired' <sup>30</sup>
o	'Oh, ...'
ta'e	'As a matter of fact'
te	'Oh, ...'
tomo	'Yes'
tue	'Allow it'
zo	'Only, just' (the alternate form aezo, occurs occasionally without conditioning factors)

e.g. 'Suppose I had wings, (but I haven't)' 6.10.12

suppose	I-have-wings
azem	hepepo
pt	VPh

'Oh, they pulled it there' 9.10.6

Oh	pull	there	at	plural
kwa	umutyk	pe	pe	w <sub>2</sub>
pt	VPh	Adj		pt

The particle aipo 'perhaps' may also occur in initial position, but is classed as a medial particle on the basis of its more frequent occurrence in that position. (cf. sect. 12.3)

Of the above forms, the following have not been found occurring within the favourite sentence, but only in the non-favourite 'Exclamative Sentence' (cf. chap. 13.4)

---

30. In the idiolect of one informant, this form was pronounced as two words, nan rəm.

erekatu	'Go on' (urging to do something)
eru'u	'Is that so!'
hoz	'Hello!'
met	'Liar!'
mo	'Yes'
nan	'No'
tomo	'Yes'

The following may occur preceding another initial particle.<sup>31</sup> Apart from this, only one initial particle may occur in a sentence.

kwa	'Oh,...'
o	do
te	do

e.g.	Oh	perhaps	-	'Oh, perhaps!'	9.9.13
	o	aze	pa	(non-favourite exclamation	
	pt	pt	pt	sentence, cf. chap. 13.4)	

The forms *tue* and *zo* may also occur following any sentence element except an Auxiliary Verb or a final particle, regardless of position within the sentence. In such cases they are semantically linked closely with the element they follow. They might therefore be regarded as functioning as the 'post' element in the unit they accompany, but it has been thought better to analyse them as particles with a specially free distribution.

---

31. It is nearly always one of these three particles which is classified phonologically as a span initial foot of high pitch, cf. chapter 4.18. The particle *o* occasionally occurs in various alternate forms without apparent conditioning factors, cf. chapter 4.18, footnote 13.

When not in initial position, tue has a general emphatic meaning, e.g.

e.g. 'It was right here that I came' 3.30.8  
 I-come here indeed  
 azur ce tue  
 VPh Adj pt

When not in initial position, zo may occur in either of the alternate forms, zot or zote, without conditioning factors. (Its other alternate form, aezo, (cf. above) is restricted to initial position.)

e.g. 'He was just sitting laughing' 9.10.14  
 he-laugh only sitting  
 upuka zot in  
 VPh pt AV

## 12.2 Particles occurring in Post Initial Position

The following members of the particle class may be said to constitute the sub-class 'Post Initial' because they always, or most commonly, occur in post initial position in the sentence. A few instances have been found of Post Initial particles following the second instead of the first, element of the sentence, but this is not common, except when the first element is a particle.

et	'emphatic' (commonly co-occurs with the final particle ce, cf. sect. 12.46. alternate forms en and em occur occasionally without conditioning factors, and the forme when preceding the particle ce.)	
kutu	'reaffirmation'	
kwehe	'distant past'	
mua'u	'mistake or deception'	
omo	'unfulfilled condition' (commonly co-occurs with the initial particle azem cf. sect. 12.1)	
poko	'deliberation' (in questions)	
rakakwez	'past action, generally immediate past' (alternate forms rakwez and kakwez occur occasionally without conditioning factors)	
roko	'past action'	
ru'u	'uncertainty'	
tezyz	'frustration'	
tomo	'deliberation' (in statement)	
ze	'speaker not an eye witness'	
zepe	'incomplete success'	
e.g.	'Let's go and bathe after all'	9.21.13
	we bathe after-all we-go	
	zazahak kutu zaha	
	VPh pt Av	

e.g.	'A horse has died there'					9.9.8
	horse	past	die	there	at	
	kawar	roko	umə.no	pe	pe	
	subj	pt	VPh	adj		

Two, and in a few cases three, post initial particles have been found in a sentence, and additional sub-classes might be set up on the basis of their relative order. This does not, however, yield a clear pattern, and a number of exceptions would also have to be stated. No further sub-division is therefore attempted.

e.g.	'They say that a horse lay down, long ago'					
	lay down	they say	long ago	horse		
	u'ar	ze	kwehe	kawar		
	VPh	pt	pt	subj	4.10.1	

The initial particles, tue and zo (cf. sect.12.1) and the medial particles aipo and kwez (cf. sect. 12.3), may also occur in post-initial position. They are classified as initial and medial respectively however on the basis of their most common occurrence. The post-initial particle zepe occurs occasionally in other than post-initial position following any sentence element other than an Auxiliary Verb or final particle, and is then closely linked semantically with that element.

## 12.21 Particles indicating time

The particles roko, rakakwez and kwehe are commonly used to indicate past time, though not with any degree of precision. Other forms used to indicate

past or future time are the final particles *nehe* 'future' (sect. 12.43), the medial particle, *kwez* 'immediate past' (cf. sect. 12.3), and the post-verbal *tar* 'future' (cf. chap. 9.132) (The final particles *rihi*, *ri'i*, *ra'e*, *zipi* (sect. 12.45) and *kury* (sect. 12.46) also have associations relating to the passage of time, and the Auxiliary verb often has associations of continuing action.) Such forms tend to occur at the beginning of a stretch of speech, or at points where the temporal setting changes during a stretch of speech, and otherwise at irregular intervals while the temporal setting remains unchanged. A verbal phrase in a sentence which lacks any of these forms may therefore be translated as either past, present or future, according to the last indication of temporal setting in the preceding context.

### 12.3 Particles occurring in Medial Position

The following members of the particle class may be said to constitute the sub-class Medial, because they most commonly occur in medial position in the sentence.

kwez	'Immediate past, completion'
aipo	'perhaps'

e.g. 'He went and split some firewood (just now)'

firewood	split	go	past	
zepe'aw	umu'i	oho	kwez	3.7.3
obj	VPh	AV	pt	

The particle kwez also occurs in post-initial position, and the particle aipo also occurs in both initial and post-initial position. The two particles may both occur in the same sentence, but have not been observed both together in medial position.

### 12.4 Particles occurring in Final Position

A number of particles only occur in final position in the sentence, and may therefore be said to constitute the sub-class Final. Their relative order is rigidly fixed,<sup>32</sup> and they will be listed in terms of nine positions, numbered so that a particle occurring in a given position may only be preceded by particles in a position having a lower number. These particles are mutually exclusive of

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32. Such particles are not analysed as together forming a higher ranking unit because they are all optional, and do not display any structural pattern beyond their relative order.

all others which may occur in the same position, but there are no other restrictions of co-occurrence other than those determined by semantic factors, (except as noted below in the course of description). No more than four final particles have however been found in a sentence.

A number of final particles appear to be of stylistic rather than semantic significance, though some also have definite semantic associations which will continue to be noted as far as possible. In conversational speech, the vast majority of sentences conclude with one or more final particles. The shorter a stretch of speech is, the more likely is each sentence to conclude with a final particle. In prolonged narratives, sentences without final particles are not uncommon, but even so a majority of sentences have them. They are therefore regarded as having as their primary function the syntactic and stylistic one of marking the end of sentences. In addition to this, they often serve to link together main and satellite clauses within extended sentences. (cf. chap. 14.1)

#### 12.41 Position One

The only forms which function as the particle element in position one are pronouns, (cf. chap. 10.13). They are listed again here, to facilitate reference, and are as follows.



12.42 Position Two

One particle only occurs in position two, namely,  
 wə 'plural'

As with pronouns functioning as particles in position one, so the particle wə may refer to the actor or topic of the sentence (as it does most commonly), or to the goal of the action or to some entity not otherwise referred to in the sentence. There is no formal indication of what is pluralised, and there is commonly semantic ambiguity relieved only by the context. wə does not occur obligatorily following forms which are semantically plural, and has not been found to occur following any pronoun functioning as a particle other than a'e, 3rd sg/pl.

e.g. 'They don't want farinha' (Refers to Subj) 4.9.20  
 not-want farinha he pl  
 nupubar tyrəm a'e wə  
 VPh obj pt pt  
 pos 1 pos 2

'I killed two' (Refers to obj) 2.43.10  
 I-kill two plu  
 azuka mokoz wə  
 VPh obj pt  
 pos 2

'Zaky (and others) came' 4.3.20  
 (Refers to entity not otherwise in sentence)  
 Zaky come he plu  
 zaky ur a'e wə  
 subj VPh pt pt  
 pos 1 pos 2

The particle wə 'plural' also occurs in position nine,  
 (cf. sect. 12.49).



12.45 Position Five

The following particles occur in this position

rihi 'still, yet' looking forward to change of state  
or action

ri'i 'action in the past' (Frequently occurs with the  
post-initial particles roko and  
rakakwez, cf. sect. 12.2)

The alternate form zi'i occurs frequently,  
without conditioning factors.

ra'e 'unfortunate or otherwise amusing action, often  
in past', also 'uncertainty'

zipi 'habitual past action, often incompletely  
successful'

The alternate form zupi occurs occasionally,  
without conditioning factors.

e.g. 'The mandioca was still very soft' 3.4.4

mandioca	very soft	it	still
mani'oka'i	ipywahy	a'e	rihi
subj	VPh	pt	pt
		pos 1	pos 5

'It died, (in an amusing context)' 2.48.15

it died	amusing
uməno	ra'e
VPh	pt
	pos 5

12.46 Position Six

One particle only occurs in this position, namely,

kury 'now, then, action or state  
at point of change'

e.g. 'Then it began to dawn for them' 2.46.24

it-dawn	plu	past	then
uzekwa	wə	zi'i	kury
VPh	pt	pt	pt
	pos 2	pos 5	pos 6

12.47 Position Seven

One particle only occurs at this position, namely,

no This form has no semantic reference, but  
seems to be very generally related to  
change of topic, in certain narratives.

e.g. 'Granny, and others, went still' 2.45.10

go	Granny	she	plu	yet	-
oho	zaryz	a'e	wə	rihi	no
VPh	subj	pt	pt	pt	pt
		pos 1	pos 2	pos 5	pos 7

12.48 Position Eight

The particles which occur in this position fall into two groups, one used only by male speakers and the other only by female ones. They all have a certain, rather weak, exclamative sense, and occur chiefly in conversational speech.

They are the following:

Male speaker	Female speaker	Person Addressed	Meaningful association
pa	ma	anybody	Weak exclamation
ce		do	do
ty	kyn	one person, of same sex as speaker	General appellation e.g. 'fellow' 'girl'
zəkwə	'y	one person of opposite sex to speaker	do
ra	rare	anybody	prediction or derision
ya		anybody	Emphasis

e.g. 'It won't break it, old fellow!' (male speaker)  
 not-it-break not fellow 3.41.10  
 nomonohok kwaw ty  
 VPh pt  
 pos 8

'You'll be fast, - just you see!' (male speaker)  
 you-be-fast you future - prediction  
 neəkwena'u ne nehe no ra 6.4.10  
 VPh pt pt pt pt  
 pos 1 pos 3 pos 7 pos 8

In addition to the above members of the particle class, certain noun roots may also function as the particle element in this position. There is a semantic restriction upon such noun roots. Only those may occur which are used in a vocative manner, e.g. persons' names, certain

kinship terms, and also names of animals or other objects in certain folk tales in which these are credited with personality and addressed.

e.g. 'Have you eaten it all, cousin?' 3.3.13  
 entirely you-eat perhaps now cousin  
 paw ere'u aipo kury kwaity  
 Adj VPh pt pt  
 pos 6 pos 8  
 Nrt

#### 12.49 Position Nine

The particle wə 'plural' which generally occurs in position two, (cf. sect. 12.42) may also occur following either the particle ty or kyn, general appellations\* (cf. sect. 12.48). The combination ty wə is used only by male speakers, and kyn wə only by female ones. They may be addressed to groups of people regardless of their sex, or to an individual of the opposite sex to the speaker.

e.g. 'I didn't see any bacuri, folks' 6.118.1  
 not-I-see not bacuri folks  
 naecak kwaw pakuri kyn wə (lady speaker)  
 VPh obj pt pt  
 pos 8 pos 9

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## CHAPTER 13 NON-FAVOURITE SENTENCES

### 13.0 Non-Favourite Sentences

All the units which together constitute the grammatical hierarchy have now been fully described, with the exception of certain alternate arrangements of elements within the sentence. These alternate arrangements will now be described as the non-favourite sentences 'Inverted Sentence' ( sect. 13.1) 'Declarative Sentence' ( sect. 13.2) 'Interrogative Sentence' (sect. 13.3) and 'Exclamative Sentence' (sect. 13.4)

The Favourite Sentence (cf. chap. 8.1) and the four non-favourite ones are together regarded as constituting a class, represented by the single unit 'The Sentence', (cf. chap.3.3). The various sentences share the common function of occurring in utterances potentially unaccompanied, or followed by indefinite pause. They are each minimal units which are interchangeable in all environments. (Only the favourite sentence may be down-ranked and function within some other unit, however.) They also have much in common from a structural point of view, since the structural pattern of each may be stated in terms of the same elements, despite the differences which they display in the arrangement of such elements and in their potential manifestation.

The favourite sentence is by far the most frequent in its occurrence, some ~~seventy~~ per cent of the sentences

examined being of this type. Less than ten per cent are of the inverted sentence type, and some fifteen percent are of the declarative type, though the majority of the latter are linked with a favourite sentence in an 'extended sentence' construction, (cf. chap. 14.1.) Interrogative and exclamative sentences are each quite rare in the data examined, but are more frequent in conversational speech.

### 13.1 The Inverted Sentence

The Inverted Sentence is composed of the same elements as the favourite sentence, namely, Verbal Phrase, (obligatory), and Subject, Object, Auxiliary Verb, Adjunct and Particle (all optional). These elements may all be manifested by lower ranking units as described for the favourite sentence, except as provided below. They occur in a different order from the favourite sentence however. Either an Adjunct element or the particle *tue* or *aipo* occurs in first place, and the Verbal Phrase always follows any Subject or Object elements which are present.

With first or second person actors, the verbal phrase is inflected as for a favourite sentence. When the actor or topic of the sentence is third person, the inflection of the verbal phrase is different from its form within a favourite sentence. The pronominal prefix *i-* occurs with transitive, intransitive and stative forms when the actor (and any object or goal of action) is singular, and the pronominal prefix *wa-* when

the actor is plural, (and also with transitive forms, when the object or goal of action is plural, notwithstanding that the actor is singular.) (cf. chap.9.123)  
The post-verbal -n always follows verbs or verbal pieces in the third person, when these end in a vowel (cf. chap. 9.135).

e.g. 'He killed a certain son long ago' 9.10.13  
 long ago a certain son he killed -  
 kwehe we omo ta'yra'i i- -zuka -n  
 Adj Obj VPh

Contrast the favourite sentence form.

he killed a certain son long ago  
 \* u- -zuka omo ta'yra'i kwehe we  
 VPh Obj Adj

e.g. 'Then he carried them close by, perhaps' 4.11.12  
 close by perhaps them carry then  
 pe pe rən ru'u wan- -eraha -n kury  
 Adj pt VPh pt

In this example it is the object of the action which is plural. This is not shown in the parallel favourite sentence form.

he carry perhaps close by then  
 \* u- -eraha ru'u pe pe rən kury  
 VPh pt Adj pt

The Auxiliary Verb element occurs very infrequently in Inverted Sentences, and always follows the Verbal Phrase immediately. The verbal phrase itself never

includes any post-verbal other than -n. More than one adjunct may occur, and the second and subsequent such generally follow the VPh, though two have been found at the beginning of the sentence in a few cases. An adjunct occurring sentence initial may not be manifested by a DRS Phrase. Particles occur freely in their positions as described in chapter 12.

The forward shift of the adjunct element has the effect of bringing this into semantic prominence, at the expense of the verb. A few instances have been observed in which the verbal phrase is inflected as for an Inverted Sentence, and the adjunct element is shifted forward in front of the VPh, but not to initial place in the sentence.

### 13.2 The Declarative Sentence

The declarative sentence may be composed of one or more of the elements Subject, Adjunct, Auxiliary Verb and Particle, and these may be manifested by lower-ranking units as described for the favourite sentence, except as provided below. No one element occurs obligatorily though either a Subject, or an Adjunct element must occur, and in the majority of cases there is at least one Particle. The relative order of elements is not

fixed except in the case of particles, which occur as in the favourite sentence. The AV element has not been found sentence initial or preceding the Subject however.

As to meaningful associations, declarative sentences are often statements of the existence or descriptions of the character of some entity, and are translatable by English expressions such as 'there is' or 'it was'. The following are some examples.

e.g. 'maybe those are wild pig!' 3.55.5

wild pig	plu	may be	-
ymətə	wə	ra'e	pa
subj	pt	pt	pt

'It was like this, long ago, they say' 9.11.7

like this	they say	long ago	-
nezewe	ze	kwehe	pa
adj	pt	pt	pt

'There were only dogs with him' 4.3.19

dog	only	with him	plu	-
zawar	zo	ipyr	wə	no
subj	pt	adj	pt	pt

In other cases, declarative sentences are used to state the similarity or identity of two entities, translatable by the English verb, 'to be'. In such cases, two nominal phrases may occur.

e.g. 'That man's name is Zoakihiu' 6.33.3

Zoakihiu that man name  
zoakihiu kwez apyaw her  
subj subj

'That is a hawk up there,<sup>33</sup> fellow!' 3.6.1

that hawk up there fellow  
'az 'aw wirəhu i'yz 'aw ty  
subj subj AV pt

Such cases are here analysed as a second occurrence of the subject element. There seems no reason to analyse such second nominal phrases as an object element, in view of the criteria upon which the object is recognised within the favourite sentence, (cf. chap. 8.2). Nor is it felt necessary to set up a completely new element, such as a complement, to account for a very few instances such as the above. Such a new element would not occur in any other place in the hierarchy.

There is no formal distinction between two nominal phrases each functioning as a subject element (as in the above examples), and two such phrases, the first functioning as the genetical element of the second, as in the utterance:

Zoakihiu axe 'The axe of Zoakihiu'  
\*zoakihiu tazy (cf. chap.10.102)

Semantic factors generally relieve any ambiguity, and phonological stress patterns also mark the two utterances as of contrasting grammatical structure, (cf. chap. 5.16).

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33. The AV -'yz, listed in chapter 11.113 as meaning 'to be scattered' here has an unusual reference to a single location.

When a single nominal phrase occurs, functioning as the subject element of a declarative sentence, it may be formally identical with a favourite sentence in which the Head element of the Verbal Phrase is manifested by a noun root, (cf. chap. 9.1). Such constructions are potentially distinguishable however because of the contrasting pre-verbal and pre-nominal elements which may occur with them.

e.g. 'He has no gun' Favourite sentence: VPh element

not	he	gun
*na'-	i-	mukaw
Pre-V	PP	Head

'It is not his gun' Declarative sentence: Subj element

not	his	gun
*nan	i-	mukaw
Pre-N	Gen	Head

\* i- mukaw could be either 'He has a gun' or 'It is his gun'.

More than one adjunct element may occur in a declarative sentence, though this is somewhat infrequent. The occurrence of an AV element is also quite infrequent.

### 13.3 The Interrogative Sentence

Favourite, Inverted and Declarative Sentences may each be of the sub-category, 'Interrogative'. Interrogative Sentences are singled out for separate mention because the first word of the sentence must be an interrogative, (cf. below) and because, phonologically speaking, they are always of pitch pattern five, (cf. chap. 4.15). By contrast, favourite, inverted and declarative sentences which do not begin with an interrogative, are of pitch patterns one, two, three, four, or six. Interrogative sentences are not therefore of a different structural pattern, grammatically, as are inverted and declarative sentences, but the present cross-classification is not without interest for a complete grammatical statement.

The following forms are classed as interrogatives and are regarded as a sub-class of noun roots, so defined by their occurrence only as the first word in sentences which are also spans of pitch pattern five.

ma'e	'What?'
mo	'Who?'
mərən	'How many?'

These forms, when they occur alone, function as the head element of nominal phrases which manifest the subject or object within the sentence. It is for this reason that they are analysed as a sub-class of noun roots. They may not be accompanied by any other element within the nominal phrase, but they are frequently followed

immediately by either or both the particles *tue* and *et*, (cf. chap. 12. 1 and 2, noting alternate form *en*)

e.g. 'What can a man eat?' 3.7.11

what	indeed	emphatic	man	eat
ma'e	<i>tue</i>	<i>et</i>	awa	u'u
obj	pt	pt	subj	VPh

'What is heavy inside my sack?' 6.12.6

what	emphatic	perhaps	is heavy	being	my sack	in	-
ma'e	<i>en</i>	<i>aipo</i>	<i>ipuhyz</i>	<i>iko</i>	<i>hecak</i>	<i>pupe</i>	<i>no</i>
subj	pt	pt	VPh	AV	adj		pt

Interrogative forms may be followed by relators in which case they are analysed as manifesting the relatee element in a relational phrase, (cf. chap.11.3). As such they may not be accompanied by either pre-or post-relational elements. The following are the most common combinations.

ma'e pe	'Where (to or at)'	The alternate form, <i>ma'a pe</i> occurs frequently without conditioning factors.
ma'e wi	'Where (from)'	
ma'e mehe	'When'	
ma'e rupi	'How much'	
ma'e rehe	'How, why'	
ma'e romo	do	
mo rupi	do	
mərə zəwe	do	( <i>mərə</i> is taken as an alternative form of <i>mərən</i> .)

These combinations always occur sentence initial and therefore only occur in inverted or declarative sentences.

e.g. 'Where's he going to now?' Inverted sentence  
 where to he go perhaps now - 3.5.16  
 ma'a pe ihon aipo kury pa  
 Adj VPh pt pt pt

' Now where is my hat?' Declarative sentence  
 where at deliberation my-hat - 6.15.11  
 ma'e pe poko hezapew pa  
 Adj pt subj pt

Interrogative sentences are invariably **semantically** questions, to which the appropriate answer is a statement rather than a simple affirmative or negative. By contrast questions to which a simple affirmative or negative answer is appropriate may be posed by the use of a favourite, inverted or declarative sentence with pitch pattern six, (cf. chap. 4.16), and without an interrogative sentence initial. The particles *aipo*, *ru'u* and *ra'e*, each of which has associations of uncertainty (cf. chap. 12. 2, 3 and 45.), are commonly found in both types of question.

e.g. 'Are you going?' Favourite sentence 3.3.11  
 you-go fut. perhaps fut.  
 peho tar aipo nehe  
 VPh pt pt

It is worthy of note that an object may precede a subject element in an interrogative sentence, though not elsewhere. In the following instance, for example, semantic factors clearly indicate such an order of elements, though formal factors are ambiguous.

e.g. 'What can a man eat?' 3.7.11  
 what indeed emphatic man eat  
 ma'e tue et awa u'u  
 Obj pt pt Subj VPh

13.4 The Exclamative Sentence

The Exclamative Sentence is quite different in structure from all other sentences. It may consist of an initial particle, which may be accompanied by one or more post-initial, medial or final particles, or it may consist of a final particle of position eight, with or without one of position nine, (cf. chap. 12.) An exclamative sentence may be of pitch pattern seven, or of any of the pitch patterns one to four, (cf. chap. 4.1).

Some initial particles have not been found in exclamative sentences, and those that have been found are listed here for ease of reference.

awyze	'next'	met	'liar'
aze	'perhaps'	mo	'Yes'
erekatu	'Go on'	nan	'No'
eruø	'I don't know'	te	'Oh'
eru'u	'Is that so'	tomo	'Yes'
hoz	'Hello'	tue	'Allow it'
kwa	'Oh'		

The following is an example of an initial particle followed by other particles within the sentence. It is the occurrence of such constructions which justify setting up the exclamative sentence as parallel to the others. Such sentences are **not** uncommon, though they are generally shorter than the example given.

e.g.	'No, (in vain, past, amusing.)'				3.34.6
	no	in vain	past	amusing	-
	nan	zepe	roko	ra'e	pa
	pt	pt	pt	pt	pt
	init	post-init	post-init	final	final

The negative particle nan is commonly followed by the post-verbal kwaw (negative) or by the post verbals ete and -z ('almost' and 'negative') with an emphatic sense.

e.g.	'Oh no, fellow'				3.42.10
	neg	neg	past	fellow	
	nan	kwaw	roko	ty	

nan ete	-z	'By no means!'
		(a common exclamation, not present in the data.)

In view of the idiomatic nature of such utterances, it has not been thought necessary to include them in the statement of normal syntactic relationships expressed by the hierarchy.

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## CHAPTER 14 CONSTRUCTIONS LARGER THAN THE SENTENCE

### 14.0 Relationships above the Sentence

The Sentence is the highest-ranking unit of the grammatical hierarchy. It is the unit within which all lower-ranking units must eventually function as elements, and which any utterance of any length may be analysed as consisting of, without residue. It is also the unit which corresponds most regularly with a phonological unit, (i.e. the span, cf. chap. 4) and with a stretch of speech which is semantically complete.

Sentences may be said to combine together loosely in groups such as the paragraph or the topic, and in some cases such groups appear to be characterised by formal criteria, such as change of pitch (cf. 7.44), the occurrence of certain particles (cf. chap. 12.47), or the occurrence of nominal and relational phrases with nouns rather than pronominal forms as their manifestation. Such formal criteria are far from being obligatory or predictable in their occurrence, and appear to be of stylistic rather than syntactic relevance. The recognition of these groups of sentences depends heavily upon semantic factors which are not regarded as adequate criteria for setting up additional grammatical units.

Apart from such large loose groupings of sentences, one sentence may be formally marked as semantically dependent upon another by phonological factors. This happens frequently in two instances

described below under the headings, The Extended Sentence (sect. 14.1) and The Speech Report (sect. 14.2). No additional grammatical units are set up to account for such constructions, since the grammatical units of which they consist (i.e. sentences) come together to form them optionally, and do not necessarily function as elements in their structure, as is the case with all units within the hierarchy, and the elements which they manifest. These constructions are not therefore set up as part of the grammatical hierarchy, but are included in the present description for the sake of completeness. Some further instances of paratactically linked sentences are noted in section 14.3.

#### 14.1 The Extended Sentence

The Extended Sentence is a construction which is recognised in order to account for the frequent occurrence of a sentence with one or more other sentences semantically subordinate to it and phonologically linked with it. The non-subordinate sentence will be referred to as the 'main clause' of the extended sentence and any semantically subordinate sentences as 'satellite clauses'. The label 'Extended Sentence' refers to the extension of semantic relationships, not to any extension of grammatical relationships.

The main clause of an extended sentence may be a favourite, inverted or declarative sentence, but is generally a favourite sentence. The satellite clause must be a declarative sentence, but may not contain an Auxiliary Verb element. Such clauses may either precede or follow the main clause. A satellite clause which precedes the main clause is generally of pitch pattern four, (cf. chap. 4.14). Any which follow the main clause are generally of slightly lower overall pitch, (cf. chap. 7.432). The semantic relationship between main and satellite clauses is such that the entities referred to in the latter qualify or clarify the predication expressed by the former. Satellite clauses are translatable into English as an integral part of the predication of the main clause.

e.g. 'They say, that a lorry killed Kaitan' 4.4.15

Kaitan	they say	-	lorry	killed	it	-	.
kaitan	ze	pa,	kamiaw	uzuka	a'e	pa.	
Sat cl			Main cl				
subj	pt	pt	subj	VPh	pt	pt	

'Ruzena'i went there, to our house' 4.4.1

went	Ruzena'i	there	to -,	our-house	to	-.
oho	ruzena'i	pe.	pe no,	urerypza	me	no.
Main cl				Sat cl		
VPh	subj	Adj	pt	Adj		pt

As may be observed from the first example, a nominal phrase which is analysed as the Subject element of a declarative sentence, in a satellite clause, may be the object or goal of the action expressed in a main clause. There is no formal grammatical relationship

between the two clauses, and apart from the phonological link already mentioned, such an extended sentence is indistinguishable from a sequence of a declarative and a favourite sentence which are not semantically linked. Semantic, as well as grammatical, ambiguity is theoretically possible, but it has not in fact been observed, because the contexts in which declarative sentences may occur as independent predications are somewhat limited.

Two or more satellite clauses commonly occur following a main clause, but more than one is rarely found preceding a main clause. Preceding satellite clauses may have particles in any position, but it is uncommon for following satellite clauses to contain any other than in final position. There is often harmony between the particles of the main and the satellite clauses, (cf. chap. 12.4), and this may be observed in the examples already quoted. This repetition of particles is a formal mark of the semantic relationship between the clauses, additional to the phonological factors already mentioned. It does not occur obligatorily however, and therefore is not regarded as evidence of a formal grammatical relationship.

As stated in chapter 3.1, there is a stylistic limit on the number of elements (other than particles) which generally occur in a favourite sentence. The extended sentence construction may be used to link together a larger number of elements than are stylistically acceptable in a single sentence. The following is an example of such a construction which is translatable into

English as one sentence with a fairly lengthy  
'down-ranked' type of construction which is not  
stylistically tolerated in one Guajajara sentence.

e.g. 'I heard him talk to him about going to the festival'  
I-hear to-him talk time past festival to go-thing about  
aenu izupe ize'cŋ mehe ri'i, mynykaw pe ihohaw rehe ri'i.  
Main Clause Sat Clause  
VPh Adj:DRSPH pt Adj:Rel Ph pt

An alternative analysis of this construction  
would be to set up the Extended Sentence as another  
unit within the hierarchy. This would consist of all  
the elements already set up for the favourite sentence,  
and provide for the additional occurrence of Subject,  
Object or Adjunct elements, accompanied by Particles,  
the latter combination either preceding or following  
the elements normally present in a favourite sentence.  
Such a unit might either be considered to be an  
additional non-favourite sentence, or it might be set  
up as a unit at a rank higher than the sentence.

The advantage of such an analysis would be that  
the resulting unit would reflect more clearly the  
semantic relationships between elements now analysed  
as belonging to two sentences. The occurrence of  
particles in positions as for the favourite sentence  
is regarded as strong support for analysis as two  
sentence type units however, and once a unit of some  
kind is set up to account for the occurrence of a  
Subject, Object or Adjunct with accompanying Particles,  
semantic factors are regarded as inadequate reason not

to identify this unit with the Declarative Sentence, which exhibits the same structural pattern.

While recognising that the Extended Sentence might with some justification be set up as a unit of a higher rank than the Sentence, it has been thought preferable to treat it as a construction additional to the hierarchy and not to extend the latter with non-obligatory units higher than the sentence. Such an analysis gives additional prominence to the Sentence as one of the basic units of speech, and this seems appropriate in view of its being the maximum unit which any utterance may be analysed as consisting of, without residue.

#### 14.2 The Speech Report

Sentences of all types are commonly followed by a favourite sentence which is translatable into English by an expression such as "I said to him", and is generally phonologically linked with the preceding sentence by being of slightly lower overall pitch, (cf. chap.7.432). Such a sentence will be referred to as a 'Speech Report' and the preceding sentence or sentences as a 'Quotation'.

The Verbal Phrase of a speech report sentence is invariably manifested by either, -mume'u 'to say' or -'e 'to say/think'. Very frequently it also contains an Adjunct element manifested by a Relational Phrase with the relator *pe*, which refers to the person addressed. Other elements which may occur are the Subject, Auxiliary Verb, and Particle and other Adjunct elements, not necessarily RPhs. The VPh element always precedes the Subject, and otherwise the order is as stated for the favourite sentence.

e.g. ' "Give me your gun fellow" I said to him' 3.4.6

give	your-gun	to-me	fellow	I say	to him
emur	nemukaw	ihewe	ty,	a'e	izupe.
Quotation				Speech Report	
VPh	Obj	Adj	pt	VPh	Adj:RPh

' "You'll explode it", I said to him (lying down)' 3.30.13

you-explode-it	I-say	past	lying	to him	-
eremopok,	a'e	roko	tupø	izupe	no.
Quotation	Speech Report				
VPh	VPh	pt	AV	Adj	pt

The 'Quotation' which precedes a Speech Report commonly consists of more than one sentence, and the upper limit to the number of such sentences is stylistically rather than structurally determined. When a large number of sentences are quoted, without other narrative type interruption, the first and last such sentences are almost invariably followed by a Speech Report, and other Speech Reports occur at frequent irregular intervals throughout the quotation. Single sentences are invariably followed by a Speech Report.

Sentences containing the verb -mume'u or -e may also occur preceding any quotation, though they do not do so regularly, and a Speech Report sentence still occurs following the quotation. Such preceding sentences are analysed just as any other favourite sentences, since they are not generally phonologically linked with the quotation that follows.

'Quotations' followed by Speech Report sentences are not confined to reports of physical speech events. They also commonly refer to thoughts, especially doubts, desires and reflections. No alternate construction has been found by which such thought activities are expressed. An example of this is the following; it is taken from the parsed text in chapter 16, and its context, which indicates that it refers to a thought rather than a physical speech activity, may be examined there.

e.g. Literally ' "Oh, perhaps someone is sitting there",  
I said to it'.

Idiomatically 'I realized that someone was sitting  
there'. 2.75.23

Oh	perhaps	someone	is sitting	there	at	-	I said to it
o	aipo	omo	hin	pe	pe	no,	a'e izupe.
	Quotation						Speech Report
Pt	Pt	Subj	VPh	Adj	pt	VPh	Adj

### 14.3 Other Paratactically Linked Sentences

Other instances than the above occur of two or more sentences which are paratactically linked to each other. Again there is no formal marker of such relationship except the phonological factors already referred to, i.e. the occurrences of pitch pattern four with sentences semantically dependent upon a following one (cf. chap. 4.14), and of slightly lower overall pitch with sentences semantically dependent upon a preceding one (cf. chap. 7. 432). Such linked sentences are generally translatable into English as one sentence having a main and subordinate clause.

e.g. 'As I came along the road, he met me' 3.24.16  
 I come there road along, he-met-me going - .  
 azur pe pe pehu rupi, heruðiei oho no.  
 VPh Adj Adj VPh AV Pt  
 Fav.Sent Fav.Sent

Sentences such as the above, which are translatable as main and subordinate clauses of a single sentence, are not always marked by the phonological factors noted above. There is no formal grammatical construction which links together two or more sentences each of which contains a Verbal Phrase element, either by way of co-ordination or subordination. Paratactic succession, with or without phonological marking, is therefore a fairly common feature of any prolonged stretch of speech. The following are additional examples of such succession.

e.g. Literally 'Suppose it doesn't kill it. It will run off'.  
 Idiomatically 'If it doesn't kill it, then it will run off'.

suppose	not-kill-it,	it-run	going	then.	3.16.12
aze	nuzukaz,	uzən	oho	kury.	
pt	VPh	VPh	AV	pt	
Fav.Sent		Fav.Sent			

Literally 'He sought a hammock then. He wanted  
 to go and hang himself up with it'.

Idiomatically 'He sought a hammock to hang  
 himself up in then'.

hammock	he-seek	then,	he hang				
ikyhawəma'i	uekar	kury,	himself up	desire	going	with it.	
Obj	VPh	pt	uzeəpyr	rəm	oho	hehe.	
Fav.Sent			VPh		AV	Adj	
			Fav.Sent				

CHAPTER 15 THEORETICAL CONCLUSIONS

The phonological and grammatical hierarchies have been fully described. It remains only to examine the inter-relationship of the hierarchies, and draw theoretical conclusions. Some comments on the usefulness of the hierarchy as a descriptive framework will be made first.

Grammatical descriptions making use of a hierarchical framework are not new. All tagmemic grammatical descriptions for instance, employ such a framework.<sup>34</sup> For the description of Guajajara, justification for the setting up of a hierarchy must be sought not in descriptions of other languages, but in the clarity or otherwise of the present study. The hierarchical framework serves well to bring out the common features enjoyed by the various phrases, by the noun and the verb, and by the nominal and verbal pieces, all highlighted by the horizontal dimension of the hierarchy. The vertical dimension brings out the various possibilities of 'down-ranking' - the inclusion of higher-ranking units within units of a lower rank, e.g. the Nominal Piece and the DRS Phrase. Its major advantage is of course its capacity to display clearly the diverse functions and structural patterns of units, and provide an overall statement of the grammar as a whole.

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34. of Pike 1960, etc. Pickett 1960, Elson and Pickett 1962 and Longacre 1964.

For the phonology, a hierarchical framework has equal justification in its capacity to generalise relationships and patterns in one overall statement. Non-hierarchical prosodic analysis has long served as a useful framework for the description of sound features which extend over, or have relevance to, stretches of speech of varying length. The hierarchy serves to display the inter-relationship of such features in one overall pattern. It also emphasises those patterns which are necessarily present throughout the whole data, over against those of limited relevance, or unpredictable occurrence, which are not allocated a place in the hierarchy.

In these respects therefore it may be urged that the present study offers some support for the suggestion that hierarchy is an integral aspect of both phonology and grammar.<sup>35</sup> It does not, of course, prove that hierarchy is a universal factor in such systems, but it does provide an example of a language whose grammatical and phonological systems can be each described in a hierarchical framework.

Not only can each hierarchy be justified in terms of itself, but there is also some justification for adopting a parallel descriptive framework for the two hierarchies. In the present study each hierarchy has been set up solely in terms of itself and without reliance upon the other. When the two are compared, however, there are significant areas of correspondence. These have been mentioned in the course of description

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35. See Pike, *Language* - 1960, pp. 38 - 43 and throughout.

of the various units, but may be summarised here. A sentence, (cf. chaps. 8 and 13), including one which is a clause within an extended sentence, (cf. chap. 14.1.) is almost always co-extensive with a span (cf. chap. 4). The final syllable of almost every grammatical structure lower than the sentence is also the final syllable of a foot (cf. chap. 5.0) The only exceptions to this are the Auxiliary Verb and the Relational Phrase, the final syllables of either of which may be foot final (e.g. as the last element of a span) but are more commonly foot medial. There are also some restrictions upon the occurrence of certain phonematic units or syllable patterns in terms of grammatical units, (cf. chaps. 6.00 and 7.31). These common boundaries for units in totally independent hierarchies serve to emphasize the fact that grammatical units find physical expression by means of phonological units, and a fair degree of congruence is to be expected because of this.

A more important advantage which is gained by the parallel descriptive framework is the clarity with which fundamental differences between the two aspects of language may be perceived. It is here assumed that phonology and grammar are basically different in that the latter relates to formal patterns observed in the occurrence of meaningful units as such<sup>36</sup> while the former relates to the phonetic phenomena employed in the utterance of these

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36. The term 'meaningful unit' is used here in a wide sense, and specifically includes the grammatical function of words which may have no objective semantic associations.

units, without primary reference to their meaning.

The patterns generalised from the utterance of meaningful units give rise to the classification of phenomena into units which enter into syntagmatic relationships with other units to form structures. The units are resolved ultimately into classes whose members operate paradigmatically as elements in structures. This type of relationship also obtains at one point in the phonological hierarchy, where consonants and vowels operate paradigmatically as elements in the structure of the syllable, and there enter into syntagmatic relationships with each other. It is perhaps for this reason that the 'phoneme' has at times been described as if it were the lowest rank of the grammatical hierarchy.

The paradigmatic and syntagmatic relationships of consonants and vowels may however be considered to constitute a sub-system within the phonological hierarchy. The relationships of the ultimate constituents other than Position are neither paradigmatic nor syntagmatic, except in a very limited sense, as e.g. where a system of seven patterns could be said to operate paradigmatically (but not syntagmatically) as the element Tune within the Span. The phonological units other than the syllable do not display a structure similar in kind to that of grammatical units, with contrasting classes which are paradigmatic systems combining syntagmatically. This is perhaps the most basic difference between the relationships

expressed in the two hierarchies.

The same basic difference is highlighted by the abstraction of prosodic features within the phonology. There is no parallel relationship within the grammar, for no element of a grammatical structure extends throughout the whole unit as do prosodic features. Had the grammatical patterns included that of concord or government, this would indeed have required treatment as it related to the whole extent of the relevant unit. But any concordial affixes would need to be dealt with as features of arrangement of lower ranked units, as is done in the phonology for special span-final elements (cf. chap. 4.2). They would not be parallel to the prosodic features of the present study, since such features relate to ultimate constituents which are not included in lower ranked units. The sense in which prosodic features are said to function as elements in phonological structures is not strictly equivalent to the way in which lower-ranking units do so. It may perhaps be called syntagmatic in the most general sense of that term, but it does not result in a structure which can be expressed as an ordered series of elements or places, as in the case in the grammatical hierarchy. This is therefore, only a further reflection of a basic difference in the type of relationships represented in the two hierarchies.

In view of these basic differences, it may be asked whether a parallel hierarchy is in fact the most helpful descriptive framework for the purpose of

comparing these two aspects of language. One additional advantage of such a description may therefore be pointed out in conclusion. This is that the need for a complete independence between the two hierarchies is clearly seen in the considerable divergence between the sets of units established. There is significant congruence between many of the units, as stated above, but there is even more significant lack of obligatory congruence at each rank and between each unit. A sentence, as stated above, is almost always co-extensive with a span, but not absolutely always. Similarly, the final syllable of lower-ranking grammatical structures than the sentence is very commonly also the final syllable of a foot, but not necessarily so. In rapid speech, or for the purpose of emphasis, and sometimes unassociated with any such apparent cause, these general principles of congruence are not observed.

It is not therefore possible to account strictly for the occurrence of the phenomena abstracted as prosodic features in terms of their occurrence in grammatical units such as the sentence, phrase or word. Even with a complete listing of the different grammatical units with which these prosodies normally occur, ( and such a list would be awkwardly long, and not very homogenous) it would not be possible to account for the possible lack of congruence mentioned above. The abstraction of phonological units as totally independent of grammatical ones makes it possible to make generalisations

which are not subject to special exceptions which lack a phonological basis.

For this reason alone it is both helpful and necessary to set up phonological units independent of grammatical ones. The hierarchical framework here employed has been chosen as the most appropriate one for the data to be described here. Any additional light thrown upon the interrelation of grammar and phonology by this parallelism is to a large extent incidental to the main purpose of the study, i.e. a clear description of the data of Guajajara.

CHAPTER 16    PARSED TEXT

The following short text is taken from the tape-recorded corpus upon which this study has been based. It is part of a spontaneous account by Mane Luis of his activities on the preceding day, and is typical of the type of narrative which constitutes the greater part of the data collected. It is here presented in terms of both its phonology and its grammar.

The text is divided into spans, which are numbered consecutively from one to fifty. Each span is transcribed, divided into feet and syllables and with the pitch marked above, according to the conventions of chapters four to seven, i.e. in phonological transcription. The occurrence of emphasis, hesitation or correction is marked by a superscript, E, H or C, respectively, appearing above the pitch transcription. Brief remarks concerning the abstractions to which the span is referred appear immediately below.

In most cases, the span is coextensive with a sentence, and this is then parsed immediately below the transcription of the span. In some cases however, the two units are not coextensive, and two or more spans may precede one sentence, or vice versa. Certain parts of some spans are bracketed off, because they are followed by hesitation or correction, and were ignored by the informant during transcription of the tape. They are therefore assumed to be irrelevant to this study, and not to be part of the units which have been set up.

The sentences are transcribed in 'reading transcription', which does not of course correspond exactly with the phonological transcription of the span. Specifically it does not include the span final phenematic units, h, ' and ə, and foot initial ə, which do not enter into grammatical relationships, (cf. chaps. 4.21 and 22, and 5.2) A fairly literal translation appears below each sentence.

The sentence is then written again, divided into its minimal units, and parsing appears below. For ease of cross-reference, morphemes which occur in the reading transcription in alternate forms are re-written in their basic form for parsing. Each sentence is parsed first into its major elements and the units which manifest them. These units are in turn parsed into their elements and the units which manifest them, and so on until minimal units are arrived at. In order to help relate the lower ranking elements to the parts of the transcription, the extent of each element is indicated by a horizontal line drawn immediately beneath it.

The abbreviations employed are the same as those used in chapters eight to fourteen, and are listed in the table at the end of this study. A unit which is functioning as an element of the same name is not written, but a dash is employed instead, so as to avoid confusing wearisome repetition. All units are parsed into their constituent elements, as described in the

foregoing chapters, with the exception of the head element in nominal and verbal phrases and in auxiliary verbs. When these are manifested by verbs or nouns which consist in turn of a head element manifested by verb or noun roots, one rank of the hierarchy is skipped in the parsing, and the verb or noun root is treated as if it were functioning immediately as the head element of the phrase. Apart from this, no ranks are skipped, and this is done purely to conserve space.

Following the parsing of the complete text, an idiomatic translation in consecutive English narrative style is included, to highlight the semantic relationships of the various phonological and grammatical units. Grammatical constructions larger than the sentence are also referred to as they occur in the text.

1.

\_\_\_\_\_

\_\_\_\_\_

a, ha, 'a, pe, y, pa, pe, ka, ru, me, heh,

Span of pitch pattern one, followed by pause.

2.

\_\_\_\_\_

\_\_\_\_\_

pe, pe, wy, ra, wy, zy, py, pe, i, mə, 'e, məh,

Span of pitch pattern one, followed by pause;  
with slightly lower overall pitch.

3.

\_\_\_\_\_

\_\_\_\_\_

pe, pe, y, pa, peh,

Span of pitch pattern one, followed by pause;  
lower overall pitch maintained.

1, 2 and 3 Favourite Sentence<sup>37</sup>

aha 'a pe ypa pe karu mehe pe pe wyrawyzypy  
pe imə'e mə pe pe ypa pe.

I went there to the lake in the afternoon, there to  
'hollow-tree' place to look, there to the lake.

after-

I	go	there	to	lake	to	noon	time	there
a-	-ha	'a	pe	ypa	pe	karuk	mehe	pe pe
<u>VPh</u>		<u>Adj</u>		<u>Adj</u>		<u>Adj</u>		<u>Adj</u>
-		RPh		RPh		RPh		RPh
<u>PP</u>	<u>Head</u>	<u>Rtee</u>	<u>Rel</u>	<u>Rtee</u>	<u>Rel</u>	<u>Rtee</u>	<u>Rel</u>	<u>Rtee</u>
-	VRT	NPh	-	NPh	-	Adv	-	Adv
		<u>Head</u>		<u>Head</u>				
		NRT		NRT				

hollow	tree	to	-	look	-	there	to	lake	to
wyrawyzypy	pe	i-		-mə'e	pə	pe	pe	ypa	pe
<u>Adj</u>		<u>Adj</u>				<u>Adj</u>		<u>Adj</u>	
RPh		DRSPH				RPh		RPh	
<u>Rtee</u>		<u>Rel</u>	<u>Head</u>		<u>Post</u>	<u>Rtee</u>	<u>Rel</u>	<u>Rtee</u>	<u>Rel</u>
NPh		-	DRS		-	Adv		NPh	
<u>Head</u>			<u>VPh</u>					<u>Head</u>	
NRT			-					NRT	
			<u>PP</u>	<u>Head</u>					
			-	VRT					

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37 This sentence might alternatively be analysed as three sentences corresponding to three spans. The first would be a favourite sentence and the next two declarative ones, all linked together in one Extended Sentence. Apart from the unusually large number of adjuncts present, however, there is no grammatical reason why it should not be just one sentence, and it is therefore analysed as such.

4.

-----  
-----

a,mə,'e, te,zy, za,ha, pe, pe, pe, pe,har, y,paw, re,he.

Span of pitch pattern one, not followed by pause.  
Normal pitch regained.  
Favourite sentence.

amə'e tezyz aha pe pe pe pehar ypaw rehe.

I went and looked there at the lake that is there, in vain.

I	look	in-vain	I	go	there	to	there	at	one	lake	it	at
a-	-mə'e	tezyz	a-	-ha	pe	pe	pe	pe	-har	ypaw	r-	-ehe
<u>VPh</u>		<u>Pt</u>	<u>AV</u>		<u>Adj</u>		<u>Adj</u>					
-		PIinit	-		RPh		RPh					
<u>PP</u>	<u>Head</u>		<u>PP</u>	<u>Head</u>	<u>Rtee</u>	<u>Rel</u>	<u>Rtee</u>					<u>Rel</u>
-	Vrt		-	Vrt	Adv	-	NPh					-
							Gen			<u>Head</u>	<u>PP</u>	
							NPh			Nn	Rt	-
							<u>Head</u>					
							NPi					
							<u>Base</u>			<u>Nzr</u>		
							RPh					
							<u>Rtee</u>			<u>Rel</u>		
							Adv					

5.

ty, hu, we, ri, hi',

Span of pitch pattern one, followed by pause.  
Favourite sentence.

tyhu we rihi.

It was still deep.

It is deep still	yet
tyhu we	rihi
VPh	Pt
	F:5

<u>Head</u>	<u>Post</u>
-------------	-------------

VRt <sup>37</sup>	s/c 3
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6.

nu, ma, i, 'u, k<sup>w</sup>aw, ze, zu, i, pu, pe, (ku) ri, hi,

Span of pitch pattern one, followed by pause, with  
correction break.

Favourite sentence.

numai'u kwaw zezu ipupe rihi.

The zuzu aren't eating in it yet.

not	it	thing	eat	mot	zezu	it	in	yet
n-	u-	ma'e	'u	kwaw	zezu	i-	pupe	rihi
VPh					<u>Subj</u>	<u>Adj</u>		<u>Pt</u>

-					NPh	RPh		F:5
<u>Pre</u>	<u>PP</u>	<u>Head</u>		<u>Post</u>	<u>Head</u>	<u>Rtee</u>	<u>Rel</u>	

-	-	VPI		sc 4	NRT	PP	-
---	---	-----	--	------	-----	----	---

<u>Vzr</u>	<u>Base</u>
-	<u>Vb</u>
	<u>Head</u>
	<u>VRT</u>

37. tyhu is one of two forms analysed as verb roots which function as the head element in verbal phrases without a pronominal prefix. The other is typaw, which occurs in sentence 7, below. The initial syllable ty might be analysed as a 3rd person pronominal prefix referring to water.



10.

C

\_\_\_\_\_

- . - . - . - -

\_\_\_\_\_

pe, pe(o,mo) o,mo, a,py,aw, he, kon,

Span of pitch pattern two, with correction break.  
Normal pitch regained.<sup>38</sup>

11.

\_\_\_\_\_

. . - . -

\_\_\_\_\_

wə,hu,ka, pə,no,

Span of pitch pattern one, not followed by pause.

10 and 11. Inverted sentence

pe pe omo apyaw hekon wəhu ka pə no.

Some fellow was there breaking babassu.

there	at	some	fellow	he	is	-	babassu	break	-	-
pe	pe	omo	apyaw	i-	-iko	-n	wəhu	ka	pə	no
<u>Adj</u>		<u>Subj</u>		<u>VPh</u>			<u>Adj</u>			<u>Pt</u>
RPh		NPh		-			DRSPH			F:7
<u>Rtee</u>	<u>Rel</u>	<u>Pre</u>	<u>Head</u>	<u>PP</u>	<u>Head</u>	<u>Post</u>	<u>Head</u>			<u>Post</u>
Adv	-	Spec	NRt	-	VRT	Sc 5	DRS			-
							<u>Obj</u>	<u>VPh</u>		
							NPh	-		
							<u>Head</u>	<u>Head</u>		
							NRt	VRT		

<sup>38</sup> The penultimate foot of this span might be expected to have as another syllable the vowel ə, preceding the syllable he, (cf. chap. 5.2.). In this case, the pitch pattern, with its resulting acceleration of the two final feet of the span (cf. chap. 4.12) is regarded as a possible explanation of the absence of the ə syllable.

12.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

e, ru, əh,

Span of pitch pattern four, followed by pause.

13.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

ma, 'e, a, py, aw, ru, 'u, a, 'e, noh,

Span of pitch pattern one, followed by pause.

12 and 13. Declarative Sentence.

eruə ma'e apyaw ru'u a'e no.

I don't know, it was some fellow.

I don't know	some	fellow	perhaps	it	-
eruə	ma'e	apyaw	ru'u	a'e	no
<u>Pt</u>	<u>Subj</u>		<u>Pt</u>	<u>Pt</u>	<u>Pt</u>
Init	<u>NPh</u>		F:1	Pro	F:7
	<u>Pre</u>	<u>Head</u>			
	Spec	Nrt			

14.

E

· - · - · - · - · - · - · - · -

a,ha, ro,ko, i,zi,wy, ra,hy, a,'i, ze,pe, ri,'i',

Span of pitch pattern one, with emphasis, followed by pause.  
Favourite Sentence.

aha roko iziwyr ahy a'i zepe ri'i.

I went very close to him, in vain, (i.e. without seeing him).

I	go	past	him	beside	very	very	in vain	past
a-	-ha	roko	i-	iwyr	ahy	a'i	zepe	ri'i
<u>VPh</u>		<u>Pt</u>	<u>Adj</u>				<u>Pt</u>	<u>Pt</u>
-		<u>PInit</u>	<u>RPh</u>				<u>PInit</u>	<u>F:5</u>
<u>PP</u>	<u>Head</u>		<u>Rtee</u>	<u>Rel</u>	<u>Post</u>	<u>Post</u>		
-	<u>Vrt</u>		<u>PP</u>	-	<u>p.vbl</u>	<u>p.vbl</u>		

15.

· - · - · - · - · - · - · - · -

a,'e, ro,ko,ce, a,'i, hi,na,'e, ri,'i,noh,

Span of pitch pattern three, followed by pause.  
Inverted Sentence.

a'e roko ce a'i hin a'e ri'i no.

He was sitting just there.

he	past	there	very	he	sit	he	past	-
a'e	roko	ce	a'i	i-	-in	a'e	ri'i	no
<u>Subj</u>	<u>Pt</u>	<u>Adj</u>		<u>VPh</u>		<u>Pt</u>	<u>Pt</u>	<u>Pt</u>
<u>NPh</u>	<u>P-Init</u>	<u>Aph</u>		-		<u>Pro</u>	<u>F:5</u>	<u>F:7</u>
<u>Head</u>		<u>Head</u>	<u>Post</u>	<u>PP</u>	<u>Head</u>			
<u>Pro</u>		<u>Adv</u>	<u>p.vbl</u>	-	<u>Vrt</u>			

16.

\_\_\_\_\_

\_\_\_\_\_

a, e, zo, a, zu, k<sup>w</sup>en, i, ho,

Span of pitch pattern four, not followed by pause.

Favourite Sentence.

aezo azukwen iho.

Just (as) I went past.

Just	I	pass	-	go
zo	a-	-zukwen	i-	-ho
<u>Pt</u>	<u>VPh</u>		<u>AV</u>	
Init.	-		-	
	<u>PP</u>	<u>Head</u>	<u>PP</u>	<u>Head</u>
	-	VRT	-	VRT

17.

\_\_\_\_\_

\_\_\_\_\_

a, ha, pe, ypa, pe, ku, ry,

Span of pitch pattern four, not followed by pause.

Favourite Sentence.

aha pe ypa pe kury.

I went there to the lake then.

I	go	there	lake	to	then
a-	-ha	pe	ypa	pe	kury
<u>VPh</u>		<u>Adj</u>	<u>Adj</u>		<u>Pt</u>
-		Adv	RPh		F:6
<u>PP</u>	<u>Head</u>		<u>Rtee</u>	<u>Rel</u>	
-	VRT		NPh	-	
			<u>Head</u>		
			NRT		

18.

u, nu, pə, nu, pə, wə, hu, he, ra, y, k<sup>w</sup>e, pe, ku, ry,  
Span of pitch pattern one, not followed by pause.  
Favourite Sentence.

unupənupə wəhu heraykwe pe kury.

He was banging babassu behind me then.

he	bang	bang	babassu	my	behind	at	then
u-	-nupə	-nupə	wəhu	he-	aykwer	pe	kury
<u>VPh</u>			<u>Obj</u>	<u>Adj</u>			<u>Pt</u>
-			NPh	RPh			F:6
<u>PP</u>	<u>Head</u>		<u>Head</u>	<u>Rtee</u>		<u>Rel</u>	
-	Vb		NRt	NPh		-	
	<u>Fmt</u>	<u>Head</u>		<u>Gen</u>	<u>Head</u>		
	VRT	VRT		PP	NRt		

19.

pə, pə, pə, pə, i, ko, a, 'eh,

Span of pitch pattern one, followed by pause.

Favourite Sentence, with onomatopoeic section  
functioning as Verbal Phrase.

pə pə pə pə iko a'e.

Bang, bang, bang, bang he went.

bang	bang	bang	bang	he	go	he
pə	pə	pə	pə	i-	-ko	a'e
<u>VPh</u>				<u>AV</u>		<u>Pt</u>
-				-		Pro
				<u>PP</u>	<u>Head</u>	
				-	VRT	

20.

o, a, i, po, o, mo, hin, ə, pe, pe, no,

Span of pitch pattern one, not followed by pause.<sup>39</sup>

Inverted Sentence; 'Quotation' with following Speech Report.

o aipo omo hin pe pe no,

Oh, someone seems to be there

Oh	perhaps	someone	he	sit	there	at	-
o	aipo	omo	i-	-in	pe	pe	no
<u>Pt</u>	<u>Pt</u>	<u>Subj</u>	<u>VPh</u>		<u>Adj</u>		<u>Pt</u>
Init	Init	NPh	-		RPh		F:7
		<u>Head</u>	<u>PP</u>	<u>Head</u>	<u>Rtee</u>	<u>Rel</u>	
		NRt	-	VRt	Adv	-	

21.

a, 'e, i, zu, pe',

Span of pitch pattern one, followed by pause.  
Favourite Sentence; Speech Report.

a'e izupe.

I said to him.

I	say	him	to
a-	'e	i-	pe
<u>VPh</u>		<u>Adj</u>	
-		RPh	
<u>PP</u>	<u>Head</u>	<u>Rtee</u>	<u>Rel</u>
-	VRt	PP	-

<sup>39</sup> The syllable hin is followed by a syllable composed of ə (cf. chap. 5.2). In this case the coda of the preceding syllable might well be analysed as the onset of the syllable having ə for its nucleus, cf. footnote in loc.

22.

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- . - . -

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a, zu, k<sup>w</sup>en, i, ho,

Span of pitch pattern one, not followed by pause.

Favourite Sentence.

azukwen iho.

I went past.

I	pass	I	go
a-	-zukwen	i-	-ho
<u>VPh</u>		<u>AV</u>	
-		-	
<u>PP</u>	<u>Head</u>	<u>PP</u>	<u>Head</u>
-	VRt	-	VRt

23.

E

\_\_\_\_\_

. - - . - . -

\_\_\_\_\_

a, ha, pe, ŋu, ty, re, he,

Span of pitch pattern one, not followed by pause;  
With emphasis.

Favourite Sentence.

aha peŋuty rehe.

I went to the near side.

I	go	near side	it	to
a-	-ha	peŋutyr	r-	-ehe
<u>VPh</u>		<u>Adj</u>		
-		RPh		
<u>PP</u>	<u>Head</u>	<u>Rtee</u>		<u>Rel</u>
-	VRt	NPh		-
		<u>Head</u>	<u>PP</u>	
		NRt	-	

24.

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. . - . - . . = -

\_\_\_\_\_

ə,mə,'e, tɛ,zɪj, pɛ,y,pə, pɛ,

Span of pitch pattern one, not followed by pause.  
Favourite Sentence.

əmə'e tezyz pe ypa pe.

I looked there at the lake, (in vain).

I	look	in vain	there	lake	at
a-	-mə'e	tezyz	pe	ypa	pe
<u>VPh</u>		<u>Pt</u>	<u>Adj</u>	<u>Adj</u>	
-		P-Init.	Adv	RPh	
<u>PP</u>	<u>Head</u>			<u>Rtee</u>	<u>Rel</u>
-	VRt			NPh	-
				<u>Head</u>	
				NRt	

25.

E

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. . . - . -

\_\_\_\_\_

ty,hu, a,'u,we, ri,hi',

Span of pitch pattern one, followed by pause;  
with emphasis.

Favourite Sentence.

tyhu a'u we rihi.

It was still very deep.

deep	very	still	yet
tyhu	a'u	we	rihi
<u>VPh</u>			<u>Pt</u>
-			F:5
<u>Head</u>	<u>Post</u>	<u>Post</u>	
VRt	sc3	sc3	

26.

E

a,wy,ze, a,ha,k<sup>w</sup>e, ru,pi, y,pa,i,wyr, ə,ku,ryh,

Span of pitch pattern one, followed by pause;  
with emphasis.

Favourite Sentence.

awyze aha kwe rupi ypa iwyr kury.

Next I went along there beside the lake.

Next	I	go	that	it	along	lake	beside	then
awyze	a-	-ha	kwez	r-	-upi	ypa	iwyr	kury
<u>Pt</u>	<u>VPh</u>		<u>Adj</u>			<u>Adj</u>		<u>Pt</u>
Init	-		RPh			RPh		F:6
	<u>PP</u>	<u>Head</u>	<u>Rtee</u>		<u>Rel</u>	<u>Rtee</u>	<u>Rel</u>	
	-	VRt	NPh		-	NPh	-	
			<u>Head</u>	<u>PP</u>		<u>Head</u>		
			Spec	-		NRt		

27.

a,ha,pe, pe,no',

Span of pitch pattern one, followed by pause; with emphasis.

Favourite Sentence.

aha pe pe no.

I went there.

I	go	there	to	-
a-	-ha	pe	pe	no
<u>VPh</u>		<u>Adj</u>		<u>Pt</u>
-		RPh		F:7
<u>PP</u>	<u>Head</u>	<u>Rtee</u>	<u>Rel</u>	
-	VRt	Adv	-	

28.

E

H

ə,wə,hem, a,ha,pe, pe, (ma,'e,) y,pa, i,wyr, əh,

Span of pitch pattern one, followed by pause; with emphasis and hesitation.

Favourite Sentence.

əwəhem aha pe pe ypa iwyr.

I went and arrived there beside the lake.

I	arrive	I	go	there	at	lake	beside
a-	-wəhem	a-	-ha	pe	pe	ypa	iwyr
<u>VPh</u>		<u>AV</u>	<u>Adj</u>			<u>Adj</u>	
-		-	RPh			RPh	
<u>PP</u>	<u>Head</u>	<u>PP</u>	<u>Head</u>	<u>Rtee</u>	<u>Rel</u>	<u>Rtee</u>	<u>Rel</u>
-	VRT	-	VRT	Adv	-	NPh	-
						<u>Head</u>	
						NRt	

29.

H

C

(u, ma,'e, ap,y') ce, o,mo, a,py,aw, u,e,i,maw, he, re, kon, a, e, noh,

Span of pitch pattern one, followed by pause; with hesitation and correction.

Inverted Sentence.

ce omo apyaw ueimaw herekon a'e no.

Some fellow had his domestic animal there.

there	some	fellow	his	own	domestic	he	has	-	he	-
					animal					
ce	omo	apyaw	u-	-imaw	i-	-ereko	-n	a'e	no	
<u>Adj</u>	<u>Subj</u>		<u>Obj</u>		<u>VPh</u>			<u>Pt</u>	<u>Pt</u>	
Adv	NPh		NPh		-			Pro	F:7	
	<u>Gen</u>	<u>Head</u>	<u>Gen</u>	<u>Head</u>	<u>PP</u>	<u>Head</u>	<u>Post</u>			
	Spec	NRt	PP	NRt	-	VRT	sc	5		

30.

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e, ru, ə,

Span of pitch pattern four, not followed by pause.

31.

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\_\_\_\_\_

u, ru, pe, a, 'i, ru, 'uh,

Span of pitch pattern one, followed by pause.

30 and 31. Declarative Sentence.

eruə urupe a'i ru'u.

I don't know, it was probably little Urupe.

I don't	know	Urupe	little	probably
eruə		urupe	a'i	ru'u
<u>Pt</u>		<u>Subj</u>		<u>Pt</u>
Init		<u>NPh</u>		F:5
		<u>Head</u>	<u>Post</u>	
		NRt	P-vb1	

32.

C

E

(a,zo,'a,'a) a,zo,poj, zezu, te,ko,pe, pe,y,pa,i,wyr, ə,ku,ryh,

Span of pitch pattern one, followed by pause; with emphasis and correction.

Favourite Sentence.

azopoz zezu teko pe pe ypa iwyr kury.

I fed zezu there beside the lake then.

I	feed	zezu	I	be	there	at	lake	beside	then
a-	-zopoz	zezu	te-	-ko	pe	pe	ypa	iwyr	kury
<u>VPh</u>		<u>Obj</u>	<u>AV</u>		<u>Adj</u>		<u>Adj</u>		<u>Pt</u>
-		NPh	-		RPh		RPh		F:6
<u>PP</u>	<u>Head</u>	<u>Head</u>	<u>PP</u>	<u>Head</u>	<u>Rtee</u>	<u>Rel</u>	<u>Rtee</u>	<u>Rel</u>	
-	VRt	NRt	-	VRt	Adv	-	NPh	-	
							<u>Head</u>		
							NRt		

33.

H

C

(u,ze,po,'o, mə,'e, a,zo,aj,) a,zu,ka, i,mu,ə,

Span of pitch pattern four, not followed by pause; with hesitation and correction.

Favourite Sentence.

azuka imuə.

I killed one (by pulling).

I	kill	it	pull
a-	-zuka	i-	-mur
<u>VPh</u>		<u>AV</u>	
-		-	
<u>PP</u>	<u>Head</u>	<u>PP</u>	<u>Head</u>
-	VRt	-	VRt

34.

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a, zu, ka, a, 'i, mu, ə.

Span of pitch pattern four, not followed by pause.

Favourite Sentence.

azuka a'i muə.

I killed a little one (by pulling).

I	kill	little	it	pull
a-	-zuka	a'i	i-	-mur
<u>VPh</u>			<u>AV</u>	
-			-	
<u>PP</u>	<u>Head</u>	<u>Post</u>	<u>PP</u>	<u>Head</u>
-	VRt	sc 3	-	VRt

35.

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\_\_\_\_\_

a, zu, ka, i, mu, ə,

Span of pitch pattern four, not followed by pause.

Favourite Sentence.

azuka imuə

I killed one (by pulling).

I	kill	it	pull
a-	-zuka	i-	-mur
<u>VPh</u>		<u>AV</u>	
-		-	
<u>PP</u>	<u>Head</u>	<u>PP</u>	<u>Head</u>
-	VRt	-	VRt

36.

E

a, zu, ka, te, zyj, k<sup>w</sup>atr, a, 'i, wə',

Span of pitch pattern one, followed by pause; with emphasis and an unassimilated loan word displaying a non-typical syllable pattern, (tr syllable final).

Favourite Sentence.

azuka tezyz quatro a'i wə.

I killed four little ones (in vain).

I	kill	in vain	four	little	plu
a-	-zuka	tezyz	quatro	a'i	wə
<u>VPh</u>		<u>Pt</u>	<u>Obj</u>		<u>Pt</u>
-		p-init	NPh		F:2
<u>PP</u>	<u>Head</u>		<u>Head</u>	<u>Post</u>	
-	VRT		Spec	p-vbl	

37.

o, u, ze, po, kok, he, pi, na,

Span of pitch pattern one, not followed by pause: with initial high pitch.

Favourite Sentence.

o uzepokok hepina.

Oh, my fish hook caught.

Oh	it	self	hand	touch	my	hook
o	u-	-ze-	-po	-kok	he-	pina
<u>Pt</u>	<u>VPh</u>				<u>Subj</u>	
Init	-				NPh	
	<u>PP</u>	<u>Head</u>			<u>Gen</u>	<u>Head</u>
	-	VPI			PP	Nrt
		<u>Vzr</u>	<u>Base</u>			
		-	VPI			
			<u>Vzr</u>	<u>Base</u>		
			Nrt	VRT		

38.

H C

(ma, 'e, ə, hə) u, zən, o, mo, i, zu, pe, ku, ry,

Span of pitch pattern one, not followed by pause;  
with hesitation and correction.

Favourite Sentence, linked with following one in  
extended sentence.

uzən omo izupe kury,

One ran off with it then,

it	run	one	it	with	then
u-	-zən	omo	i-	-pe	kury,
<u>VPh</u>		<u>Subj</u>	<u>Adj</u>		<u>Pt</u>
-		NPh	RPh		F:6
<u>PP</u>	<u>Head</u>	<u>Head</u>	<u>Rtee</u>	<u>Rel</u>	
-	VRt	spec	PP	-	

39.

u, hu, ka, tu, ma, 'e, ku, ry',

Span of pitch pattern one, followed by pause; of slightly  
lower overall pitch.

Declarative Sentence, linked with preceding one in  
extended sentence.

uhu katu ma'e kury.

A really big one.

big	good	one	then
uhu	katu	ma'e	kury
<u>Subj</u>			<u>Pt</u>
NPh			F:6
<u>Head</u>			
NPi			
<u>Base</u>		<u>Nzr</u>	
DRS		-	
<u>VPh</u>			
<u>Head</u>	<u>Post</u>		
VRt	Pvbl		

...

40.

o, o, mo, no, hok, he, ra, ha, pah,

Span of pitch pattern one, followed by pause; with initial high pitch, and normal overall pitch.

Favourite sentence.

o omonohok heraha pa.

Oh, it broke it and carried it away.

oh	it	cause	break	it	carry	-
o	u-	-mu-	-nohok	i-	-eraha	pa
<u>Pt</u>	<u>VPh</u>			<u>AV</u>		<u>Pt</u>
Init	-			-		F:8
	<u>PP</u>	<u>Head</u>		<u>PP</u>	<u>Head</u>	
	-	V <i>Pi</i>		-	V <i>Rt</i>	
		<u>Vzr</u>	<u>Base</u>			
		-	<u>V<i>Rt</i></u>			

41.

o, a, e, zo, tu, e, a, 'e, ku, ryh,

Span of pitch pattern four, followed by pause; with initial high pitch.

Declarative sentence.

o aezo tue a'e kury.

Oh there was only that one.

Oh	only	really	it	then
o	zo	tue	a'e	kury
<u>Pt</u>	<u>Pt</u>	<u>Pt</u>	<u>Subj</u>	<u>Pt</u>
Init	Init	P-Init	N <i>Ph</i>	F:6
			<u>Head</u>	
			Pro	

42.

---

ma, 'e, tu, e, et, ə, ku, ryh,

Span of pitch pattern five, followed by pause.

Interrogative declarative sentence.

ma'e tue et kury

What now?

what	indeed	really	then
ma'e	tue	et	kury
<u>Subj</u>	<u>Pt</u>	<u>Pt</u>	<u>Pt</u>
NPh	P-Init	P-Init	F:6
<u>Head</u>			
<u>NRt</u>			

43.

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k<sup>w</sup>a, o, no, 'oŋ, ze, zu, a, 'e, wə, pe, pe, he, re, cak, wə, ku, ryh,

Span of pitch pattern one, followed by pause, with initial high pitch.

- 43a. Favourite Sentence, linked with following one in extended sentence.

kwa ono'oŋ zezu a'e wə,  
Oh, the zezu gathered,

Oh	it	gather	zezu	it	plu
kwa	u-	-no'oŋ	zezu	a'e	wə
<u>Pt</u>	<u>VPh</u>		<u>Subj</u>	<u>Pt</u>	<u>Pt</u>
Init	-		NPh	Pro	F:2
	<u>PP</u>	<u>Head</u>	<u>Head</u>		
	-	VRT	NRT		

- 43b. Declarative Sentence, linked with preceding one in extended sentence.

pe pe herecak wə kury.

there to see me then.

there	at	me	see	plu	then
pe	pe	he-	-ecak	wə	kury
<u>Adj</u>		<u>Adj</u>		<u>Pt</u>	<u>Pt</u>
RPh		DRSPH		F:2	F:6
<u>Rtee</u>	<u>Rel</u>	<u>Head</u>			
Adv	-	DRS			
		<u>VPh</u>			
		-			
		<u>PP</u>	<u>Head</u>		
		-	VRT		

44.

he, re, cak, u, pə, ku, ry,

Span of pitch pattern one, not followed by pause.

Favourite Sentence.

herecak upə kury.

They saw me then (from the ground).

me	see	be on ground	then
he-	-ecak	u-	-pe
<u>VPh</u>		<u>Av</u>	<u>Pt</u>
-		-	F:6
<u>PP</u>	<u>Head</u>	<u>PP</u>	<u>Head</u>
-	VRt	-	VRt

45.

C

(pi,) pi, na, na, he, taj, ku, ryh,

Span of pitch pattern one, followed by pause;  
with correction.

Favourite Sentence.

pina nahetaz kury.

There was no fish-hook.

hook	not	it	be	not	then
pina	na-	i-	-eta	-z	kury
<u>Subj</u>	<u>VPh</u>				<u>Pt</u>
NPh	-				F:6
<u>Head</u>	<u>Pre</u>	<u>PP</u>	<u>Head</u>	<u>Post</u>	
NRt	-	-	VRt	sc 4	

46.

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↘

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k<sup>w</sup>ah,

Span of pitch pattern seven, followed by pause.  
Exclamative Sentence.

kwa.

Oh!

kwa

Pt

Init

47.

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. - . - . - . -

\_\_\_\_\_

a,ha, to,mo, i,zu,i, ce,

Span of pitch pattern one, not followed by pause.

Favourite sentence; quotation linked with following  
speech report.

aha tomo izui ce,

I think I'll go from here,

I	go	perhaps	it	from	-
a-	-ha	tomo	i-	wi	ce
<u>VPh</u>		<u>Pt</u>	<u>Adj</u>		<u>Pt</u>
-		P-init	RPh		F:8
<u>PP</u>	<u>Head</u>		<u>Rtee</u>	<u>Rel</u>	
-	VRt		PP	-	

48.

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. - . -

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a, 'e, ku, ryh,

Span of pitch pattern one, followed by pause;  
with slightly lower overall pitch.

Favourite Sentence; speech report following  
preceding quotation.

a'e kury.

I said then.

I	say	then
a-	'e	kury
<u>VPh</u>		<u>Pt</u>

- F:6

<u>PP</u>	<u>Head</u>
-	VRt

49.

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. - . -

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ka, ruk, ø, noh,

Span of pitch pattern one, followed by pause;  
normal overall pitch.

Declarative Sentence.

karuk no.

It was late.

late	-
karuk	no
<u>Adj</u>	<u>Pt</u>

APh F:7

Head

Adv

50.

~~~~~  
 . - . . -  
 ~~~~~

o, a, zur, i, zu, i',

Span of pitch pattern one, followed by pause;  
 with initial high pitch.

Favourite Sentence.

o azur izui.

Oh I came from there.

Oh	I	came	it	from
o	a-	-zur	i-	wi
<u>Pt</u>	<u>VPh</u>		<u>Adj</u>	
Init	-		RPh	
	<u>PP</u>	<u>Head</u>	<u>Rtee</u>	<u>Rel</u>
	-	VRt	PP	-

Idiomatic Translation

The following idiomatic translation may clarify some of the semantic relationships of the foregoing text. Superscript numbers indicate the equivalent passages in the text.

1. I went off to the lake yesterday, <sup>2.</sup> to look by 'hollow-  
tree' place, <sup>3.</sup> there at the lake. <sup>4.</sup> I went there and looked  
at that lake, but it was no good. <sup>5.</sup> The water was still  
deep. <sup>6.</sup> Zezu don't bite in deep water, <sup>7,8,9,</sup> but they will  
when it is shallow.

10. There was some fellow there <sup>11.</sup> breaking babassu .  
<sup>12,13.</sup> I don't know who it was. <sup>14.</sup> I went very close to him  
<sup>15.</sup> as he was sitting there, but without realising it.  
<sup>16.</sup> As soon as I had gone by, <sup>17.</sup> as I went to the lake,  
<sup>18.</sup> he banged on the babassu behind me, <sup>19.</sup> Bang, bang,  
bang, bang, he was going, <sup>20, 21.</sup> and I realised that there  
was somebody there.

<sup>22.</sup> I went by, <sup>23.</sup> and went to the near side <sup>24.</sup> and looked at the  
lake there, but it was no good. <sup>25.</sup> The water was still very  
deep. <sup>26.</sup> Then I went along there beside the lake. <sup>27.</sup> I went  
along <sup>28.</sup> and arrived there beside the lake. <sup>29.</sup> Some fellow had  
his dog there; <sup>30,31.</sup> little Urupe I think it was.

32. Then I cast bait to the zezu there at the lakeside.  
 33. I killed one, <sup>34.</sup> I killed a little one, <sup>35.</sup> and another,  
 - <sup>36.</sup> I killed four little ones. <sup>37.</sup> My hook was taken,  
 38. one ran off with it, <sup>39.</sup> a really big one, <sup>40.</sup> it broke  
 the line and carried off the hook.

41. It was my only one! <sup>42.</sup> What now? <sup>43.</sup> Oh, the zezu  
 gathered and looked at me then! <sup>44.</sup> They looked at me there  
 in the water. <sup>45.</sup> I had no fish-hook! <sup>46.</sup> "Well, <sup>47.</sup> I think I'll  
 be getting along" <sup>48.</sup> I said. <sup>49.</sup> It was late, <sup>50.</sup> so I came  
 from there.

BIBLIOGRAPHY

The bibliography is divided into two sections, the first listing books and articles of general interest to which reference has been made in the preparation of this thesis, and the second listing materials relating to the Guajajara people and language.

Section One

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ABBREVIATIONS

Adj	Adjunct
Adv	Adverb
APh (Adv.Ph)	Adverbial Phrase
AV (Aux.Vb)	Auxiliary Verb
C	Consonant
cl	Class
do	Ditto
DRS	Down Ranked Sentence
DRSPh	Down Ranked Sentence Phrase
excl	Exclusive
F	Final
Fav	Favourite
Fmt	Formant
Gen (gen)	Genetival
H.S.	Heavily Stressed
incl	Inclusive
init	Initial
int (intr)	intransitive
I.P.A.	International Phonetic <sup>Alphabet</sup> Association
L.S.	Lightly Stressed
Main cl	Main Clause
M.S.	Medium Stressed
Nn	Noun
Nom (N)	Nominal
NPh	Nominal Phrase
NPi	Nominal Piece
NRt (Nrt)	Noun Root
Nzr (nzt)	Nominalizer

Obj (obj)	Object
pl	Plural
Pos	Position
post	Post Verbal
post-p	Post-Positional
P (Pp)	Page(s)
PP	Pronominal Prefix
Pre(pre)	Pre-Verbal
Pre-N	Pre-Nominal
Pt (pt)	Particle
Qual	Qualifer
Rel	Relator
RPh (Rel Phr)	Relational Phrase
Rt (rt)	Root
Rtee(R'tee)	Relatee
Sat cl	Satelite Clause
sc	Sub-Class
sect.	Section
sent	Sentence
sg	Sing <sup>ular</sup> <del>le</del>
SIL	Summer Institute of Linguistics
SOAS	School of Oriental and African Studies
spec	Specified
st	Stative
Subj (subj)	Subject
Tr (tr)	Transitive
unspec	Unspecified
V	Vowel
Vb (vb)	Verb
Vb1 (vb1)	Verbal
VPi	Verbal Piece
VPh (VPhr)	Verbal Phrase
VRt (Vrt)	Verb Root
Vzr (vzr)	Verbalizer