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A preliminary grammar of Hanga Hundi

Wendel, Thomas DeWayne, M.A.

The University of Texas at Arlington, 1993

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A PRELIMINARY GRAMMAR OF HANGA HUNDI

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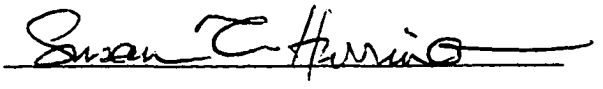

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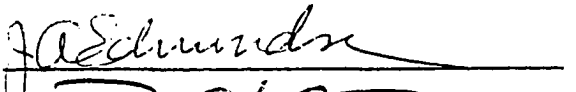

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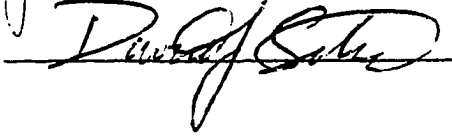

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A PRELIMINARY GRAMMAR OF HANGA HUNDI

by

THOMAS DEWAYNE WENDEL

Presented to the Faculty of the Graduate School of

The University of Texas at Arlington in Partial Fulfillment

of the Requirements

for the Degree of

MASTER OF ARTS IN LINGUISTICS

UNIVERSITY OF TEXAS AT ARLINGTON

December 1993

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November 22, 1993

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ABSTRACT

A PRELIMINARY GRAMMAR OF HANGA HUNDI

Publication No._____

Thomas DeWayne Wendel, M.A.

The University of Texas at Arlington, 1993

Supervising Professor: Susan C. Herring

This monograph presents a description of the phonology, morphology, and syntax of Hanga Hundi, a Papuan language of the East Sepik province of Papua New Guinea. While the primary purpose of the monograph is to provide a description of the language rather than an evaluation of theoretical issues, the description should nonetheless provide a researcher with some interesting information for cross linguistic comparison. The primary areas of interest are the vowel phonemes, the switch reference system of suffixes, and the case marking system that clarifies the case role of noun phrase clause constituents. The phonology is described using Underspecification Theory and a syllable template. The syntax is described primarily in an X-bar framework but the verbal description should make it accessible to a linguist from any theoretical background. In addition, several texts have been included in the description of Hanga Hundi's discourse structure.

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LIST OF ABBREVIATIONS

Abbrev.	Definition (forms in parenthesis)
1D	First person dual. (ani, -na, -ani)
1P	First person plural. (nan., me, -nani, -mbe, -kwa)
1S	First person singular. (wuni, -wu, -wuni)
2D	Second person dual. (béni, -mbé, -mbéni)
2P	Second person plural. (guni, -ngu, -nguni)
2SF	Second person singular feminine. (méni, -mé, -méni)
2SM	Second person singular masculine. (nyéni, -nyé, -nyéni)
3D	Third person dual. (bér, -bé, -bér)
3P	Third person plural. (di, -ndi, -nda)
3SF	Third person singular feminine. (lé, -lé)
3SM	Third person singular masculine. (dé, -ndé)
ABOUT	Designates a topic of a speech verb. (-ka)
all.down	Move completely down, a direction mode suffix. (-sanda)
COMPL	Complete. (-taka)
COND	Different subject conditional switch reference marker. (-t)
CONJ	Conjunction. (wali, akwi, bér, -ka)
DS	Different subject switch reference marker. (-ka, -t, -mboka)
DUB	Dubitative suffix, marks an event that is not likely to occur. (-ké)
FOR	Beneficiary of the verb. (-ka)
FRUS	Frustration, not able. (patika, -pati)
FUT	Future tense, more certain than intentive suffix. (-te)
IMMIN	Imminent action, stresses immediacy of the event. (-wata)
IMP	Imperative marker. (mé, sé, ma, sa)
IMPF	Imperfective aspect suffix. (-i)

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inside	Inside or underneath, direction mode suffix. (-solo)
INT	Intentive suffix. Very similar to future tense but less definite. (-ta)
INT	Intensifier, means 'only' or 'just'. (male, hapu)
LIKE	Means 'like', 'as', 'similar to'. (-ngala)
LOC	Locative suffix, means 'on' or 'at'. (-mbu, -mba)
NEG	Negative, means 'not' or 'no'. (yingapwe, -hapi, -hamba)
NEGPUR	Different subject negative purpose switch reference marker, means 'in order to prevent' or 'lest'. (-mboka)
now	Used for the present tense adverb. (andé)
NSQ	Same subject non-sequential switch reference marker, encodes a partial temporal overlap. (-e, -a)
outside	Outside, direction mode suffix. (-sangwandé)
outward	A directional affix meaning 'out'. (-sale)
PL	Plural. (-ngu, -mbri)
POSS	Possessor. (-na, -ka)
PUR	Purpose, in order to, a same subject switch reference suffix. (-njoka)
REL.OBJ	This seems to be a relativizer focusing on the object.
RELFUT	Accessory future suffix, makes the verb an adjective. (-te...ka)
RELPRES	Present tense relativizer. 'One who does'. (-kwa)
RELPST	Past tense relativizer. (-n)
SEQ	Same subject sequential switch reference marker, encodes the fully sequential, i.e. no temporal overlap, nature of the conjoined clauses. (-taka)
SIM	Same subject simultaneous action switch reference marker, encodes full temporal overlap. (-ta)
SS	Same subject switch reference marker.

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tentatively	A direction mode suffix, means 'to try', 'do tentatively'. (-kwexé)
then	Used for the past tense adverb *wundé* and the clause-level conjunction *bu*.
THIS	Expresses focus on a subject, means 'this one'. (-wa)
TO	Destination of the verb. (-ré)
to.all	Means 'entirely' or 'to everyone', a direction mode suffix. (-séke)
upward	A direction mode suffix, means 'up'. (-sawuré)
VOC	Vocative ending. (-wa)
WANT	'To want to do' ... Used in /sanandat/. (-na)

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1. INTRODUCTION

1.1. Language name

The language described in this thesis is called Hanga Hundi by its native speakers. It is spoken in the villages of Nungwaia, Dumek, Weko, and Warmetali in the East Sepik province of Papua New Guinea. These villages are located about thirty miles southwest of Maprik, as shown in figure 1. The total estimated population for these villages, based on the 1980 census and average population growth, is about 1,900 people.

Hanga Hundi is a sub-variety of what was first identified by Laycock (1965) as West Wosera. Laycock understood West Wosera to be a variety of Abelam (or Ambulas), one of the Ndu languages. The Ndu languages are, in turn, part of the Middle Sepik Stock of languages (Manabe 1981), which is one group of the Oceanic languages. The genetic classification of Hanga Hundi is indicated in figure 2. There are probably about nine thousand people in all who speak the West Wosera languages. In general, a speaker of one West Wosera language can be understood by a speaker of another West Wosera language, although they may have to use slower speech and clarify the use of some lexical items.

Much of the previous work that has been done on the West Wosera languages has been concerned with their genetic relationship to the languages around them. In particular, previous work has discussed whether the West Wosera languages are a separate language group or are a variety of Abelam. This question of language group or variety was first raised by Glasgow and Loving in 1964. Later, Wilson (1976), who worked on the Abelam language for many years, did a sociolinguistic survey of Abelam and classified the West Wosera area under the name of Kwasengen. Based on lexical and mutual intelligibility data, she determined that West Wosera represents a different language group and is not a variety of

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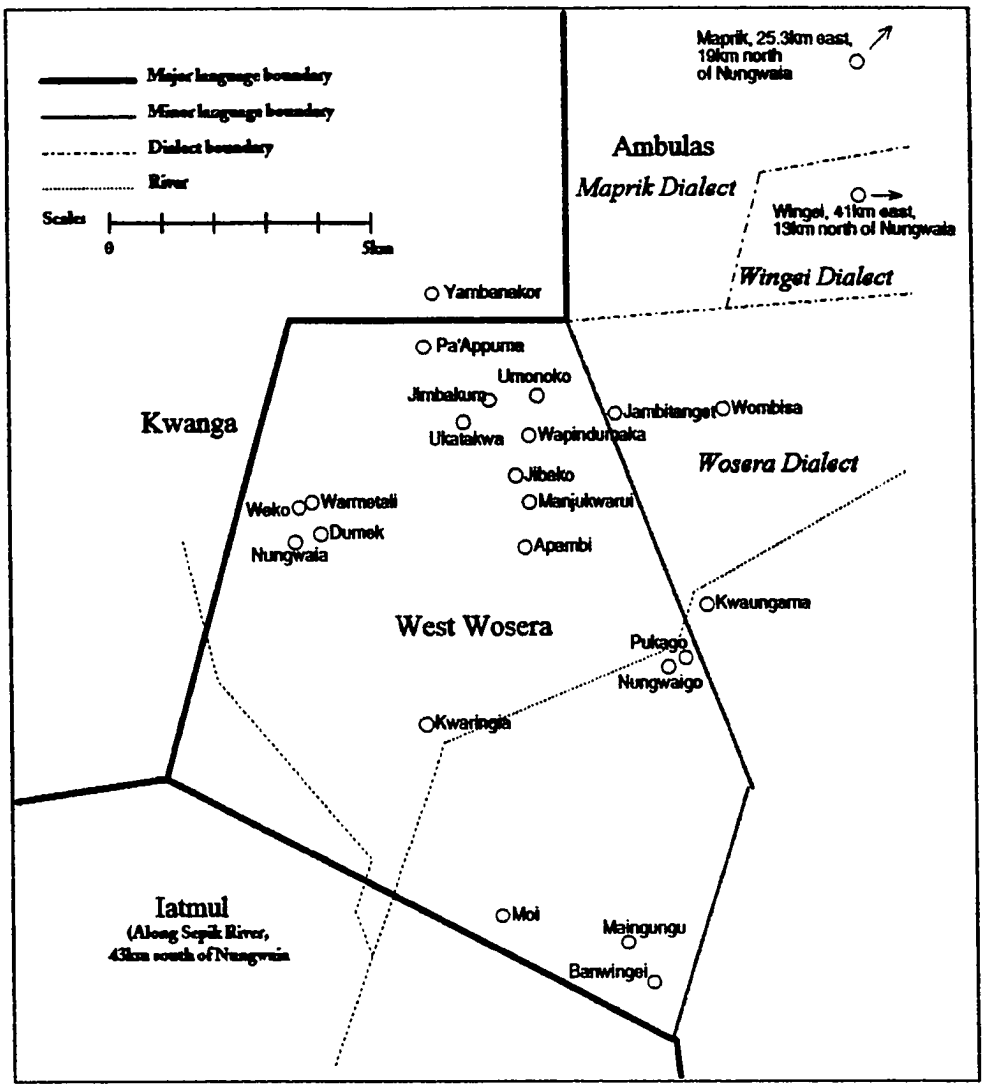

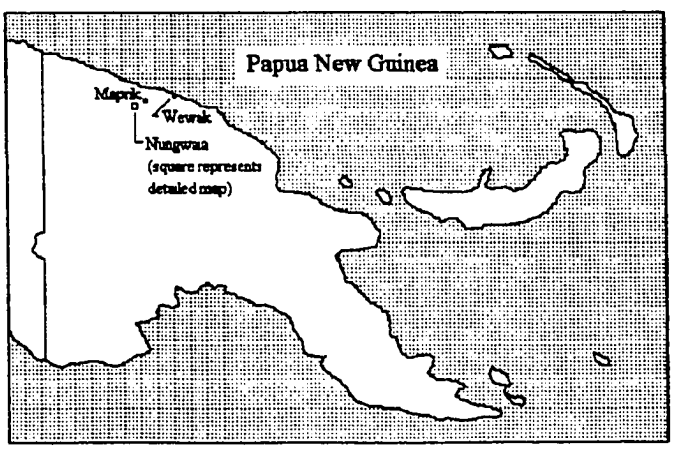

Figure 1-1. Location of Hanga Hundi speaking villages.

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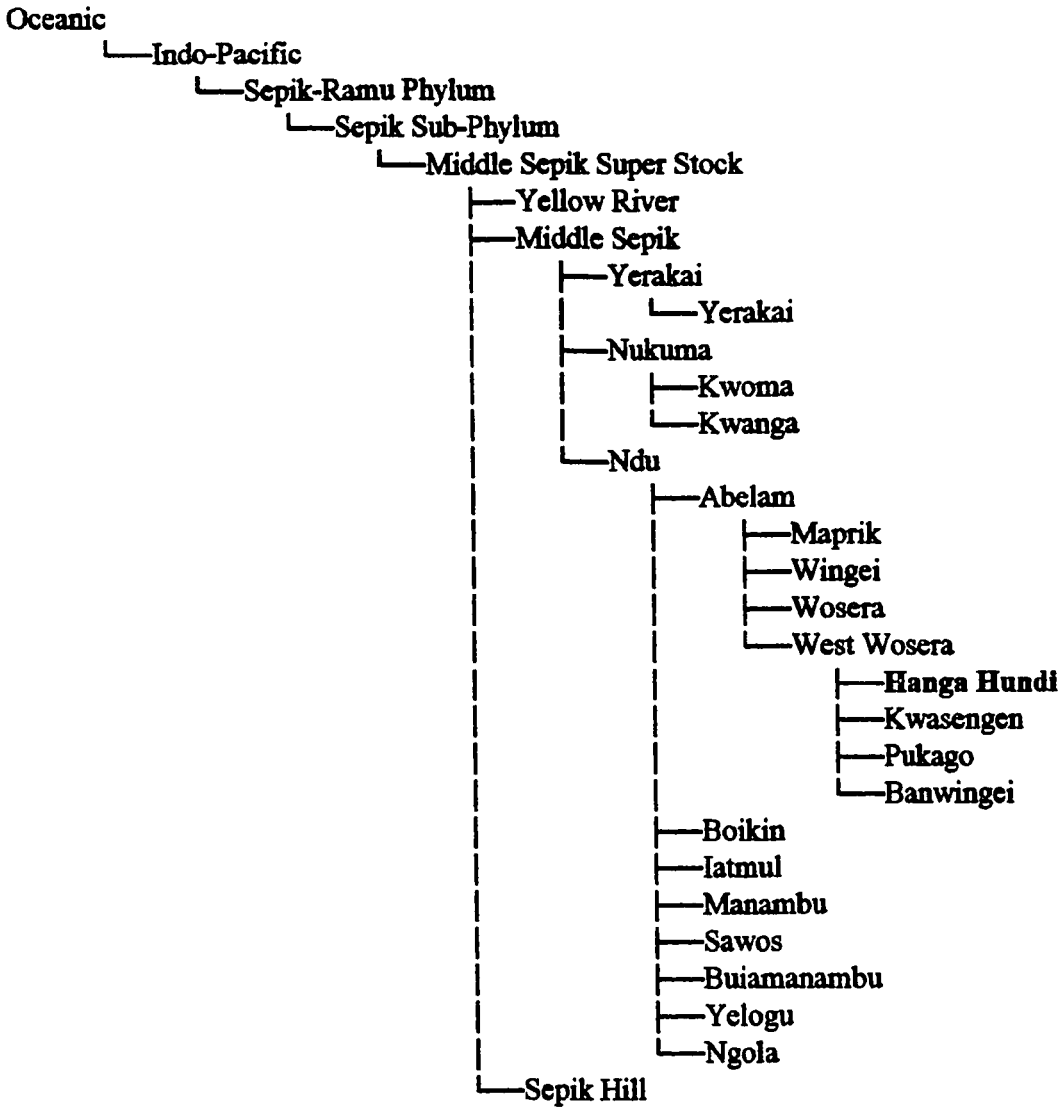

Figure 1-2. Classification of Hanga Hundi. (Manabe 1981, Ruhlen 1991)

Abelam. Manabe (1981) supported Wilson's data but felt that the data did not support her conclusion that West Wosera is a separate language group.

In this monograph I take the position that West Wosera is a separate language group, albeit one that is closely related to Abelam. There is a significant difference between the languages of the Wosera area and those of the West Wosera area. This difference is evident in the verbal morphology and in the lexical items and is apparent to native speakers as well. While many of the Wosera speakers feel that they can speak the same language as the

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people of Maprik, the people of West Wosera view their language as being distinct from that of both Maprik and Wosera but similar to the other West Wosera varieties. There are enough syntactic and lexical differences across the Wosera-West Wosera language boundary that it is virtually impossible for these groups to speak to each other in their native languages. This inability to communicate reinforces Wilson's claim that the boundary between Wosera and West Wosera is, in fact, a language boundary.

The linguistic relatedness of Hanga Hundi to the other West Wosera varieties is supported by the tradition of the people and recorded historical accounts. In approximately 1920, the Hanga Hundi speakers left the region of Jambitanget and migrated west to their current location (Forge 1966). As they moved westward the Hanga Hundi were forced to battle with other village groups in order to gain control of some land. The fights with these other language groups were recorded by Australian patrol officers. In addition, a few of the village elders witnessed those fights as children. Besides the recent history of migration from Jambitanget, there is also a tradition which states that the original Hanga Hundi speakers migrated to Jambitanget from somewhere near Ambunti, a site that is now occupied by Iatmul speakers.

The most interesting aspect of this migration is that it attaches a fairly small time frame, seventy years, to some significant linguistic change. Hanga Hundi currently differs from its linguistically related neighbors in that all word initial occurrences of /k/ are realized as [h]. In addition, only about 78% of the lexical items of Hanga Hundi are now cognate with Kwasengen, the West Wosera variety that is located nearest their ancestral home. This figure drops to about 50% if compared to the Wosera variety that now occupies Jambitanget (Wilson 1976, Manabe 1981).

As a member of the Ndu family of languages, Hanga Hundi has several features in common with the other languages of this family. Perhaps the most controversial of these features is the size of the vowel inventory. Some linguists have characterized the Ndu

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language family as having only two or three vowel phonemes (Staalsen 1966, Laycock 1965). Other linguists have felt that these languages must be analyzed as having seven or eight vowel phonemes (Dodson 1963, Wilson and Wearne 1970). The feature that is commonly agreed upon is the seven phonetic vowel sounds, possibly increasing to fourteen if [+ATR] and [-ATR] allophones are included, that are present in these languages. Another interesting feature of the phonology of these languages is the presence of prenasalized consonants. Again, all researchers seem to agree on the phonetic sounds that are present but not necessarily on their phonemic status.

The morphology of Ndu languages distinguishes itself from neighboring language groups in that Ndu languages have masculine and feminine forms for the second person singular pronouns. Another interesting aspect of the morphology is the use of switch reference suffixes on the verbs as interclausal connectors. The switch reference suffixes not only track the subject but also communicate subordination and temporal sequencing. Most of the Hanga Hundi morphology is related to the verbs, which, besides the switch reference suffixes in sentence medial positions, also have suffixes to mark subject agreement, tense, and aspect.

The Ndu languages have a predominately SOV word order. This word order is reflected in phrase structures that are generally head final. The word order is not rigid; in fact, clauses that report speech and clauses that take another clause as the complement of the verb generally have an SVO word order. The SOV word order is the preferred word order for all other clause types and the exceptions seem to be the result of moving the complement constituent to the complementizer position.

1.2. Names of consultants & period of work

The data used for this paper were gathered over a period of about two years, from September 1990 to September 1992, while working under the auspices of the Summer Institute of Linguistics. The work of S.I.L. in Nungwaia was initiated at the request of the South Seas Evangelical Church located there. While most of the data are in the form of

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interlinearized texts, some is simply in the form of elicited sentences or word lists. The men who were of particular help in recording and transcribing the data were Timothy Aaron, Filipus Angile, Timothy Halek, Sailas Manjo, Mark Taitus, Joshua Wangel, Michael Wali, Jonathan Wapi, and Clement Yato.

1.3. Purpose of the monograph

The primary purpose of this paper is to provide a preliminary description of the phonology, morphology, and syntax of Hanga Hundi. Since Hanga Hundi has not been analyzed previously, the focus will tend more toward providing a good overview than exhaustively addressing current theoretical issues. For example, although the syntax is formalized primarily with X-bar notation, no attempt has been made to discuss the empty categories PRO and e in Hanga Hundi, topics that would otherwise be of interest in a complete generative treatment. In addition, I provide some information about how Hanga Hundi compares to some of the other Ndu languages. Since more data are available on the phonologies of these languages than on the syntax, the bulk of this comparison takes place in the chapter discussing the phonology.

Another purpose of this monograph is to provide sufficient data so that other researchers will be able to benefit from this work. The last chapter in particular provides complete texts that could prove useful to a variety of linguistic pursuits.

1.4. Organization of the monograph

Chapter 2 provides an analysis of the phonology of Hanga Hundi and demonstrates how the a syllable template and Underspecification Theory are useful in explaining the phonological processes. Chapter 3 provides an explanation of the morphology of Hanga Hundi. Chapter 4 discusses the syntax of Hanga Hundi and proposes a formalization using X-bar notation. The discussion on syntax begins at the sentence level and works downward to a description of word classes. Chapters 5 discusses larger structures of Hanga Hundi, such as the predictable features of Hanga Hundi discourse, and gives examples of Hanga Hundi texts.

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2. PHONOLOGY

As with many of the languages of the Sepik basin, and especially those of the Ndu family, Hanga Hundi has a fairly complex phonological system. This is demonstrated by complex phonetic consonants, a system of overlapping vowels, and some evidence of recent phonological change. The most obvious phonological innovation is the use of the sound [h] for all word initial occurrences of /k/, a change which, as mentioned in chapter 1, can be tied to a seventy-year time frame. While this historical process is interesting, the most interesting phonological processes take place among the vowels. Our discussion of the phonology of Hanga Hundi will, therefore, start with the more straightforward topics, the consonants, and then proceed to the vowel system.

2.1. Consonant phonemes

The consonant phonemes of Hanga Hundi are listed in Table 2-1.

Table 2-1. Consonants of Hanga Hundi. (Allophones are shown in brackets.)

	Bilabial	Alveolar	Palatal	Velar
Plosive		t [t t^h]		k [h k k^h]
Prenasalized Plosive	b [b mb]	d [d nd]	ɟ [ɟ nɟ]	g [g ŋg]
Fricative	ɸ [ɸ p]	s [s ç]		ɣ [ɣ]
Nasal	m	n	ɲ [ɲ^j]	
Flap		r		
Lateral Approximate		l		
Semi-vowels (Glides)	(w)		j	w

This chart represents prenasalized plosives with symbols normally used for voiced plosives. This greatly simplifies the phonemic representations given throughout this chapter and reflects the orthography for the word-initial occurrence of these sounds. As we will

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discuss later, however, a segmental representation of these phonemes does not adequately describe their behavior.

2.1.1. Classification of consonants

While the consonant phonemes shown in Table 1 clearly contrast with each other, it is not clear that all of these sounds should be analyzed as single segments. For example, the prenasalized segments just mentioned could be analyzed as a sequence of nasal plus homorganic plosive. Also, the palatal consonants could be analyzed as a sequence of stop plus palatal glide. Besides these possibilities, which are shown in the chart, Hanga Hundi also has a contrast between labialized and non-labialized obstruents. As discussed in section 2.1.1.2., labialization is clearly an underlying sequence of a non-coronal stop followed by the labio-velar glide. The justification for the other consonant classes, however, is not so clear.

Not all linguists would agree with the above classification in regard to other Ndu languages. There is a great deal of variation regarding the phonemic status of the prenasalized stops, the palatal stops, and the labialized stops. This analysis, then, starts first with a justification of the consonant classes presented in Table 1 and then proceeds to a brief demonstration of the contrasts between the phonemes.

2.1.1.1. Prenasalized plosives

The major point of disagreement in the analysis of the Ndu language consonants is whether or not to acknowledge a class of prenasalized plosives. In his analysis of the Wosera variety of Abelam, Laycock (1965) accepts the category of prenasalized stops. In his description, Laycock states that, in addition to the contrast of nasalization, the prenasalized stops are lenis and voiced while the non-prenasalized stops are fortis and voiceless. Staalsen (1965), on the other hand, describes the prenasalized consonants of Iatmul as a cluster of nasal stop plus homorganic voiceless stop. However, Staalsen also acknowledges that these could be analyzed as single phonemes and treats them as such when describing the morphophonemics of Iatmul. Wilson and Wearne (1970) present prenasalized stops as a

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separate phonemic category in their analysis of the Maprik variety of Abelam. Dodson and Walker (1963) analyze Manambu as having a separate phonemic category of prenasalized stops as well. The analysis presented in this monograph is that prenasalized plosives must be treated as two segments for syllabification, but as single segments with regard to other phonological processes.

In the earlier descriptions of the prenasalized consonants,mentioned above, no rigorous justification is given for the analysis that was chosen. In fact, there is little phonological evidence for determining the segmental status of these sounds. Some of the evidence that one might use in the determination of segmental status would be contrast of these sounds with unambiguous sequences, effect on stress distribution, effect on neighboring phonemes, and distribution of other consonant clusters.

Of the possible means of determining the phonemic status of prenasalized plosives, contrast and stress distribution seem to be the least useful. None of the Ndu languages can demonstrate any minimal contrasts between prenasalized plosives and a corresponding sequence of nasal plus homorganic stop, although the corresponding sequences do not have the same voicing characteristics. Also, stress assignment rules in the Ndu languages seem to be conditioned solely by the syllable nucleus (Laycock 1965) and are, therefore, irrelevant to the discussion of prenasalized plosives.

Another possible source of evidence regarding the segmental status of the prenasalized consonants is their effect on the quality of adjacent vowels. In her analysis of Abelam, Wilson (1970) suggests that vowels are [+ATR] in open syllables and [-ATR] in closed syllables. She does not state what effect prenasalized obstruents have on vowel quality but she represents prenasalized stops as single phonemes. In his analysis of Wosera, Laycock does not report the same alternation between [+ATR] and [-ATR]. This alternation does not seem to exist in Hanga Hundi either, thus preventing the use of [ATR] to determine the segmentation status of the prenasalized consonants.

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One reason for accepting the category of prenasalized plosives in Hanga Hundi is the nature of other consonant clusters. Hanga Hundi only allows a maximum of two consonants in the onset of a syllable.[1] If the syllable onset contains two consonants, it is always an obstruent followed by either /w/, /l/, or /r/. The prenasalized plosives also occur in consonant clusters in the syllable onset. In addition, the prenasalized plosives and other obstruents occur morpheme internally after non-homorganic nasals. A wider variety of consonants occur together across morpheme boundaries in compound words, but these are very rare. Examples of these consonant clusters are shown below. Each example is shown first phonemically and then phonetically. In the following examples, a period (.) represents a morpheme boundary in the phonemic representations and a syllable boundary in the phonetic representations.

(2-1) Obstruent-Liquid consonant clusters:

makrau	[ma.kraʉ]	'Sepik river'
jikaɸre	[ji.ka.ɸre]	'good'
jagra	[jaŋ.gra]	'Malay apple'
anwar	[an.war]	'above'
nibleka	[nim.ble.ka]	'earlier'
glemor	[gle.mor]	'bird species'

(2-2) Liquid-Obstruent consonant clusters:

kirke	[hir.ke]	'scratch'
girɸiɲi	[gir.ɸi.ɲi]	'fig parrot'
nurkamorka	[nur.ka.mor.ka]	'young coconut'
wal.tuɸa	[wal.tu.ɸa]	'wild coconut' (bimorphemic)

[1] As discussed in section 2.2., the allowable syllable patterns in Hanga Hundi are CV, CVC, CCV, and CCVC.

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(2-3) Other combinations:

ganba	[ga.nⁱm.ba]	'morning'
hun.kʷari	[hun.kʷa.ri]	'stars' (bimorphemic)
anba	[ʔa.nⁱm.ba]	'this here'
rim.tiɸi	[rim.ti.ɸi]	'to bury' (bimorphemic)
sar.saɸ	[sar.saɸ]	'story' (bimorphemic)
saik.laɸu	[saʲ.kla.ɸu]	'hatchet' (bimorphemic)
ɸak.ɸak	[ɸak.ɸak]	'wrist'
sa.sa.kut.kut	[sa.sa.kutʰ.kutʰ]	'Adam's apple'

In the examples above, three of the words are optionally pronounced with a brief transitional vowel (ⁱ) in slower speech.

The examples above indicate that consonant clusters are possible in Hanga Hundi and that prenasalized consonants also occur in these clusters. This does not eliminate the possibility that prenasalized consonants are a sequence of nasal plus homorganic plosive; we would merely need to allow for a cluster of three consonants. However, the fact that the only sequences of three consonants involve prenasalized plosives is a strong argument in favor of interpreting prenasalized plosives as single segments.

Another argument against interpreting prenasalized plosives as a sequence of nasal plus stop was first described by Laycock for Wosera (1965). As Laycock noticed, the fact that non-prenasalized plosives do not assimilate in articulation or voicing after nasals, as in [hunkʷari] and [rimtiɸi] above, is evidence against the two-segment interpretation. If prenasalized consonants were clusters of two segments in which the nasal assimilated in point of articulation and the plosive assimilated to the nasal in voicing, we would expect this assimilation to take place in compound words as well.

Besides the lack of voicing assimilation in nasal-plosive clusters, another observation that favors interpreting prenasalized consonants as single segments is the presence of apparent post-nasalization in both Iatmul and Abelam. This phenomenon is

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described most clearly by Wilson for the Maprik variety of Abelam (1980).[2] In Maprik and Iatmul, when a stem ending in a voiceless consonant is followed by a suffix which starts with a vowel, a homorganic nasal is inserted after the consonant.[3] These post-nasalized consonants, especially the velar consonant, are also common morpheme internally where they alternate with the voiceless plosive in Hanga Hundi. Examples of the post-nasalized forms are shown below.

(2-4) Post-nasalization in the Maprik variety of Abelam:

rap + ik	rapmik	'got up'
sirak + ik	sirakŋik	'cooked'
mulɔs + it	mulasɲit	'to Mulas'

(2-5) Comparison of Abelam post-nasalization to Hanga Hundi voiceless plosives:

Maprik form	Hanga Hundi form	
kipma	hiɸa	'ground'
makŋa	maka	'top of head'

(2-6) Maprik forms showing contrast between post-nasalization and voiceless plosives:

tipma	'coconut'	tipa	'cliff'
kapmu	'self'	kapu	'or'

Example (2-6) demonstrates that there are cases in which the post-nasalized labial consonant contrasts with the labial voiceless plosive. In these cases of contrast, the post-nasalized form of Maprik is cognate with Wosera, Hanga Hundi, and Iatmul, suggesting that the contrast of post-nasalized and voiceless plosives is relatively recent in Maprik. In general, when Maprik has a post-nasalized consonant, it is cognate with a voiceless plosive in Hanga Hundi. If Maprik has a non-post-nasalized form, a plain voiceless plosive, it is usually not cognate with Hanga Hundi. It is interesting that the Wosera variety of Abelam generally uses the labial post-nasalized consonant when the Maprik variety does but very rarely uses the

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[2] Since the Maprik and Wosera varieties of Abelam differ with regard to post-nasalization, I will refer to them by their variety names in this discussion.

[3] Except for /t/, which becomes [r] when followed by a vowel. Also, /s/ takes the palatal nasal in this alternation.

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velar post-nasalized consonant. There is, therefore, a continuum in this language family in which Hanga Hundi allows no post-nasalization, Wosera allows post-nasalization for the labial but not the velar plosive, and both Iatmul and the Maprik variety of Abelam allow post-nasalization in labial, velar, and one coronal consonant (/s/). The most interesting observation relating to all of this is that it is the non-prenasalized consonants which have become post-nasalized. This suggests that the contrastive feature in some areas is becoming prenasalization versus post-nasalization, as opposed to the prenasalized and non-prenasalized contrast of Hanga Hundi.

In the above examples, the nasal portion of post-nasalized consonants only occurs when the consonant is followed by a vowel. In the same way, the nasal portion of prenasalized consonants only occurs when the consonant is preceded by a vowel. This suggests that syllabification constraints determine whether or not the nasalization may appear. For the prenasalized consonants, the nasal portion functions as the coda of one syllable and the plosive portion functions as the onset of the following syllable. When the nasal portion of a prenasalized consonant cannot be attached to the preceding syllable, it is either erased or a vowel is inserted to make syllabification possible. In post-nasalization the nasalization is deleted when no vowel is following. The process associated with prenasalization is illustrated by example (2-7).

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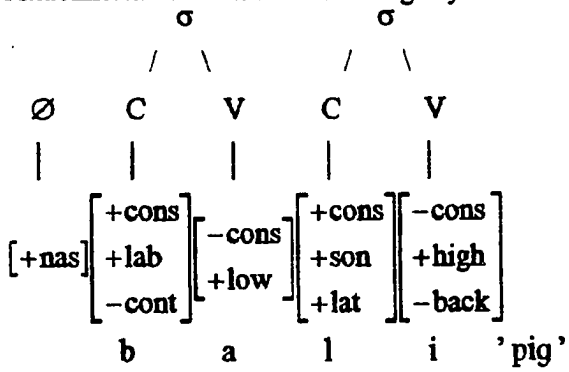
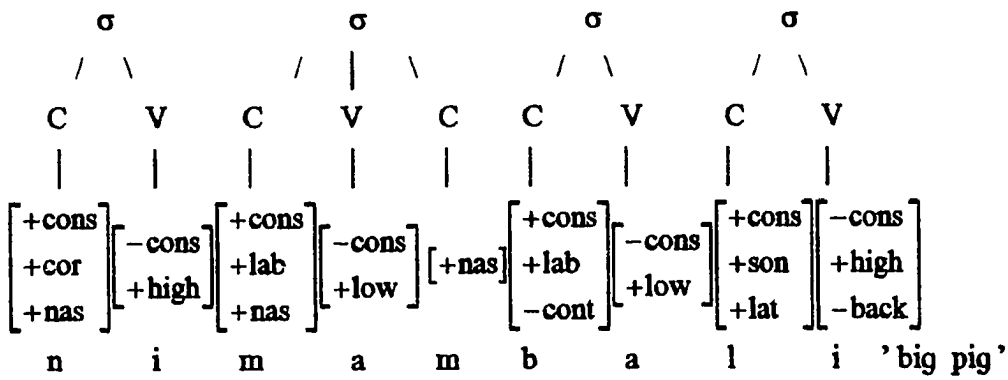
(2-7) Attachment of nasalization through syllabification:





In this example, I distinguish between the nasalization of prenasalized con-sonants and nasal consonants. The nasal portion of a prenasalized consonant is specified only for the feature [+nasal] and shares other articulation features with the following plosive. The nasalization is attached to the plosive matrix that follows it but the syllabification constraints, as described in section 2.2., determine whether or not it will surface as a syllable coda.

The feature geometry of prenasalized consonants has been discussed recently by several linguists. In her analysis of affricates, Sagey (1986) proposes that certain segments must be analyzed as contour segments in which both positive and negative values for a feature are attached to a feature node. Rosenthall (1988) proposes analyzing prenasalized stops as two root nodes attached to a single timing segment on the skeletal tier. The first root node has the feature [+nasal] and the second root node has the feature [-nasal]. The root nodes share the oral features but may have different supralaryngeal nodes. Paolillo (1989) argues

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against this representation and favors one that makes direct reference to timing and articulation gestures. Lombardi (1990) argues against ordering of features in phonological representations, particularly with regard to affricates. Steriade (1991) proposes expanding the current conception of the root node so that all plosives would have an initiation aperture feature specification and a closing aperture feature specification.

Of the various viewpoints just mentioned, it is possible to reject immediately Lombardi's argument against the ordering of phonological representation. The contrast of prenasalized and post-nasalized plosives in Abelam demonstrates the need to order velic articulation with respect to oral articulation.

It is less straightforward to compare the other proposals. The key feature of the other proposals is that they all acknowledge the need for temporal ordering of certain features, such as [nasal] and [cont], in the feature geometry. Also, Rosenthall, Paolillo and Steriade all propose representations that make it possible to distinguish between the initiation and the release of the plosive. Based on these proposals, the prenasalized plosives of Hanga Hundi could be represented by the following geometry.

Though these representations include two root nodes, no claim is made about the theoretical justification for this approach. However, if two root nodes are used, it is possible to predict the behavior of both prenasalized and post-nasalized consonants on the basis of syllable structure constraints, as described in section 2.2. The description of the process affecting the linking of these root nodes is described in section 2.1.3.1.

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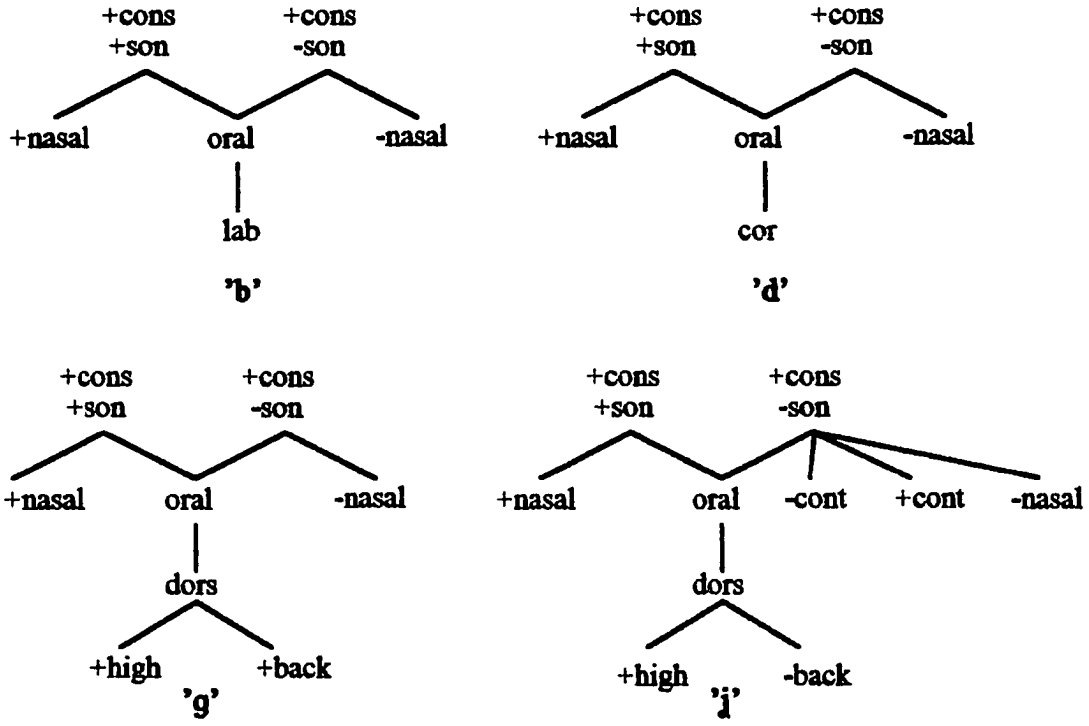
(2-8) Feature geometries of prenasalized consonants:



2.1.1.2. Labialized obstruents

As already mentioned, it is possible to demonstrate a contrast between labialization and the lack of labialization for the non-coronal consonants. Wilson (1970) comments that labialization is also contrastive on many of the Maprik consonants but that native speakers have chosen to disregard it for orthographic purposes. In Manambu, however, it was determined that labialization was phonemic and that it needed to be represented in the orthography (Dodson & Walker 1963). The analysis presented here demonstrates that labialization has an underlying representation of Cu, where C is any non-coronal consonant.

The strongest evidence for this analysis comes from a morphophonemic alternation common to verbs. When a verb root ending in /u/ is followed by the suffix /a/ 'Non-sequential, same subject', the /u/ becomes non-syllabic, as shown below.

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(2-9) Labialization by stem final u

ɸaku + a	→ ɸa?ak^{w}a	'hide and ...'
ɣaku + a	→ ɣa?ak^{w}a	'come up and ...'
raɸu + a	→ rap^{w}a	'remove skin and ...'
b^{w}ijaku + a	→ b^{w}ijak^{w}a	'overflow and ...'

This alternation does not occur on all roots ending in /u/, however. It never occurs when the consonant preceding the /u/ is coronal, although coronal consonants occasionally precede the labio-velar glide across a syllable boundary. In a few cases it appears that a root ending in /u/ does not accept the non-sequential suffix. Examples of these exceptions are shown below.

(2-10) Exceptions to labialization:

ru + a	→ rua~ruwa	'remove skin and ...'
tu + a	→ tua~tuwa	'roast and ...'
halu + a	→ halu	'carry over shoulder and ...'

In addition to the alternations shown above, another element of this discussion is the presence of many minimal pairs, and even a minimal triplet, between regular and labialized consonants. Examples of the contrastive sets are shown below.

(2-11) Minimal contrasts demonstrating labialization:

bi	'sap'	b^{w}i	'string game'	bui~buwi 'cloud'
ha	'build roof'	h^{w}a	'sleep'	
aki	'clay pot'	ak^{w}i	'with'	
ba	'stick'	b^{w}a	'scrape sago'	

These examples clearly demonstrate that, for any non-coronal consonant C, there is a three-way contrast between C, C^{W}, and Cu. However, example (2-9) also showed that many instances of C^{W}V arise from the sequence CuV. I will, therefore, conclude that sequences of C^{W}V arise from the sequence CuV and sequences of CuwV arise from the sequence CuuV. This process can be explained by the following rule.

(2-12) Labialization: A high round vowel becomes non-syllabic before another vowel.

$$\begin{bmatrix} +\text{high} \\ +\text{round} \end{bmatrix} \rightarrow [-\text{syll}] / _ [+\text{syll}]$$

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This rule applies starting from the right end of the word, a constraint which will be discussed later under syllable structure. In addition, the rule essentially states that /w/ and /u/ are allophones of the same phoneme. This view of /w/ and /u/ is also shared by Laycock (1965).

2.1.1.3. Palatalized obstruents

In his discussion of the vowels of the Ndu language family, Laycock (1991) suggests in a footnote that the palatal series of consonants [j̟ s ɲ] is historically related to the phoneme sequences /dj tj nj/. This is supported by Staalsen and Wilson, who report that the palatal obstruents affect the high central vowel /ɨ/ in a manner similar to the semi-vowel /j/, which causes /ɨ/ to become /i/ (Staalsen 1966, Wilson 1977). Further support for this hypothesis can be found in the morphophonemics of Abelam. As already mentioned, when a voiceless consonant is followed by a vowel, a homorganic nasal is inserted between the consonant and the vowel. When /s/ is followed by a vowel the palatal nasal / ɲ / is inserted (Wilson 1980). The fact that the palatal nasal is inserted strongly supports Laycock's claim that /s/ was historically a palatal consonant.

The ability of these consonants to condition both a preceding and a following /ɨ/, particularly in Abelam and Iatmul, argues against the two segment interpretation of these sounds. If these sounds currently had the underlying forms /dj tj nj/, we would expect /ɨ/ to become /i/ only following these sounds, where the palatal glide would be the conditioning environment. The fact that the vowel conditioning takes place on both sides of the sounds suggests that they are functioning as single segments and the conditioning environment is the feature matrix [+high, -back].

The only Hanga Hundi data that may support Laycock's claim regarding these consonants is the fact that none of the palatal consonants occur before another consonant. Since the Hanga Hundi syllable constraints allow at most two consonants in a syllable onset, the distribution of these consonants suggests that they are, in fact, a sequence of two

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consonants. This argument is severely weakened, however, by the fact that coronal consonants never occur as the first of two consonants in a syllable onset.

Not only is the distributional evidence weak, there is also no morphophonemic evidence to support Laycock's hypothesis. One place where we might expect to see this alternation take affect is in a situation similar to that of labialization. If a word ending in an alveolar consonant plus /i/ received a suffix starting with a low vowel, we would expect the high front vowel to become non-syllabic and, perhaps, to coalesce with the alveolar consonant. It may be significant, then, that this sequence never occurs in the data.[4] Verbs ending with either /ti/ or /ni/ usually take the same subject simultaneous suffix *-ta* rather than the same subject non-sequential suffix *-a*.

The conclusion of this discussion, then, is that there are no language internal data to suggest that palatalization is still active in Hanga Hundi. There does not seem to be any evidence of this type in any of the other Ndu languages either. Therefore, I conclude that the palatal consonants are phonemic as single segments in modern Hanga Hundi.

2.1.1.4. The odd consonant

There is one final consonant which seems to be present in many of the Ndu languages but is manifested in a different form in Hanga Hundi. Many of the other Ndu languages report a bilabial voiced fricative [β]. In Hanga Hundi this phoneme has become a voiced velar fricative, in some cases pronounced with a tensing of the lips. Some examples of comparative Maprik and Hanga Hundi words are shown below.

(2-13)	Maprik:	βi	βa	βiku	βija
	Hanga Hundi:	ɣi	ɣa	ɣiki	ɣija
	gloss:	'spear'	'dig'	'hear'	'shoot'

[4] Except for the case of one monosyllabic root: /ti+a/ [tia~tija] 'bite and ...'.

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Kooyers (1966) mistakenly considered /ɣ/ an allophone of /i̯/, probably because he did not notice the parallel to the bilabial fricative in other languages. This phoneme never occurs adjacent to a rounded vowel and rarely occurs intervocalically so its phonemic status seems questionable. However, no other phoneme has a distribution which could be considered complementary, so it seems best to describe it as a phoneme with a deficient distribution.

2.1.2. Contrasts

With the segmentation decisions out of the way, it is fairly easy to demonstrate contrast among the segments. In the examples that follow, words are shown first phonemically and then phonetically. The phonemic transcription of the prenasalized consonants uses the symbols shown in Table 2-1. The phonetic transcription of word-initial prenasalized consonants uses superscripted nasals to indicate that, as mentioned earlier, the nasalization only occurs when the nasalization can be linked to the coda of the preceding syllable.

ɸ , b

jaɸu	[jaɸu]	'lime'	ɸoo	[ɸoʔo]	'poison'
jabu	[jambu]	'road'	bo	[ᵐbo]	'ashes'

t , d

kiti	[hiti]	'dance'	ta	[ta]	'cut off'
kidi	[hindi]	'who'	da	[ⁿda]	'lower head'

k , g

lika	[lika]	'her'	ki	[hi]	'copulate'
liga	[liŋga]	'tear'	gi	[ᵑgi]	'tie up'

t , r , l

taɸu	[taɸu]	'black palm'	ɸiti	[ɸiti]	'walk'
raɸu	[raɸu]	'weak shell'	ɸira	[ɸira]	'tear down'
laɸu	[laɸu]	'banana'	ɸila	[ɸila]	'pull out'

t , s

ta	[ta]	'to cut off'	kiti	[hiti]	'dance'
sa	[sa]	'to eat'	kisi	[hiçi]	'a female'

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d , ɟ

da	[ⁿda]	'lower head'	madi	[mandi]	'buttocks'
ɟa	[ⁿɟa]	'untie'	maɟi	[manɟi]	'fiber rope'

m , n , ɲ

mu	[mu]	'crocodile'	kim	[him]	'clan'
nu	[nu]	'cold'	kina	[hina]	'whose'
ɲu	[ɲʲu]	'firewood'	kiɲa	[hiɲʲa]	'two days hence'

w , j , ɣ

wi	[wi]	'lg. grass'	wa	[wa]	'talk'
ji	[ji]	'go'	ja	[ja]	'come'
ɣi	[ɣi]	'spear'	ɣa	[ɣa]	'dig'

2.1.3. Phonological processes

In this section I will describe the phonological processes that are active among the consonants of Hanga Hundi. In section 2.4.4. I will return to these processes and review them in the light of Underspecification Theory.

2.1.3.1. Denasalization of prenasalized plosives

In the previous discussion about prenasalized consonants we determined that a two-dimensional representation was necessary to explain the behavior of these consonants. In this section we will discuss further the behavior of these consonants in order to refine the previous description.

One feature common to all Ndu languages is that prenasalized consonants lose their nasalization word initially after a pause. After a pause, the main distinction between the prenasalized and non-nasalized plosives is that the prenasalized plosives are voiced and the other plosives are not. In an utterance the prenasalized plosives become nasalized if they follow a vowel, particularly if the words are part of the same phonological phrase. Examples of the variation of nasalization are shown below.

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(2-14)	phonemic:	wuna	ge	tili-bu	ge	to-ki-mini
	phonetic:	wuna	ŋge	tilimbu	ge	tokimini
	gloss:	my	house	lot-on	house	build-DUB-2SM
	phrase:	[[POSS	N	N]-P]$_{PP}$	[[N]$_{NP:O}$	[V]]$_{VP}$

trans.: "Don't build a house on my house lot!"

(2-15)	phonemic:	na-di-ka	di	wuba	ɲama	di	di-ka	bija-bu
	phonetic:	nandika	ndi	wumba	ɲ^{j}ama	ndi	dika	mbijambu
	gloss:	say-3SM-DS	3SM	that	older	3SM	3SM-POSS	belly-on
	phrase:	[V]	[[PRON]	[DEM	N]	PRON]$_{NP:SU}$	[[POSS	N]-P]$_{PP}$

trans.: "He said that and then he, that older brother he, in his belly ..."

The important thing to notice in these examples is the variation of nasalization on the prenasalized plosives. In the first example, the word *ge* 'house' is pronounced [ŋge] when it follows a vowel within the noun phrase but [ge] when it follows a vowel across a phrase boundary. In the second example, the word *di* 'he' (3SM) is pronounced as [ndi] on its first two occurrences but [di] after a phrase boundary. In both examples the clitic *bu* 'on' and all word-internal occurrences of a prenasalized consonant are pronounced with nasalization equivalent to a full nasal consonant. Also, notice that the conditioning boundary corresponds to a syntactic boundary except when a pronoun follows a verb marked with a switch reference suffix, in which case the pronoun seems to be phonologically part of the verb phrase and is usually followed by a pause.

It appears, then, that the significant conditioning factor regarding nasalization is the phonological phrase, which corresponds closely to the syntactic phrase of X" level. In our description of this process we will need to include a statement about the determination of this phonological phrase level as well as a rule relating this phrase boundary to nasalization on prenasalized consonants. Statements describing the phonological phrase are given below.

(2-16) Phonological phrase:

The boundaries of the phonological phrase in Hanga Hundi are determined by any syntactic boundary of the form X".

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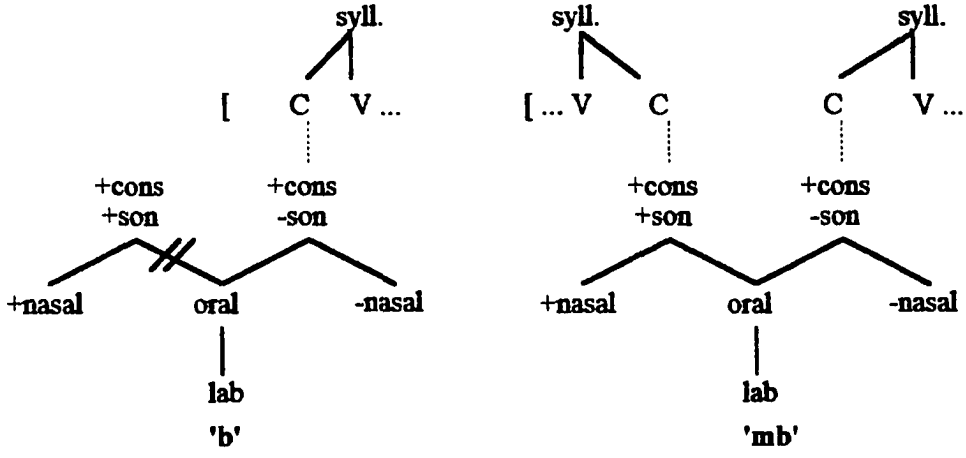
(2-17) Pronoun adjustment:

Any pronoun that immediately follows a verb phrase marked with either *-ka* 'different subject conjoining' or *-e/-a* 'same subject non-sequential' is phonologically considered to be part of the verb phrase.

The rule describing denasalization has essentially already been incorporated into the representation of the prenasalized consonants. If the root can be linked to the skeletal tier, as determined by the syllable template, then the root appears in the surface form. If not, then the root and the features that are only attached to that root, are deleted. Examples of how these roots might be linked to the skeletal tier are shown below.

(2-18) Illustration of delinking and relinking of root nodes. (Square brackets indicate the phonological phrase boundary.):



In the earlier discussion on labialized consonants, in section 2.1.1.2., it was shown that the direction of syllabification is right to left. This section has determined that the relevant domain of syllabification is the phonological phrase. We will return to syllable structure in section 2.2.

2.1.3.2. H-formation

The most obvious phonological process distinguishing Hanga Hundi from the other West Wosera languages is the formation of [h] from /k/. This process applies word-initially

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and morpheme-initially to morphemes having two or more syllables. Some examples of the application and non-application of this process are shown below.

(2-19) Application of H-formation

ji+kaba+di	[jihambandi]	'he didn't go'
ji+kaɸi+di	[jihaɸindi]	'he didn't go yet'
kua	[h^{w}a]	'to sleep'
kauluki	[ha^{u}luki]	'grasshopper'

(2-20) Non-application of H-formation

ji+ki+di	[jikindi]	'he can't go
ji+di+ka	[jindika]	'he went and ... '
kun+kuari	[hunk^{w}ari]	'stars' (compound word)
gili+kaidar	[gilikaˈndar]	'spear handle mark' (compound word)

The apparent generalization is that /k/ becomes [h] word-initially and at the beginning of all morphemes containing two or more syllables. The failure of H-formation to apply to the second member of the two compound words is probably because these compounds have been lexicalized. The proposal that these exceptions have been lexicalized is supported by the fact that the meaning of the compound is no longer related to the meaning of the component morphemes. For example, the literal meaning of 'stars' is 'firefly year' and the second morpheme of /gili+kaidar/ has no apparent meaning.

Examples (2-19) and (2-20) show the occurrence of [h] but they do not demonstrate that H-formation is an active process. There is, in fact, very little language internal evidence to demonstrate that all occurrences of [h] are the result of an underlying /k/.[5] The main evidence for this process comes from comparing Hanga Hundi to the other West Wosera languages. Every occurrence of [h] in Hanga Hundi corresponds to /k/ in words that are cognate with other varieties. In addition, many Hanga Hundi speakers can reverse this

[5] The morpheme /kuari/, which appears in [hunk^{w}ari] in (2-20), also appears as a word [h^{w}ari] 'year'.

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process, that is, turn all h's back into k's, when they are talking to speakers of different varieties.

As mentioned before, the time frame that is associated with the innovation of H-formation is seventy years or less. The small time frame suggests that H-formation was a conscious innovation by Hanga Hundi speakers for the purpose of group identification. The cultural value of language divergence in Papuan cultures is also reported by Foley (1986).

Assuming that H-formation was a conscious innovation, it is interesting that it also affects other phonological processes, such as syllabification. This suggests either that the rule has been inserted in the phonology above other phonological processes or that all processes are cyclic. Since H-formation requires morphological information, it must, by the definitions of lexical phonology, be a lexical rule. Syllabification, on the other hand, does not refer to morphological information but does require phrase-level information, therefore implying that it is a post-lexical process.

It is also interesting that the phonological innovation, assuming that it was conscious, is not easily expressed in a single phonological formalism. The formalism must reflect two separate environments, as shown below. In this rule, # represents a morpheme boundary, # # represents a word boundary.

(2-21) H-formation

$$[k] \rightarrow [h] / \begin{Bmatrix} \#\#_ \\ \#_ V_1C_1V \end{Bmatrix}$$

2.1.3.3. Labialization

The previous discussion regarding the phonemic status of labialized consonants already described this process in detail. The conclusion of that discussion was that sequences of $C^{W}V$ arise from the sequence CuV and sequences of CuwV arise from the sequence CuuV. This process was formalized by the following rule.

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(2-12) Labialization: A high round vowel becomes non-syllabic before another vowel.

$$\begin{bmatrix}+\text{high}\\+\text{round}\end{bmatrix} \rightarrow [-\text{syll}]/_[+\text{syll}]$$

As already mentioned, this rule assumes a right to left application, a constraint which will be discussed later under syllable structure. In addition, this rule essentially states that /w/ and /u/ are allophones of the same phoneme.

2.1.3.4. S-palatalization.

Another process which occurs is the palatalization of /s/ when it is adjacent to a high front vowel. This alternation is not strongly attested; in fact, all of the known occurrences are shown in examples below.

(2-22) Examples of S-palatalization

kisa	[hiça]	'vagina'
wisa	[wiça]	'urine'
kisakubue	[hiçakumbwe]	'a weaving pattern'
si+ji+aβe	[ʃaβe]	'go quickly!'
kisi	[hisi ~ hiçi]	'a female'

There are several examples in which the sequence *isa* does not undergo affrication. In all of these counter-examples, there is a morpheme boundary between the i and the s which indicates that the process must take place before the morpheme is added. Also, the above examples seem to indicate that the process is obligatory for a morpheme internal sequence of *isa* but optional when *i* follows *s*. These processes can be described by the following rule.

(2-23) S-palatalization

$$\begin{bmatrix}+\text{cor}\\+\text{cont}\end{bmatrix} \rightarrow \begin{bmatrix}+\text{high}\\ \alpha \text{ del rel}\end{bmatrix} \% _ \begin{bmatrix}-\text{cons}\\+\text{high}\\-\text{back}\end{bmatrix}$$

α is positive unless /s/ follows a word boundary.

As already mentioned, all of the known examples of S-palatalization are shown in example (2-22). It is, therefore, possible that these words are lexicalized artifacts of earlier phonological develop in Hanga Hundi. As mentioned in section 2.1.1.3., both Iatmul and

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Abelam have morphological evidence that /s/ functions as a palatal consonant. This process is not known to occur in other varieties of West Wosera.

2.2. Syllable structure

The previous discussion on the consonants of Hanga Hundi has presented two clear constraints regarding syllabification in Hanga Hundi. The analysis of labialized consonants, in section 2.1.1.2., concluded that syllabification must take place from right to left. The description on the denasalization of prenasalized consonants, in section 2.1.3.1., concluded that the domain of syllabification is the phonological phrase, which is very similar to a syntactic phrase denoted by X". This section will further elaborate on syllabification and the processes associated with it.

As already mentioned, Hanga Hundi allows CV, CVC, CCV, and CCVC syllable types. These syllable types are manifested in the phonetic representation, which might be quite different from the phonemic representation, as shown below.

(2-24) CV syllables:

ta	[ta]	'cut off'	kee	[he.ʔe]	'brother'
aɸa	[ʔa.ɸa]	'bone'	sua	[su.wa]	'wild pit-pit'

(2-25) CVC syllables:

iaai	[ja.ʔa^{i}]	'grandmother'	man	[man]	'leg'
kuiagau	[h^{w}i.jaŋ.ga^{u}]	'soft palm wood'	galok	[ga.lok]	'rat'

(2-26) CCV syllables:

ɸlarim	[ɸla.rim]	'locust'
nibleki	[nim.ble.ki]	'earlier'

(2-27) CCVC syllables:

makrau	[ma.kra^{u}]	'Sepik River'	gual	[g^{w}al]	'grandparent'
guar	[g^{w}ar]	'song'			

In order to facilitate this discussion on the syllable structure of Hanga Hundi, this analysis uses the sonority hierarchy that was proposed by Selkirk (1984). This hierarchy, modified to correspond to Hanga Hundi sounds, is shown below.

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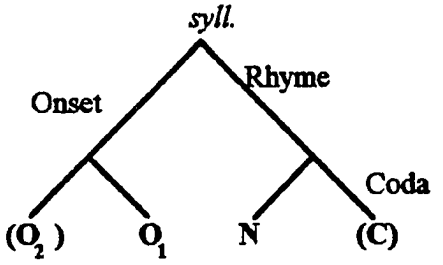
(2-28) Sonority hierarchy

Sonority Index	Sound	Sonority Index	Sound
10	a	5	nasals
9	e, o, ə	4	voiced fricatives
8	i, i, u, j, w, h, ʔ	3	voiceless fricatives
7	r-sounds	2	voiced stops
6	laterals	1	voiceless stops

As many of the examples have already shown, the predominant phonetic syllable pattern in Hanga Hundi is CV. The examples above show that Hanga Hundi syllables allow diphthongs, closed syllables, and consonant clusters in the onset. Since a diphthong never occurs with a consonant in the coda, the off-glide is interpreted as being assigned to the coda. Also, labialization, which was earlier shown to be the result of a desyllabified /u/, is considered to function as a consonant in the syllable onset. In addition, all Hanga Hundi syllables begin with an onset, which is often an epenthetic glottal stop.[6] These constraints on the syllable shapes are illustrated below.

(2-29) Syllable template:



$O_1 \leq 8$

$O_2 < O_1$; if O_2 = h, then O_1 = w

$N \geq 8$

$C \geq 1$

Constraints:

1. If a syllable has both O_2 and C, then both O_1 and C are sonorant.
2. If a syllable has both O_1 and O_2, then O_2 = [-cor]
3. If N = 9 and C = 8, then N and C agree in backness.

When analyzing the vowels, some linguists have suggested that all occurrences of /ɨ/ are the result of epenthesis. One difficulty with this analysis is the fact that some consonants may occur word finally in some words but in other words they are followed by /ɨ/, such as in *galok* and *nibleki*, above. However, we note that the syllable template rejects *blek* as a

[6] For comments on onsetless syllable constraints see Selkirk 1982.

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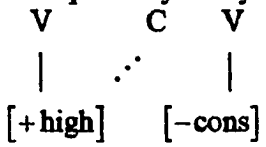
possible syllable type whereas *lok* is acceptable. This syllable template, then, allows us to analyze all occurrences of /i̯/ as being the result of an epenthetic rule. This rule is given below.

(2-30) Vowel insertion:

$\varnothing \rightarrow$ i̯ Where required for syllable structure.

Another common epenthetic process, as shown in example (2-24), is insertion of a glide or glottal stop to break up a two-vowel sequence which cannot be linked to the syllable template. If the first vowel is either /i/ or /u/, then a glide is inserted which corresponds in backness and roundness to the first vowel. If the first vowel is any other vowel, then a glottal stop is inserted. A glottal stop is also inserted phrase initially before a vowel. These two processes are described by the rules below.

(2-31) Glide insertion #1: Insert the glide after a high vowel when it precedes another vowel as required by the syllable template.



(2-32) Glottal insertion: Insert the glottal stop between two non-high vowels or before a non-high vowel word initially:

$$\varnothing \rightarrow \begin{bmatrix} +\text{cons} \\ +\text{low} \end{bmatrix} / \left\{ \begin{bmatrix} -\text{cons} \\ -\text{high} \end{bmatrix} \right\} \text{--} \begin{bmatrix} -\text{cons} \\ -\text{high} \end{bmatrix}$$

A common exception to the pattern described above is the first person subject agreement suffix. This suffix is always pronounced [wu] after a vowel and [u] after a consonant but never as the coda to a diphthong. A similar alternation occurs with the high front vowel. When [i] is word initial, it is often pronounced [ji̯] after a vowel and [i] after a consonant. In several words the diphthongs freely alternate with two-syllable allophones. Examples of these alternations are shown below.

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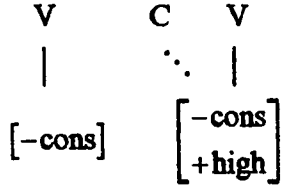
(2-33) High vowel alternations:

yata+u	[ya.ta.wu]	'I carried'	ikaɸre	[ʔi.ka.ɸre~ji.ka.ɸre]	'good'
gau	[ga^{u}~ga.wu]	'palm branch'	aiua	[ʔa^{i}.wa~ʔa^{i}.ji.wa]	'mother'
saiki	[sa^{i}ki~sajiki]	'cassowary'	uba	[ʔumba~wumba]	'there'

This is apparently a different type of glide insertion and is obligatory for the first person singular subject agreement suffix but is optional otherwise. This process is closely related to the first glide insertion rule but must be ordered after it, since the glide normally copies the features of the preceding high vowel. This type of glide insertion is expressed by the following rule.

(2-34) Glide insertion #2: Link a high vowel to both the syllable onset and nucleus when it follows another vowel. Required for 1st sing. subject suffix. Optional otherwise.



In this section we have presented the syllable template of Hanga Hundi and have proposed that this template governs the application of vowel insertion, glide insertion, and glottal insertion. The labialization rule that allowed us to eliminate the class of labialized obstruents is now no longer required; it is the result of the syllable template. The application of the syllable template and the four insertion rules are shown in example (2-35).

This derivation demonstrates an interesting feature of the syllable template. Apparently the syllable template decides on the syllabic status of the current segment by looking ahead to the next segment. For example, in forming the fourth syllable the template came to /l/ and looked ahead to see if the next segment was a vowel, finding no vowel it inserted one after /l/. A similar process also occurs with the prenasalized consonants, thus insuring that prenasalized consonants never occur word finally.

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(2-35) Application of syllable structure rules (brackets represent syllable boundaries):

Underlying Form	klk^{n}die	klkuniie
H-formation	hlk^{n}die	hlkuniie
1st syllable (O_1+N_1)	hlk^{n}d[je]	hlkuni[je]
2nd syllable	hlk^n[di][je] (i-insertion)	hlku[ni][je]
3rd syllable	hl[kin][di][je] (i-insertion)	hl[ku][ni][je]
4th syllable	h[li][kin][di][je] (i-insertion)	h[li][ku][ni][je] (i-insertion)
5th syllable	[hi][li][kin][di][je](i-insertion)	[hi][li][ku][ni][je] (i-insertion)
vowel assimilation	[hi][li][kin][di][je]	—
surface form	[hi][li][kin][di][je]	[hi][li][ku][ni][je]
gloss	'He does not like.'	'I do not like'

2.3. Stress and tone

In all previous analyses of Ndu languages, stress was analyzed as being predictable and, therefore, not phonemic. While these analyses have agreed on the phonemic status of stress, they have not agreed on the rules of stress assignment. Though many of the previous analyses have not defined stress, for Hanga Hundi it is marked by both loudness and pitch. This section will demonstrate that stress assignment, like syllabification, is based on the phonological phrase and not on word boundaries. In general, previous analyses have acknowledged that the phonological phrase is significant in determining stress.

In his analysis of Abelam, Laycock (1965) proposed a fairly elaborate system of vowel weighting to predict the stress of syllables within a phonological phrase. In this system, complex nuclei are more likely to attract stress than simple nuclei and lower vowels are more likely to attract stress than higher ones. According to this analysis /i/ would be the least likely to receive stress, and the diphthongs /au/ and /ai/ would be the most likely. Laycock allows for primary, secondary, and zero stress on syllables. The heaviest syllable nucleus of the first two syllables receives primary stress and other syllables receive non-stress. Secondary stress is applied to the third syllable of the phrase if it is of equal weight as the primary stressed syllable and after a sequence of three non-stressed syllables. When he

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originally proposed this analysis, he was describing the three central vowels as /ə/, /ʌ/, and /a/. I have repeated Laycock's weighting system below but have adapted it to his later description of the central vowels (Laycock 1991) and have included a transcription of the surface form of these vowels, as described by his analysis. According to his analysis, the complex nuclei are heavier than the simple nuclei, and the lower numbered nuclei are heavier than the higher numbered ones.

(2-36) Laycock's ranking of syllabic nuclei:

	1	2	3
Complex nuclei	aw [a^{u}]	əw [o o^{u}]	w [wʊ u]
	aj [a^{i}]	əj [e e^{i}]	j [jɪ i]
Simple nuclei	a	ə	i

Some examples of the application of Laycock's stress rules are shown below.

(2-37) Wosera stress patterns as observed by Laycock:
/girákəmĩnigwə/ 'you will cry' /kwpẃk/ 'three'
/mj́ gagi/ 'tree leaf' /kẃla/ 'axe'

The analysis proposed by Wilson and Wearne (1970, Wilson 1977) for Abelam is significantly different. Their analysis, as I have paraphrased it in terms of metrical phonology, is that stress is assigned according to bisyllabic, left-headed feet beginning from the right end of the word. Every syllable with a branching rhyme is the head of its foot. The word is right-headed so that primary stress is assigned to the right-most foot in the word and secondary stress to all other stressed syllables. They also state, however, that /i/ is often skipped over in stress assignment, yielding an apparent tri-syllabic foot. While they contend that stress is predictable at the word level, they also concede that phrase-level stress often obscures word-level stress. Unfortunately, I have no examples demonstrating Wilson and Wearne's stress rule.

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In order to further investigate stress and intonation, I recorded several short Hanga Hundi sentences and analyzed them using CECIL, a computer program produced by the Summer Institute of Linguistics.[7] This program produces graphs of utterance loudness and pitch so that stress and intonation can be measured accurately. A sample of the results given by CECIL is shown in figure 2-1. In this example the top graph is the loudness contour of the utterance and the bottom graph is the frequency contour of the utterance.

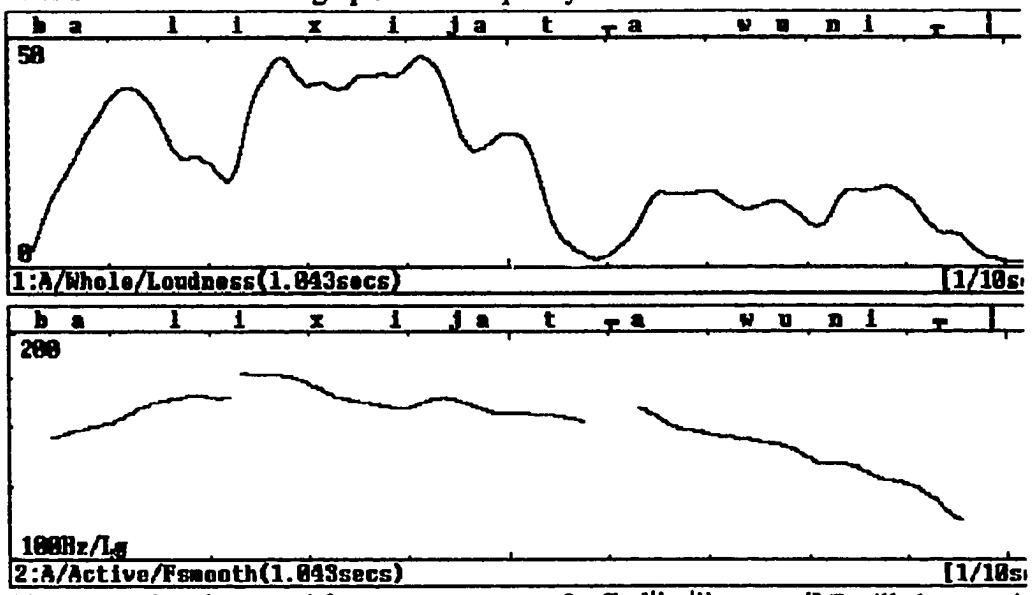

Figure 2-1. Loudness and frequency contours for [bal'i ɣ'ijatawuni] 'I will shoot a pig'.

As figure 2-1 demonstrates, the acoustic results do not particularly support either Laycock's or Wilson and Wearne's proposal. In this example, [bal'i] 'pig' is stressed on a high vowel in the ultima and [ɣ'ijatawuni] 'I want to shoot' is stressed on the first syllable of the word, with a slight secondary stress on the ultima. Continued testing demonstrated that word-level stress was not consistent and, therefore, not significant in Hanga Hundi. The only significant stress pattern is the phrase-level stress pattern, which agrees somewhat with Laycock's earlier proposal, although I find no evidence of the significance of vowel

[7] CECIL: Computerised Extraction of Components of Intonation in Language. This analysis used version 1.2a of the software.

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weighting. Stress, as indicated by loudness and pitch, is usually greatest on the second syllable of the phonological phrase and drops steadily from there to the end of the phrase. If the phonological phrase is sentence medial, however, stress will rise slightly at the end of the phrase, usually on the last two syllables of the phrase. Also, question sentences generally rise in stress on the last word of the phrase; often this increase in stress is manifested by increasing loudness and decreasing pitch. Additional examples of phrase-level stress in Hanga Hundi, as measured by CECIL, are shown below.

(2-38) Phrase-level stress in Hanga Hundi (higher numbers represent higher stress):

4 7 6 6 5 3 6 4	5 7 6 5 4 2 1
ɣiri hamwi satamini?	wuna bija ᵐbu jata
'Will you eat fish?'	'My stomach is full.'
4 6 8 8 2 1 1	6-8 5 4 4 2
bali wuni ɣije?e	geⁱ andi towi
'I shoot a pig'.	'I am building a house.'

While I find no evidence that tone plays any role in the phonemic system of Hanga Hundi, it is interesting to note that many Hanga Hundi speakers can also communicate using a whistle language. My initial impression of the whistle language is that it is a relatively closed set of messages used while hunting or to communicate over very large distances. Also, it seems that the whistle language is not used by all Hanga Hundi speakers. The whistle language, like the drum language that the Hanga Hundi also use, must be taught to its users. Once taught, each user is given his or her own whistle 'name', so that it is possible to summon that individual from a distance. I have mentioned the whistle language here only because of the possible implication that tone is important in Hanga Hundi, which is otherwise not the case. Other than that, I mention both the whistle language and the drum language as possible topics of future study.

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2.4. Vowel phonemes

As mentioned earlier, there is disagreement about the status of the vowel phonemes in the Ndu languages. Most of these languages have at least seven contrasting phonetic vowels and have some morphophonemic evidence that the semi-vowels are involved in backness and roundness assimilation. Because of this assimilation process, some linguists have reduced the vowel system to three central vowels, /ɨ/, /ə/, and /a/, plus the semi-vowels (Laycock 1965, Staalsen 1966).

Hanga Hundi is true to its family relationships in this respect. It has an inventory of at least thirteen phonetic vowels. A traditional analysis of these sounds yields seven apparent vowel phonemes which interact with the semi-vowels. The initial goal of this analysis was to reduce this system to just three vowels, /ɨ/, /u/, and /a/. The final analysis, however, yields a four-vowel system, /i/, /u/, /ə/, and /a/, in which there is no contrast between the high vowels and the related semi-vowels.

The analysis of the vowels proceeds as follows: Section 2.4.1. gives an overview of the distribution and contrast of the vowel sounds, section 2.4.2 provides examples of the morphophonemic alternations, section 2.4.3. describes previous analyses of Ndu language vowels, and section 2.4.4. analyzes these vowels in the light of Underspecification Theory.

2.4.1. Apparent vowel inventory

As just mentioned, this section focuses on the distribution and contrast of the Hanga Hundi vowel sounds. The apparent vowel inventory of Hanga Hundi is as follows.

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Table 2-2. Apparent vowel phonemes of Hanga Hundi. Allophones are listed in square brackets under the vowel.

	front	central	back
high	i [jɪ i ɪ]	ɨ [i ɨ u]	u [wʊ u ʊ]
mid	e [e ɛ]	ə [e a o]	o [o ɔ]
low		a [a a?a]	

These vowel sounds contrast with each other as shown below.

(2-39) Contrast of i , e , ɨ , a , u , o

ti	[ti]	'to bite'	te	[te]	'stand and ...'
tɨ	[tɨ]	'to stand'	ta	[ta]	'to cut'
tu	[tu]	'to roast'	to	[to]	'to build'

(2-40) Contrast of ɨ , i , ə , a

kɨ	[hɨ]	'who'
ki	[hi]	'to copulate'
kə	[ha]	'to build'
ka	[ha?a]	'breadfruit'

As shown in (2-40), the contrast between central vowels is not strictly a contrast in vowel quality. As Staalsen (1966) and Wilson (1976) note for Iatmul and Abelam, respectively, the central vowels are distinguished in other ways as well: /ɨ/ is usually much shorter in duration, resists stress, never appears word-initially, and is deleted before another vowel; /ə/ is similar in duration to other vowels; /a/ is longer in duration than other vowels and in many of the varieties is pronounced as [a?a].

In Hanga Hundi the difference in vowel quality between /ə/ and /a/ has been neutralized in many environments so that both vowels are pronounced [a]. This neutralization occurs word initially and in verbs. When a contrast is retained in Hanga Hundi, the corresponding sounds are [a] and [a?a]. In verbs, the neutralized contrast between /ə/ and /a/ returns when the verb is suffixed with one of the same subject suffixes, either *-ta*, or *-e/-a*, as shown below.

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(2-41) Examples of verbs with neutralized low vowels

Underlying Representation	Unsuffixed form	Suffixed form	Gloss
ɸaku	ɸaku	ɸa?akwa	'hide and ...'
ɣaku	ɣaku	ɣa?akwa	'come up and ...'
ɸira	ɸira	ɸira?ata	'peeling while ...'
kua	hwa	hwa?ata	'laying while ...

(2-42) Examples of verbs with mid vowels

Underlying Representation	Unsuffixed form	Suffixed form	Gloss
rəpu	raɸu	raɸwa	'remove skin and ...'
wəkrə	wakra	wakre	'call and ...'
jətə	jata	jate	'carry and ...'

In Abelam and Iatmul only the low vowel is pronounced as V?V. In Hanga Hundi, however, the same type of sequence also occurs with /e/ and /o/, as shown below. It is interesting that these V?V sequences are cognate with Abelam diphthongs while most Abelam diphthongs are generally cognate with just /e/ and /o/ in Hanga Hundi.

(2-43) Examples of other mid vowel sequences

noo	[no?o]	'sago'
giroo	[giro?o]	'measurement'
mwee	[mwe?e]	'taro, a tuber'
kee	[he?e]	'brother'

The examples that have been presented so far suggest that the distinctive feature, at least in Hanga Hundi phonology, between /ə/ and /a/ is not vowel height but vowel length. In the section on morphophonemic alternations, however, we will demonstrate that the contrasts in both height and length must be maintained. At this point, however, we note that the Hanga Hundi vowel system does make a systematic differentiation between high and non-high vowels. The non-high vowels can all appear as long (V?V) vowels and as the syllable nucleus in diphthongs. The high vowels never appear in the V?V sequences.

It is also interesting to note that /i/ does not take part in diphthongs nor does it occur word-initially. Examples of the other vowels occurring in word-initial position are given

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below. As mentioned in section 2.2, any utterance-initial vowel is preceded by a glottal stop. There is no contrast between /ə/ and /a/ word-initially.

(2-44) Word-initial vowels:

aɸwi	[ʔaɸwi]	'bird'	ikaɸre	[ʔikaɸre~jikaɸre]	'good
o	[ʔo]	'or'	umba	[ʔumba~wumba]	'there'
eko	[ʔeko]	'inside'			

In summary, this section has demonstrated that each of the apparent vowel phonemes contrasts with each of the other vowel phonemes. In addition, we have shown that vowel length, as marked by the sequence VʔV, rather than vowel height, is the feature distinguishing what has previously been analyzed as /ə/ and /a/ in other languages. This section has also shown that there is an interesting dichotomy between high vowels and non-high vowels. The non-high vowels have long forms (VʔV) and short forms (V) yet the high vowels only appear in short forms. The high vowels become non-syllabic following a vowel but not the non-high vowels. This investigation will now consider the morphophonemic processes relevant to the vowels.

2.4.2. Morphophonemic alternations

While the contrasts given in the previous section are fairly good evidence of the phonemic status of each of the vowel sounds, some morphophonemic alternations make their phonemic status questionable. As discussed in section 2.2., it is possible to predict all occurrences of /i̯/ based on the syllable template. In addition, the examples from the previous section suggest that /ə/ and /a/ seem to be distinguished primarily by vowel length in Hanga Hundi. In this section we will show that the central vowels have allophones corresponding to the front and back vowels. We will also look at more data showing the syllabic and non-syllabic usage of the high vowels. The purpose of this section, then, will be to summarize the morphophonemic alternations that take place among Hanga Hundi vowels. In the following sections we will consider possible analyses of these alternations.

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The most common morphophonemic variation is among the central vowels. The central vowels become fronted or backed when they precede either the front or back semi-vowel, respectively. Examples of these alternations are shown below.

(2-45) Central vowel alternations in Hanga Hundi.

Isolated Forms	Combined	
/mɨ ua/	[mua~muwa]	'Talk!'
/mɨ ia/	[mia~mija]	'Come!'
/sɨ i+kua/	[sikwa]	'Let's go!'
/mə i+kua/	[me^{j}kwa]	'O.K. let's go!'
/sa ji/	[sa^{j}]	'Go on!'
/tai+noo/	[de^{j}no]	'Jellied sago'

If we were to eliminate the vowel height contrast between /ə/ and /a/, it would be difficult to explain why /a+j/ produces [a^{j}] and /ə+j/ produces [e^{j}]. However, the assumption that these vowels differ in height fails to explain why /tai/ 'make jelly' is pronounced [ta^{j}] as an independent root but [de^{j}] in a compound word. It seems likely that [de^{j}no] has become lexicalized and that, in the process of lexicalization, /a/ shifted to /ə/.

Another source of data regarding these alternations is the subject agreement suffixes. When these suffixes are followed by the present tense suffix *-i*, they produce alternations very similar to the ones shown before. The subject suffixes are listed below along with their present tense counterparts; all forms are shown phonetically. In these examples, all occurrences of [e] arise from [a+i].

(2-46) Alternation of vowels on subject agreement suffixes:

Past Tense	Present Tense	Gloss	Past Tense	Present Tense	Gloss
wu	wi	1st Sg.	gu	g^{w}i	2nd Plural
na	ne	1st Dual	di	di	3rd Sg. Masc.
k^{w}a	k^{w}e	1st Plural	li	li	3rd Sg. Fem.
mɨ	mi	2nd Sg. Masc.	bɨ	bi	3rd Dual
p^{j}i	p^{j}i	2nd Sg. Fem.	da	de	3rd Plural
bɨ	bi	2nd Dual			

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Earlier we mentioned that contrast between /ə/ and /a/ is restored in verbs when either *-ta* 'Same subject simultaneous action' or *-e/-a* 'Same subject non-sequential' is added to the verb. Examples of these alternations are shown below.

(2-47) Verbs suffixed with -i 'Same subject non-sequential'

Unsuffixed Forms		Suffixed Forms		Gloss
Underlying	Surface	Underlying	Surface	
sə	sa	sə+e	se	'eat and ...'
wə	wa	wə+e	we	'talk and ...'
kira	hira	kira+e	hire?e	'get and ...'
ɣa	ɣa	ɣa+e	ɣe?e	'dig and ...'

The evidence given by these verb forms once again compels us to reconsider the distinction between /ə/ and /a/. In these verbs the distinguishing feature is length and not vowel height. It appears, then, that some morphophonemic alternations strongly favor interpreting the contrast between these vowels as a contrast of vowel height, while other alternations favor interpreting the contrast as one of vowel length.

The alternations which involve vowel height involve a process of vowel assimilation. In vowel assimilation, a non-low central vowel copies the roundness and backness features of an adjacent high vowel, giving preference to the following vowel. This process can be expressed by the following rule.

(2-48) Assimilation of central vowels: A non-low central vowel assimilates in roundness and backness to an adjacent high vowel.

$$\begin{bmatrix} -\text{cons} \\ -\text{low} \end{bmatrix} \rightarrow \begin{bmatrix} \alpha\,\text{back} \\ \beta\,\text{round} \end{bmatrix} / - \begin{bmatrix} -\text{cons} \\ +\text{high} \\ \alpha\,\text{back} \\ \beta\,\text{round} \end{bmatrix}$$

A very relevant question at this point is whether all occurrences of [e] could be analyzed as resulting from /əi/. There is no language internal evidence to support this but there are several comparative examples that suggest this, as shown below.

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(2-49) Comparative examples of mid-vowel generation:

Maprik:	$k^{w}aji$	maji	bawu	rawu
Hanga Hundi:	$h^{w}e$	mwe?e	bo	ro
gloss:	'to give'	'taro'	'ashes'	'hug'

Another factor relevant to the phonemic status of the mid vowels is the position of the vowel assimilation process relative to syllabification and other phonological processes. The fact that Hanga Hundi allows both /ai/ [aj] and /e/ in words, even though most morpho-phonemic occurrences of /ai/ become /e/, argues in favor of including occurrences of /e/ in the lexicon. If /e/ was not inserted prior to syllabification, the syllable template would give the incorrect result, as shown below.

(2-50) Demonstration of lexical application of vowel assimilation:
(O = onset, N = nucleus, C = coda)

With lexical application:

t a ɸ u e l → t a ɸ u e l → t a ɸ w e l → t a ɸ w e l
C N C O_1N C O_2O_1N C

→ t a ɸ w e l → t a ɸ w e l 'A location name'
N O_2O_1N C O_1N O_2O_1N C

Without lexical application:

taɸuail → t a ɸ u a i l → t a ɸ u a i l → t a ɸ u a j i l*
C N C O N C

As this example demonstrates, if morpheme internal vowel assimilation does not take place in the lexicon, we would expect the glide insertion rule to break up the vowel cluster, since the syllable structure constraints do not allow two vowels in the syllable nucleus. Therefore, the mid-vowels are generated in the lexicon prior to syllabification.

2.4.3. Previous analyses

At this point, it is useful to compare this analysis of Hanga Hundi with work that has been done in other Ndu languages. As I mentioned at the beginning of the phonology section, the vowels of the Ndu family of languages have long given linguists difficulties. Laycock

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(1991) sums up the situation when he says, "But, for Abelam and other Sepik languages, all phonemic solutions, as well as non-phonemic ones, run into trouble." There have been a wide variety of phonemic solutions for these languages and a fair amount of variation in orthographies used as well. All of the previous solutions were presented in a non-generative format and were based on segments rather than distinctive features. When Staalsen (1966) analyzed the vowel phonemes of Iatmul he proposed the following three-vowel system:

Table 2-3. The vowel phonemes of Iatmul.

Phoneme	Allophone	Environment
ɨ	i	before j or ɲ
[high]	u	before w
	ɪ	after j or ɲ
	ʊ	after w
	ʔi	before j and not after a consonant
	ɨ	elsewhere
ə	e	before j or ɲ
[mid]	o	before w
	ɛ	after j or ɲ
	ɔ	after w
	ʔe	before j and not after a consonant
	ʔo	before w and not after a consonant
	ə	elsewhere
a	ʔa	not after a consonant
[low]	a	elsewhere, generally longer in duration than other vowels

In addition to the above alternations, some linguists (Foley 1986) have suggested that the high vowel /ɨ/ is not phonemic but is a predictable epenthetic vowel. The key feature to notice in the above analysis, however, is that it reports essentially the same alternations that we have already seen in Hanga Hundi, except that the lax allophones are very rare in Hanga Hundi. The analysis presented above is very similar to the analysis Laycock (1965) proposes for the Wosera variety of Abelam, and also for the rest of the Ndu languages. Laycock's analysis differs from Staalsen's in that Laycock would attribute most occurrences of [u], [wu],

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and [wʊ] to the phoneme /w/ whereas Staalsen claims that they result from [ɨw], [wi#], and [wiC], respectively.

Because of the relative abstractness of Staalsen's analysis, many linguists have preferred to analyze the vowel sounds as separate phonemes. Wilson and Wearne (1970) propose a seven vowel system for the Maprik variety of Abelam although a later paper (Wilson 1977) acknowledges the same central vowel variations that are reported above by Staalsen. Freudenburg (1975) prefers a nine vowel system for Boikin, essentially analyzing every vowel sound as a phoneme.

None of these analyses adequately describes the processes involved in the vowel alternations. This inadequacy is due partially to the fact that they were written from a primarily descriptive perspective, not utilizing distinctive features to generalize the processes involved. Another failure of previous analysis is that they have considered syllable structure and phonemic inventory to be independent of each other. In the next section we will demonstrate that syllable structure is critical to understanding the phonemic status of the high vowels and semi-vowels. After syllable structure we will see that an underspecification analysis of the vowel system further helps to explain the processes involved.

2.4.4. Underspecification theory analysis

According to Archangeli (1988), there are two dominant approaches to underspecification, Contrastive Underspecification and Radical Underspecification. Contrastive Underspecification is promoted by Steriade (1987), Halle (1959), and others. Archangeli and Pulleyblank (1986) are the primary proponents of Radical Underspecification. The two approaches differ significantly from each other. Radical underspecification proposes that features are only needed in the phonemic inventory when they cannot be predicted by other features. Also, features are more likely to be eliminated if they follow cross-linguistic tendencies. Archangeli proposes that the following default rules are used universally to eliminate features from feature matrices.

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(2-51) Universal default rules:

[+low]→[+back] [ ]→[+high]

[+low]→[-high] [ ]→[-low]

[ ]→[-back]

Steriade, on the other hand, proposes that languages do not use a universal set of default redundancy rules. Instead, she claims that features which are contrastive within a class of segments, which she calls distinctive features, must be underlyingly present in that class. She contrasts distinctive features from redundant ones, which are predictable within a segmental class. Contrastive underspecification allows a ternary distinction in feature marking; positive, negative, and unmarked. Steriade summarizes her definition of redundant and distinctive features as follows:

(2-52) Definition of redundant (R) and distinctive (D) features. (Steriade 1987)

- R-class of segments with respect to F: the class of segments where a feature co-occurrence constraint blocks one value of F.
- D-class of segments with respect to F: a class of segments where both values of F are allowed.
- R-value for F: the value of F present within its R-class.
- D-value for F: a value of F present within its D-class.
- R-rule for F: a redundancy rule introducing an R-value.
- D-rule for F: a redundancy rule introducing a D-value.

We now turn to the actual feature matrices as produced by each of these approaches. The three matrices shown below are the result of contrastive underspecification, radical underspecification using Archangeli's default rules, and a form of radical underspecification which ignores cross-linguistic default rules. Note that the feature [syll] has been eliminated from all of these matrices so that the semi-vowels and high vowels are no longer distinct. Also, the matrices have maintained a three-way contrast in the central vowels, even though some question remains about the distinguishing feature of /ə/ and /a/.

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Table 2-4. Feature matrices of Hanga Hundi glides and vowels as reduced by Contrastive Underspecification.

	j, i	e	ɨ	w, u	o	ɔ	a
cons	-	-	-	-	-	-	-
high	+	-	+	+	-	-	
low		-			-	-	+
back	-	-	+			+	
round			-	+	+	-	

Table 2-5. Feature matrices of Hanga Hundi glides and vowels as reduced by Radical Underspecification and universal default rules.

	j, i	e	ɨ	w, u	o	ɔ	a
cons	-	-	-	-	-	-	-
high		-			-	-	
low							+
back			+			+	
round				+	+		

Table 2-6. Feature matrices of Hanga Hundi glides and vowels as reduced by Radical Underspecification with language specific default rules.

	j, i	e	ɨ	w, u	o	ɔ	a
cons	-	-	-	-	-	-	-
high	+		+	+			
low							+
back	-	-					
round				+	+		

The redundancy rules used to produce the last set of matrices are shown below. Note that fewer rules are required to define the language specific defaults than the proposed universal defaults.

(2-53) Hanga Hundi default rules:

[ ]→[-round] [ ]→[-high]

[ ]→[-low] [ ]→[+back]

2.4.4.1. Application to rules

We will now evaluate these reduced feature matrices by attempting to formulate a description of the vowel processes we looked at earlier. First we will use the feature matrices produced by contrastive underspecification.

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(2-54) Vowel Assimilation:

$$\begin{bmatrix} +\text{back} \\ -\text{round} \end{bmatrix} \rightarrow \begin{bmatrix} \alpha\,\text{back} \\ \beta\,\text{round} \end{bmatrix} / _ \begin{bmatrix} +\text{high} \\ \alpha\,\text{back} \\ \beta\,\text{round} \end{bmatrix}$$

(2-55) Vowel Insertion (as required to maintain syllable structure):

$$\varnothing \rightarrow \begin{bmatrix} +\text{high} \\ +\text{back} \\ -\text{round} \end{bmatrix}$$ As required by syllable template.

(2-56) Labialization

$$\begin{bmatrix} +\text{high} \\ +\text{round} \end{bmatrix} \rightarrow [-\text{syll}]$$ As required by syllable template.

The three rules shown above adequately describe the vowel processes that have been discussed in this paper. We note that Contrastive Underspecification did not allow us to significantly reduce the number of features in the matrices or in the rules. Also, contrastive underspecification forces us to express the vowel assimilation rule as a feature changing rule in that the features mentioned in the structural description are the same ones mentioned in the structural change. We now turn to a formulation of the rules in terms of radical underspecification.

The feature matrices produced using the universal default rules yield some very unexpected results. The vowel assimilation rule expressed by a single rule in (8) now must be expressed by two rules, as shown below.

(2-57) Vowel Assimilation:

(a) [+back] → [+round] / _ [+round]

(b) [+back] → [ ] / _ [ ]

(2-58) Vowel Insertion (as required to maintain syllable structure):

∅ → [+back] As required by syllable template.

(2-59) Labialization

[+round] → [−syll] As required by syllable template.

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The first vowel assimilation rule seems well motivated in that it expresses rounding harmony among back vowels. The second rule, (2-55b), violates the constraints of underspecification theory because it involves the erasure of a feature that is present underlyingly, besides the fact that the environment is 'nothing'. Also, we note that both /o/ and /u/ meet the structural description for Labialization and /u/ has no specified feature by which we might exclude /o/. While these rules use significantly fewer features, it is apparently at the cost of reduced clarity.

We now turn to an evaluation of the rules formed by using the language specific default rules. These feature matrices are based on the assumption that the mid-central vowel is the least marked vowel.

(2-60) Vowel Assimilation (braces indicate that only one of two features exists):

$$\begin{bmatrix} 0\,\text{round} \\ 0\,\text{back} \end{bmatrix} \begin{bmatrix} +\text{high} \\ \{+\text{round}, -\text{back}\} \end{bmatrix}$$

V X

(2-61) Vowel Insertion (as required to maintain syllable structure):

$$\varnothing \rightarrow [+\text{high}] / [+\text{cons}] _ [+\text{cons}]$$

(2-62) Labialization (as allowed by syllable template):

$$\begin{bmatrix} +\text{high} \\ +\text{round} \end{bmatrix} \rightarrow [-\text{syll}] / [-\text{cons}][+\text{cons}] _ [-\text{cons}]$$

These language specific default rules allow us to express the Vowel Assimilation rule as a single rule again, with the added benefit of making it clear that it is a feature filling rule rather than a feature changing one. In contrast to the universal default rules used above, the language specific default rules have allowed us to preserve the feature [+high], which is

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the only relevant feature in the environment of the Vowel Assimilation rule.[8] Also, the labialization rule can now be written so that it excludes /o/ from meeting the structural description.

2.4.4.2. Summary of underspecification results

In the preceding discussion we have shown that both Contrastive Underspecification and a modified form of Radical Underspecification are adequate to describe the Hanga Hundi vowel processes. This discussion has also shown that a set of redundancy rules based on cross linguistic default rules, as proposed by Archangeli (1988), is not adequate to describe these processes. While both the modified form Radical Underspecification and Contrastive Underspecification were able to adequately describe these vowel processes, the modified form of Radical Underspecification is the preferred method because:

1. Fewer features are required in the feature matrices and in the rules.
2. It does not allow a ternary distinction of feature values.
3. It is easier to use to generate the underspecified feature matrices.

The analysis of the vowels aids in clarifying the vowel processes but still does not allow us to eliminate the height distinction between /ə/ and /a/. At this point it appears that this height distinction must be retained along with the added feature of [+long]. Therefore, we will accept both of these vowel sounds as phonemes and admit that they are neutralized word initially and in unsuffixed verbs. The coexistence of these two allows for data such as the following.

(2-63) Diphthongs and sequences of long vowels

[ja?aʲ]	'grandmother'	[taʲ]	'make jelly'
[he?e]	'brother'	[te]	'stand and ...'

[8] In other dialects of this language both of the alveo-palatal consonants also participate in the Vowel Assimilation process. It is no coincidence that these phonemes are also [+high].

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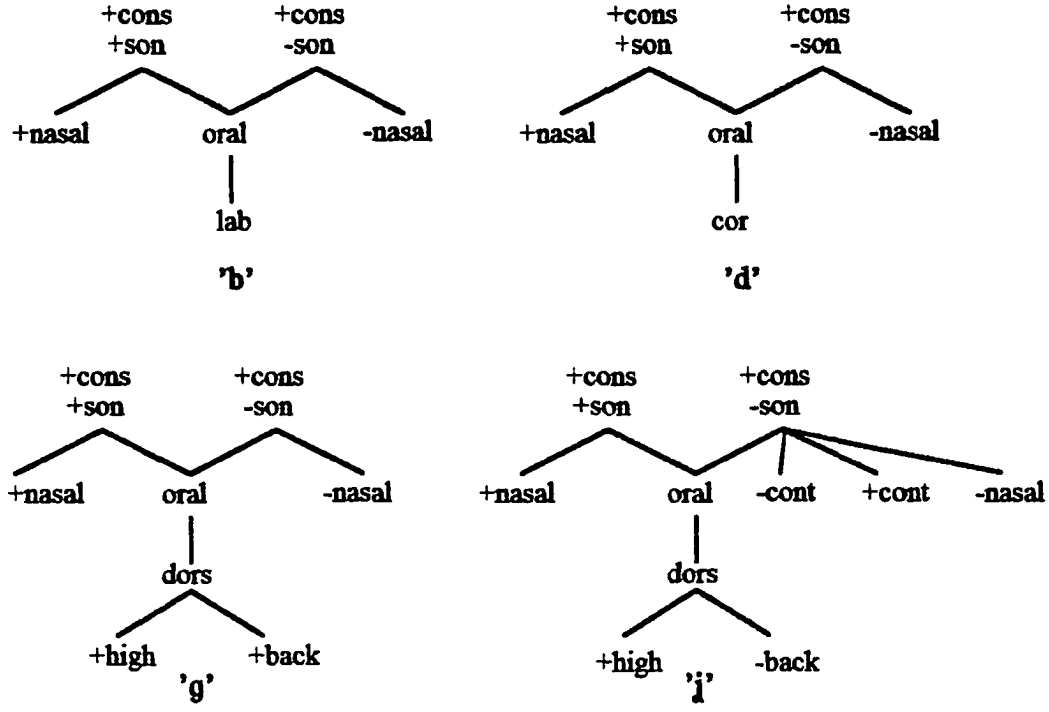
2.5. Summary

2.5.1. Summary of processes and rules.

In this chapter we have discussed the phonemes and phonological processes of Hanga Hundi. In the analysis of the consonants we demonstrated that prenasalized consonants function as two segments in terms of syllabification and as a single segment with regard to other processes. We determined that two-dimensional representation of these phonemes was required. The two-dimensional representations are repeated below.

(2-8) Feature geometries of prenasalized consonants:



Prenasalization is controlled by the syllable template in the domain of the phonological phrase. For Hanga Hundi the phonological phrase was defined as follows:

(2-16) Phonological phrase:

The boundaries of the phonological phrase in Hanga Hundi are determined by any syntactic boundary of the form X^n.

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(2-17) Pronoun adjustment:

Any pronoun that immediately follows a verb phrase marked with either *-ka* 'different subject conjoining' or *-e/-a* 'same subject non-sequential' is phonologically considered to be part of the verb phrase.

Besides prenasalization, we also considered labialized consonants and determined that they were the result of an underlying *Cu* sequence. The high round vowel becomes non-syllabic before another vowel, a fact which was also explained by the syllable template.

The process that distinguishes Hanga Hundi from closely related varieties, H-formation, was described by the following rule.

(2-21) H-formation

$$[k] \rightarrow [h] / \left\{ \begin{matrix} \#\#_ \\ \#_ V_1 C_1 V \end{matrix} \right\}$$

While this rule explains all occurrences of [h], we also noted that it must occur early in the lexicon since very few morphemes have both h-initial and k-initial allomorphs.

Another process that was described was that of S-palatalization. This process occurs infrequently in the data but, nonetheless, was described by the following rule.

(2-23) S-palatalization

$$\begin{bmatrix} +\text{cor} \\ +\text{cont} \end{bmatrix} \rightarrow \begin{bmatrix} +\text{high} \\ \alpha \text{ del rel} \end{bmatrix} \% _ \begin{bmatrix} -\text{cons} \\ +\text{high} \\ -\text{back} \end{bmatrix}$$

α is positive unless /s/ follows a word boundary.

Many of the phonological processes related to Hanga Hundi were explained in terms of a syllable template. The template controls prenasalization, labialization, vowel epenthesis, glide epenthesis and glottal epenthesis. While the predominant syllable type in Hanga Hundi, the template allows for both a branching onset and a branching rhyme, as shown below.

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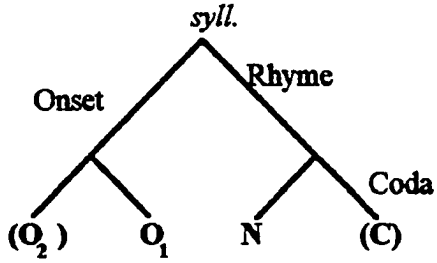
(2-28) Sonority hierarchy

Sonority Index	Sound
10	a
9	e, o, ə
8	i, i, u, j, w, h, ʔ
7	r-sounds
6	laterals
5	nasals
4	voiced fricatives
3	voiceless fricatives
2	voiced stops
1	voiceless stops

(2-29) Syllable template:



$O_1 \leq 8$

$O_2 < O_1$; if O_2 = h, then O_1 = w

$N \geq 8$

$C \geq 1$

Constraints:

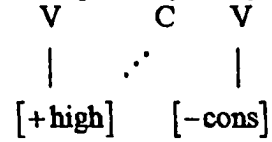
1. If a syllable has both O_2 and C, then both O_1 and C are sonorant.
2. If a syllable has both O_1 and O_2, then O_2 = [-cor]
3. If N = 9 and C = 8, then N and C agree in backness.

This syllable template predicted vowel insertion and glide insertion based on the following rules.

(2-30) Vowel insertion:

$\varnothing \rightarrow$ [+high] Where required for syllable structure.

(2-31) Glide insertion #1: Insert the glide after a high vowel when it precedes another vowel as required by the syllable template.



(2-32) Glottal insertion: Insert the glottal stop between two non-high vowels or before a non-high vowel word initially:

$$\varnothing \rightarrow \begin{bmatrix} +\text{cons} \\ +\text{low} \end{bmatrix} / \left\{ \begin{bmatrix} -\text{cons} \\ -\text{high} \end{bmatrix} \right\} \text{--} \begin{bmatrix} -\text{cons} \\ -\text{high} \end{bmatrix}$$

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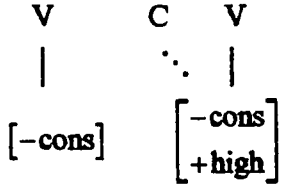
(2-34) Glide insertion #2: Link a high vowel to both the syllable onset and nucleus when it follows another vowel. Required for 1st sing. subject suffix. Optional otherwise.



The work on the vowels sought to reduce the number of phonemes from the seven contrasting phonetic vowel down to three. This effort failed because of the necessity of contrasting /a/ and /ə/ in the phonological processes. In addition, the alternations present in Hanga Hundi vowels indicate that Hanga Hundi is incorporating length as a distinctive feature in the vowel phonology.

Another question regarding the vowels was the current phonological status of the mid vowels, /e/ and /o/. Comparative data indicate that these vowels are historically derived from /əi/ and /əu/, respectively. On the other hand, it was demonstrated that any morpheme-internal occurrences of [e] must be represented as such prior to syllabification. Thus, we were forced to admit that some occurrences of [e] result from the lexicon while others are the result of morphophonemic alternations.

The insertion rules shown above assume the use of feature matrices as produced by a form of radical underspecification. The feature matrices produced by underspecification theory for the vowels and glides are shown below. This chart has been modified to include ʔ, since it is involved in the glide insertion rule above.

Table 2-6. Feature matrices of Hanga Hundi glides and vowels as reduced by Radical Underspecification with language specific default rules.

	j, i	e	i	w, u	o	ə	ʔ	a
cons	-	-	-	-	-	-	-	-
high	+		+	+				
low							+	+
back	-	-						
round				+	+			

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These feature matrices allowed us to simplify the expression of the vowel assimilation rule to the following:

(2-60) Vowel Assimilation (braces indicate that only one of two features exists):

$$\begin{bmatrix} 0\text{round} \\ 0\text{back} \end{bmatrix} \begin{bmatrix} +\text{high} \\ \{+\text{round} \\ -\text{back}\} \end{bmatrix}$$

V X

While underspecification theory allowed us to simplify the vowel processes it still did not present a solution to the underlying forms of [e] and [aʲ], a question which is linked to the determination of whether [ə] and [a] are separate phonemes or not. However, since the syllable template requires that all morpheme-internal occurrences of [e] be represented as such prior to syllabification, is seems likely that /e/ has some degree of psychological reality to a native speaker, along with the other mid vowel /o/, and that these sounds will need to be treated separately in the orthography.

2.5.2. Phoneme and orthography chart

The consonant phonemes of Hanga Hundi, as determined by the current analysis, are repeated below. The vowel phonemes are shown in the feature matrices above.

Table 2-1. Consonants of Hanga Hundi. (Allophones are given in brackets.)

	Bilabial	Alveolar	Palatal	Velar
Plosive		t [t tʰ]		k [h k]
Prenasalized Plosive	b [b mb]	d [d nd]	ɟ [ɟ nɟ]	g [g ŋg]
Fricative	ɸ [ɸ p]	s [s ç]		ɣ [ɣ]
Nasal	m	n	ɲ [ɲʲ]	
Flap		r		
Lateral Approximate		l		

The following table indicates the orthographic symbols used for Hanga Hundi and other Ndu languages. The top line gives the phonemes or sequence of phonemes as determined by the current analysis. Note that other varieties have /p/ as a phoneme where

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Hanga Hundi has /ɸ/. The orthography shown in these charts for Hanga Hundi closely follows the orthography currently used for Tok Pisin, the trade language that is dominant in the area surrounding the Hanga Hundi speakers.

Table 2-7. Orthography for labial and velar consonants. (word initial, word medial)

Phoneme(s):	b	buV	g	guV	k	kuV	m	muV	p	puV	β
Iatmul	mb	mbw	ng	ngw	k	kw	m	mw	p	pw	v
Ambulas	b	b	g	g	k	k	m	m	p	p	v
Manambu	b	bw	g	gw	k	kw	m	mw	p	pw	v
Tok Pisin	b,mb	-	g,ng	-	k	-	m	-	p	-	v
Hanga Hundi	b,mb	bw,mbw	g,ng	gw,ngw	h,k	hw,kw	m	mw	p	pw	x

Table 2-8. Orthography for alveolar and palatal consonants.

Phoneme:	d	j	l	n	ɲ	r	s	t
Iatmul	nd	ns	l	n	ny	l	s	t
Ambulas	d	j	l	n	ny	r	s	t
Manambu	d	j	l	n	ny	r	s	t
Tok Pisin	d,nd	j	l	n	ni	r	s	t
Hanga Hundi	d,nd	j,nj	l	n	ny	r	s	t

Table 2-9. Orthography for vowel and semi-vowel phones (not phonemes).

Phoneme:	ə	a	aʔa	e	eʔe	i	i̇	o	oʔo	u	w	j	a^i	a^u
Iatmul	a	a	aa	e	-	i	i	o	-	u	w	y	-	-
Ambulas	a	aa	aa	e	-	i	é	o	-	u	w	y	ayé	awu
Manambu	a	a	aa	e	-	iy	i	-	-	uw	w	y	ay	aw
Tok Pisin	-	a	-	e	-	i	-	o	-	u	w	y	ai	au
Hanga Hundi	a	a	aa	e	ee	i	-é	o	oo	u	w	y	ai	au

2.5.3. Sample text

I include the following text to indicate how the orthography relates to both the phonetic and phonemic representations of words. The text is given in three parallel lines; the top, enclosed in < >, is the orthographic representation, the next, enclosed in / / is the phonemic representation, and the bottom, enclosed in [ ], is shown phonetically.

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<Wuni wuna jambu hwanyi wuni. Wuni hanja, wuna gwal, rendénéka,>
/uni una jabu kuaɲi uni. uni kaja, una gual, red#n#ka,>
[wuni wuna ɲjambu hwaɲ'i wuni. wuni hanja, wuna ŋgwal, rendinika,

<yalapu hundi watawuni.>
/ialaɸu kudi uata#uni./
[jalaɸu hundi watawuni.]

'My clan is the black fantail. I want to tell a story about me, my grandfather, and the place he was from.'

<Hanja wuna gwal, dé anwarémbu dé té, wuni weko wuni.>
/kaja una gual, d anuar#bu d t, uni ueko uni./
[hanja wuna ŋgwal, di anwarimbu ndi ti wuni weko wuni.]

'Before, my grandfather he lived up on the mountain, I was from Weko.'

<Wumbu tendé, némbuli yae, gaya weko takataka gaya némbuli,>
/ubu t#e#d, nbuli ya#e, gaia ueko taka#taka gaia nbuli,/
[wumbu tendi, nimbuli ya?e, gaja weko takataka ŋgaja nimbuli,]

<Nungwaiambu tendé wuna yapar héra.>
/nuguaia#bu t#e#d una yaɸa#r kra./
[nuŋgwa'jambu tendi wuna yaɸar hira.]

'He lived on top in Weko and then he came down and brought his stuff to Nungwaia where he got my father (by birth).'

<Hree takandéka, némbuli wuna yapa, re takandéka dé bu>
/kra#e taka#d#ka, nbuli una yaɸa, re taka#d#ka d bu/
[hire?e takandika, nimbuli wuna yaɸa, re takandika ndi mbu]

<hiyandéka némbuli wuni ambu Nungwaiambu wuni re.>
/kia#d#ka nbuli uni ambu nuguaia#bu uni re./
[hijandika nimbuli wuni ?ambu nuŋgwa'jambu wuni re.]

'My father was born and lived there until he died and now I live here in Nungwaia.'

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3. MORPHOLOGY

The morphology of Hanga Hundi is relatively simple. Hanga Hundi can be shown to have nouns, adjectives, demonstratives, pronouns, adverbs, verbs, quantifiers, conjunctions, and a closed class of particles. All of the inflection is limited to suffixes on nouns, pronouns and verbs, although other word classes can accept noun phrase clitics. Some derivational morphology is still evident in the language but it does not appear to be currently productive. Verbs are the only word class with a complex system of suffixes. These suffixes are complex not only because there are many of them, but also because the meaning of these suffixes is dependent on their position in the word. In all classes, affixes are agglutinating so that the boundaries between morphemes can be easily determined. In this chapter, all of the examples are shown in orthographic rather than phonetic representation.

3.1. Inflection

The inflectional morphology of Hanga Hundi is especially interesting because a form often may serve different purposes in different positions in the word or on a different word class. For example, the suffix *-na* indicates the possessor when attached to a noun or pronoun, desire before a subject agreement suffix on a verb, and it can function as a subject agreement suffix on a verb. In some cases these suffixes are identical to free word forms and there is an obvious semantic relationship between the various uses of the form. I will point out the forms that have multiple uses as we go through the different groups of suffixes.

3.1.1. Nouns

Nouns may be divided into two basic classes, kinship nouns and all other nouns. Kinship nouns are distinguished from the rest in that they refer to kinship or clan relationships and they are the only nouns that can accept a plural suffix. Most of the kinship nouns are

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pluralized by adding the suffix *-ngu*, or *-éngu* if the root ends in a consonant. Only three irregular kinship nouns have been found and they are shown in the examples below.

(3-1) Examples of plural nouns.

Singular form	Plural form	
Regular kinship names:		
bandi	bandi-ngu	'younger siblings'
bati	bati-ngu	'aunts'
mandika	mandika-ngu	'ancestors'
Regular clan names:		
hwaru	hwaru-ngu	'eclectus parrots'
manawi	manawi-ngu	'birds of paradise'
giyan	giyan-éngu	'parrots'
Irregular forms:		
nyan	nyangwal,	nyambali 'children'
yapa	yapa-mbri	'fathers'
gwal	gwal-ungu	'grandfathers'

While only the kinship nouns may be inflected for plurality, all nouns, at least as far as is semantically feasible, can receive the suffix *-na* which indicates the possessor in a genitive phrase. This suffix can also be added to kinship nouns that have already been pluralized, in which case it follows the plural suffix. Examples of nouns marked with the possessive suffix are shown below.

(3-2) Examples of nouns marked for possession.

Root form	Possessor form	Root form	Possessor form
wasa	wasa-na nyan	mandika	mandika-ngu-na nukwa
'dog'	'the dog's child'	'ancestor'	'the ancestors' (Pl.) day'
ge	ge-na yapa		
'house'	'the house's father (owner)'		

As will be seen later, the suffix used for inflection of possession is related to the possessor forms of the first and second person pronouns. This suffix is distinguished from clitics because it only functions within a noun phrase while clitics function on the clause level.

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Besides the relatively common suffixes for plurality and possession, there are two other suffixes that can be found on nouns. The first of these is the vocative suffix *-a* which is added to proper nouns when calling someone. The vocative suffix is always pronounced with rising intonation on the word. The other suffix is actually a fragment of the word *eko* 'inside'. This fragment has the form *-ko* and attaches to nouns that end in a vowel. Examples of these two suffixes are shown below:

(3-3) Examples of the vocative suffix -a:

Maikela	Klemena
Maikel-a	Klemen-a
Michael-VOC	Clement-VOC
'Hey Michael!'	'Hey Clement!'

(3-4) Examples of the word fragment -ko:

gekoré	hundikombu
ge-ko-ré	hundi-ko-mbu
house-inside-TO	mouth-inside-LOC
'to the inside of the house'	'at the inside of the mouth'

(-ré and -mbu are clitics, see section 3.3)

A summary of the noun suffixes is shown in the chart below:

Table 3-1. The noun suffixes of Hanga Hundi: (Optional)

Noun class	First suffix	Second suffix
Kinship	-ngu, -mbri 'plural' (PL)	-na 'Possessor' (POSS) -ko 'inside' -a 'Vocative' (VOC)
Other	—	

In addition to the noun suffixes shown above, nouns may also be suffixed with a noun phrase clitic. The clitics function primarily to encode grammatical relations but also serve as post-positions. The clitics are described in section 3.3 below. The noun phrase clitics do not occur after the possessor or vocative suffixes but do occur after the plural and 'inside' suffixes.

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3.1.2. Pronouns

The pronoun system encodes person, number, and, for second and third person singular, gender. In addition, pronouns can be inflected to indicate possession and for the vocative case. What I have called the vocative signals the vocative case on second person pronouns and emphasis on third person pronouns. Vocative marking on second person pronouns is commonly used as a form of greeting and as a way to call someone who is far off. Emphatic marking on third person pronouns is used to add emphasis to a character in a narrative. A complete listing of the various forms of the pronouns is shown below.

Table 3-2. Pronouns of Hanga Hundi

Nominal Form	Possessor Form	Vocative / Emphatic Form	Pers.	Number	Gender
wuni 'I'	wuna 'my'		1st	sing.	
ani 'we'	ana 'our'		1st	dual	
nani 'we'	nana 'our'		1st	plural	
me 'we'	–		1st	plural	
méni 'you'	ména 'your'	ménawa 'you!'	2nd	sing.	masc.
nyéni 'you'	nyéna 'your'	nyénawa 'you!'	2nd	sing.	fem.
béni 'you'	béna 'your'	bénawa 'you!'	2nd	dual	
guni 'you'	guna 'your'	gunawa 'you!'	2nd	plural	
dé 'he'	déka 'his'	déwa 'he!'	3rd	sing.	masc.
lé 'she'	léka 'her'	léwa 'she!'	3rd	sing.	fem.
bér 'they'	bérka 'their'		3rd	dual	
di 'they'	deka 'their'		3rd	plural	

Included in this chart is the first person plural form *me*. This form is slightly more common in my text data than the other form, *nani*, but it is never suffixed. This form, *me*, is apparently preferred sentence medially while *nani* is preferred sentence initially and where a suffix is required.

As with nouns, pronouns can also be suffixed with noun phrase clitics. These clitics are added to the nominal form of the pronoun and do not occur on the possessor or vocative forms of the pronoun. Most of the third person possessor forms are homophonous with the third person benefactive forms, which are formed by adding the benefactive clitic, *-ka* 'for', to

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the nominal form. Only the third person plural possessor form, *deka* 'their', is distinct from its benefactive counterpart, *dika* 'for them'.

A summary of the pronoun suffixes is shown in the chart below:

Table 3-3. Pronoun suffixes.

Person	Nominal	Possessor	Vocative
First	-ni	-na	
Second	-ni	-na	-nawa
Third		-ka	-wa

As already mentioned, the first person plural form *me* does not accept any of these suffixes. Also, these pronoun suffixes may not co-occur with each other.

In the above chart I have chosen to assume that the nominal form of the first and second person pronouns includes a common suffix *-ni*. This is because the remaining stem closely corresponds to the subject agreement suffixes that are used on verbs, and because it allows me to conclude that first and second person pronouns have the same possessor suffix as nouns. The drawback to this analysis is that it also requires the vocative suffix to be significantly different for the second person and the third person.

3.1.3. Verbs

Whereas the system of suffixes for nouns and pronouns was relatively simple, the system of suffixes for verbs is significantly more complex. For ease of explanation, I have grouped them as directional suffixes, medial verb suffixes, final verb suffixes, and relativizing suffixes. I have also included a section on imperatives, because the imperative particles are frequently incorporated phonologically as prefixes on the verb although they are syntactically independent words.

The directional suffixes, which encode direction or aspect, occur closest to the root and may be combined with any of the other suffixes. The medial verb suffixes occur on verbs that are in the middle of a sentence and indicate whether the subject is different or the same in the following clause. The medial verb suffixes also encode information about the semantic

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relationship between clauses. The final verb suffixes encode information about the modality and time frame of an event. The relativizing suffixes, which are used to form relative clauses, are actually related to the medial verb suffixes, but have been treated separately because they are used in noun phrases.

3.1.3.1. Directional suffixes

These suffixes indicate a direction of motion or may otherwise modify the aspect of the verb. The directional suffixes very rarely occur together, but they frequently occur in combination with other verbal suffixes. The directional suffixes are shown in the chart below.

Table 3-4. Directional verb suffixes.

Form	Gloss
-kwexé	'tentatively'
-sale	'outward'
-sanda	'all down'
-sanga	'away and down'
-sangwandé	'outside'
-sawuré	'upward'
-séke	'to all'
-solo	'inside'

Examples of each of these suffixes are shown below.

(3-5) sa-kwexé
eat-tentatively
'to taste'

huru-kwexé
hold-tentatively
'to try, to test'

(3-6) hu-sale-séke
put-outward-to.all
'to put them all out'

(3-7) tu-sanda
cook-down.all
'to burn down, destroy'

(3-8) ya-sang-e
come-away.down-SS.NSQ
'came down away from it and'

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(3-9)	yaki-sangwandé	gi-sangwandé
	throw-outside	tie-outside
	'to throw outside'	'to wrap around, encircle'

(3-10) yaki-sawuré
throw-upward
'to throw upward'

(3-11)	bwa-séke	wa-séke
	scrape-to.all	talk-to.all
	'to scrape all of it'	'to discuss in a meeting'

(3-12)	hu-solo	wa-sol-a
	put-inside	talk-inside-SS.NSQ
	'to put inside, put into'	'talk quietly (whisper) and'

3.1.3.2. Medial verb suffixes (Switch Reference)

The medial verb suffixes can be divided into two main categories, same subject suffixes and different subject suffixes. The primary structural difference between these two categories is that the different subject suffixes require a subject agreement suffix and the same subject suffixes do not permit a subject agreement suffix. The relativizing suffixes also fit into this classification but I will discuss them separately in section 3.1.3.4.

The subject agreement suffixes used for the different subject endings are shorter than the subject agreement suffixes used with the final verb irrealis subject suffixes but are very similar to the final verb realis subject suffixes. Since repeating subject suffixes for each of the different types of suffixes would greatly increase the size of the charts necessary for listing them, the subject suffixes are all listed together below.

As I mentioned in section 3.1.2, the subject agreement suffixes and the free pronouns are clearly related. In fact, the final irrealis subject agreement suffixes are identical to the free pronouns except that the prenasalization has been shown in the written form. This conforms to the orthography which writes prenasalization in word-medially but not word-initially.

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Table 3-5. Subject agreement suffixes.

Person	Number	Gender	Abbrev.	Medial Different	Final Realis	Final Irrealis
first	singular		1S	wu	wu	wuni
first	dual		1D	na	na	ani
first	plural		1P	mbe	kwa	me
second	singular	masculine	2SM	mé	mé	méni
second	singular	feminine	2SF	nyé	nyé	nyéni
second	dual		2D	mbé	mbé	mbéni
second	plural		2P	ngu	ngu	nguni
third	singular	masculine	3SM	ndé	ndé	ndé
third	singular	feminine	3SF	lé	lé	lé
third	dual		3D	mbé	mbé	mbér
third	plural		3P	nda	nda	ndi

It could easily be argued that the final irrealis subject agreement suffixes are actually free pronouns occurring immediately after the verb, especially since there is no clear phonological break at word boundaries. There are, however, two reasons for rejecting this analysis. The first is that the subject agreement suffix is obligatory after the irrealis final suffixes while occurrences of free pronouns are usually optional. The second is that the presence of the subject agreement suffix clarifies the contrast between homophonous irrealis and medial same-subject suffixes. This analysis also simplifies the description of the verb phrase.

3.1.3.2.1. Medial verb different subject suffixes

Medial verb different subject suffixes not only indicate that the subject of the next clause is different, they also indicate the relationship between the clauses. One of the different subject suffixes indicates coordination and the others indicate subordination. A medial verb different subject suffix is always preceded by a subject agreement suffix. Examples of the usage of medial verb forms are shown below.

(3-13) Gi-ndé-**ka** lé wasa wungi wanji.
tie-3SM-**CONJ** 3SF dog likewise scream
V **DS** PRON N ADV V

'It (a snake) tightened and the dog therefore screamed.'

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These suffix combinations can follow the directional suffixes or may attach directly to the stem. The possible combinations of the different subject suffixes are shown in the chart below.

Table 3-6. Medial verb different subject suffixes.

Position			Abbreviation	Description
First	Second	Third		
na	subject agreement suffixes	t	DES	Desire and Conditional
–		t	COND	Conditional
–		te	FUTPUR	Future purpose
–		mboka	NEGPUR	Negative purpose, 'lest'
–		ka	CONJ	Simple conjunction, 'and'

The Desire suffix *-na* is rare and only occurs in conjunction with the Conditional suffix *-t*. It expresses the idea of wanting to do and, with the Conditional suffix, occurs on the independent clause of if-then sentences. As with all of the different subject suffixes, the subject of the following verb, in this case the 'then' clause, is different from the subject of the verb marked with this suffix. The Desire suffix is shown in the sentence below.

(3-14) Méni saiké xé-**na**-mé-t wuni ya hore-wu-t
2SM cassowary see-**DES**-2SM-COND 1S come bring-1S-COND
PRON N V **DS** PRON V V DS

méni xé.
2SM see
PRON V

'If you want to look at the cassowary, I'll go get it and hold it so that you can look.'

The Conditional suffix is also used by itself to express an if-then clause dependency. The conditional clause normally occurs first in the sentence. Two examples of sentences containing the conditional suffix are shown below.

(3-15) Méni baka yi-mé-**t** bu wuni male suku yata-wu.
2SM worthless go-2SM-**COND** then 1stSg only morota carry-1S
PRON ADJ V **DS** CONJ PRON INT N V

'If you go empty-handed then I alone will carry morota.'

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(3-16) Sa-njoka héléké ya-nda-**t** méni-ka waré hwe-ta-wuni.
eat-PUR not.like come-3P-**COND** 2SM-FOR go.up give-INT-1S
V V V **DS** PRON V V

'If they don't want to eat, I'll go up and give it to you.'

The Future Purpose and Negative Purpose suffixes are related semantically and can be easily substituted for one another in the sentence, though with opposite meanings. In the two sentences below these two suffixes occur in the same environment.

(3-17) Wali giya-ndé-**te** di huru.
rain to.rain-3SM-**FUTPUR** 3P do
N V **DS** PRON V

'They did it (hit slit gong) so rain will come down.'

(3-18) Wali giya-ndé-**mboka** di huru
rain to.rain-3SM-**NEGPUR** 3P do
N V **DS** PRON V

'They did it (hit slit gong) lest rain come down.'

While I have identified the suffix *-te* as the future purpose suffix, it would be more correct to say that when it occurs after a subject agreement suffix it functions as the future purpose suffix. The same form, *-te*, is used in the future tense suffix and the future relativizer where it occurs without or before the subject suffix, respectively. In all three of these uses the suffix maintains the notion of future tense and the position of the suffix adds further grammatical meaning.

The last of the different subject suffixes functions as a simple conjunction. Since there is no way of saying 'because' in Hanga Hundi, this suffix is also used in cause-result sentences. As can be seen in the examples below, this suffix is best translated as 'and'.

(3-19) Yi-na-**ka** di apwi sékéra.
go-1D-**CONJ** 3P bird fly.away
V **DS** PRON N V

'We went (cause) and the birds scattered (result).'

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(3-20) Sékéra-nda-**ka** wuni wa, "Wu mapa wana."
fly.away-3P-**CONJ** 1S talk "that possum perhaps"
V **DS** PRON V "DEM N ADV"

'They scattered (cause) and I said (result), "Oh a possum perhaps."

3.1.3.2.2. Medial verb same subject suffixes

As I mentioned earlier, the same subject suffixes differ from the different subject suffixes in that they do not occur with a subject agreement suffix. While they may occur with a directional suffix, they may not occur in combination with any other verb suffix. In addition to this co-occurrence difference, the same subject suffixes also encode some vastly different ideas from the different subject suffixes. The same subject suffixes are shown in the chart below.

Table 3-7. Medial verb same subject suffixes.

Suffix	Abbreviation	Description
ta	SIM	Simultaneous action, 'while'
e, a	NSQ	Non-sequential action, 'and'
taka	SEQ	Sequential action, 'and then'
hapi	NEG	Negative, 'not yet'
njoka	PUR	Purpose, 'in order to'
patika, pate	FRUS	Frustration, 'tried to but could not'
wata	IMM	Imminent action, 'when about to'

The first three of the same subject suffixes are primarily concerned with the relative order of events. While it is assumed that the events will be related in chronological order, these suffixes specify whether the events occurred simultaneously, non-sequentially or sequentially. The non-sequential suffix indicates that the time period for the events overlapped but they did not share the same starting and ending point. These three suffixes are very common in everyday speech and in narratives and often occur together in the same sentence, as shown in the examples below.

(3-21) War-**a** wuni mc-mbu hwaa-**ta** wuni hwaké.
go.up-**NSQ** 1S base-LOC lie-**SIM** 1S search
V **SS** PRON N V **SS** PRON V

'I went up and while I lie at the base I searched.'

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(3-22) Huru-**ta** wuni na-**e** huru-wu-ka dé-wa mi wungi tukwe.
do-**SIM** 1S express-**NSQ** do-1S-CONJ 3SM-EMPH tree wungi tukwe.
V **SS** PRON V **SS** V PRON N ADV V

'While holding I thought and I held it (a branch) and this branch likewise broke.'

(3-23) Wa-**taka** wuni hama héra-**e** hura wuni wundé yi-wu, apaka-ré.
talk-**SEQ** 1S bamboo get-**NSQ** hold 1S then go-1S jungle-TO
V **SS** PRON N V **SS** V PRON ADV V N

'I said that and then took the gun and holding it I went, to the jungle.'

(3-24) Wa-**taka** ya-sang-**e** wuni xé wungi hwa-lé -ka,
talk-**SEQ** come-away.down-**NSQ** 1S see likewise lay-3SF-CONJ
V **SS** V **SS** PRON V ADV V DS

sara hambwe
snake snake
N N

'I said that and then turned and saw lying there a python.'

It is interesting to notice that the simultaneous and non-sequential suffixes cause the lengthening of any low central vowels in the root but the sequential suffix does not. The lengthening property of these suffixes distinguishes the simultaneous suffix from the final verb intentive suffix, which has the same form but does not affect the root vowels.

The Sequential suffix *-taka* is identical in form to the word meaning 'to put'. Abelam shares the same similarity between these two morphemes except that the Abelam form is *-takŋa*. Besides having an identical word and suffix, Abelam also uses this form as a directional suffix meaning 'complete'. As shown in the following examples, it is possible that Hanga Hundi also has this third usage of the form *-taka*, but in many cases this usage can also be explained by the verb root usage of this form.

(3-25) Examples of the completive usage of taka.

huru-taka	samé-taka	pusa-taka	yéna-taka
do-COMPL	cover-COMPL	???-COMPL	deceive-COMPL
'create'	'cover completely'	'kill'	'false (ADJ)'

The same subject negative suffix *-hapi* is unique in its function among the same subject medial suffixes. The sole purpose of the suffix is to encode a negative meaning to a

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medial verb. Since it does not encode any chronological information, it is usually followed by the dummy verb *ya* 'do', which is then suffixed with either a same subject or different subject suffix. Another function that is unique among the same subject suffixes is that *-hapi* is used to form a relative clause, as will be described in section 3.1.3.4. The non-relativizing usage of *-hapi* is shown in the examples below.

(3-26) Xé-**hapi** y-e di wungi té-nda-ka dé, nakémba
see-**NEG** do-NSQ 3P like.that stand-3P-CONJ 3SM another
V **SS** V **SS** PRON ADV V DS PRON QNT

nukwa, wamandu du wundé yandé.
nukwa wamandu du wundé ya -ndé
day white.man man then come-3SM
N N N ADV V

Having not yet seen they stayed like that and he, one day, the white men came.

(3-27) Wali giya-**hapi** ya-ndé-t maket-ré yi-ta-wuni.
rain rain-**NEG** do-3SM-COND market-TO go-INT-1S
N V **SS** V **DS** N V

If it doesn't rain, I'll go to the market.

In addition to the sequence related same subject suffixes, there are also two suffixes that are used on subordinate clauses. The purpose suffix is used on the reason clause of a reason-result sentence and has virtually the same usage as the future purpose different subject suffix, except that it is used when the subject of both clauses is the same. The reason clause normally comes first in the sentence but the clause order can be reversed. When the reason clause follows the result clause, the result clause still receives final verb marking. Examples of the purpose suffix are shown below:

(3-28) Barka rami-ré xiya-**njoka** wuni naki.
ball thorn-TO pierce.hit-**PUR** 1S fasten.throw
N N V **SS** PRON V

'I threw the ball in order to hit the pen.'

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(3-29) Nyéni manji nyéni xéli, wur yati-**njoka**.
2SF fiber.rope 2SF twist bilum weave-**PUR**
PRON N PRON V N V **SS**

'You're twisting the string in order to make a bilum.'

The frustration suffix indicates a failed attempt to complete an action. This suffix has two forms which seem to be freely interchangeable. Examples of the frustration suffix are shown below.

(3-30) Hwaké-**patika** wuni dawi-ré wungi waré
search-**FRUS** 1S top.of.tree-TO likewise go.up
V **SS** PRON N ADV V

'Searching in vain I therefore went up to the top.'

(3-31) Lé-ka du huru-**pate** huru-pate dé yataka-ndé-ka
3SF-POSS man do-**FRUS** do-FRUS 3SM leave -3SM-CONJ
PRON N V **SS** V **SS** PRON V DS

naande léka humbu lépak.
naand -e lé -ka humbu lépak
go.down-NSQ 3SF-POSS head remove.head
V SS PRON N V

'Her man tried in vain to hold her and lost her and she went down and her head was removed.'

The imminent action same subject suffix gives information about the relative sequence of the clauses and marks a subordinate clause as well. This suffix can best be translated by the phrase, 'When (subject) was about to (action).' This suffix is shown in these examples:

(3-32) Ya-e di yak xiya-**wata**, ya ya-nda-ka dé
come-NSQ 3P enough pierce-**IMM** come come-3P-CONJ 3SM
V SS PRON ADV V **SS** V V DS PRON

dé wuné hurendén wuné sal dé hure.
dé wuné hure -ndé-n wuné sal dé hure
3SM that bring-3SM-RELPST that salt 3SM bring
PRON DEM N DEM N PRON V

'They came and they, enough, they were about to shoot and they came and he, that stuff he carried, he brought that salt.'

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(3-33) Xé-taka ya-e dé wa, "Waku hiya-**wata** yingi
see-SEQ come-NSQ 3SM talk "Waku die-**IMM** like.what
V SS V SS PRON V "N V **SS** WH

dé wa?"
3SM talk"
PRON V"

'He saw them and said, "When Waku was about to die what did he say?"
'

3.1.3.2.3. Constraints on same versus different

While many languages mark the medial verbs with suffixes indicating whether the following subject is the same or different, there is some variation among languages as to what constitutes being the same subject. All languages agree that 'he' and 'I' are different subjects but when either of these, or both, are combined and become part of 'we' it is not universally clear whether these are the same subject or not. In Hanga Hundi the subjects are considered to be the same if there is a logical overlap of both person and event. Also, the use of the conditional suffix seems to create a preference for marking subjects as being different; this is probably motivated by the fact that no conditional suffix exists for a same subject medial verb.

The example below illustrates many of the observations mentioned above. The sentence starts out with a verb marked as same subject non-sequential action that is followed by a subject pronoun indicating a first person dual subject. The subject of the next verb, however, is actually a first person singular; a shift from 'we two' to 'I'. Within the quote, the conditional marker on *remét* signals the change of subject from second person singular to first person singular, where there is no overlap of person. The following verb, *hérawut*, is also marked for a conditional with change, of subject but in this case the first person singular subject is part of the first person dual subject of the final verb; however, there is no overlap of event.

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(3-34) War-a ani dé-ré wa, "Sé nandé ambu re-mé-t
go.up-NSQ 1D 3SM-TO talk "IMP2 go.down here sits-2SM-COND
V SS PRON PRON V "ADV V DEM V DS

bu, wuni sape yar héra-wu-t bu yi-na."
PERF 1S can machete get-1S-COND PERF go-1D"
ADV PRON ADV N V DS ADV V"

We went up and said to him, "If you sit here then I can get my machete and we will go."

In the example below the same subject marking allows a subject change from first person plural to third person plural but the different subject marker is used to switch back to first person plural. The use of same subject suffixes on *ware* and *giya* indicates that the subject of *yatandaka* was involved in these events as well. The use of a different subject suffix on *yatandaka*, though there is overlap in person and event, may simply be the author's way to indicate that he was not one of those who carried the pig, even though they all came down together.

(3-35) War-e giy-a yata-nda-ka me wundé gaya-kwa.
go.up-NSQ bind-NSQ carry-3P-CONJ 1P then comedown-1P
V SS V SS V DS PRON ADV V

'We went up and tied it and they carried (the pig) and we came down.'

3.1.3.3. Final verb suffixes

As mentioned in the subject suffix chart, the final verb suffixes can be broken down into two main divisions, the realis suffixes and the irrealis suffixes. The realis suffixes are used for an event that has either occurred already or is certain to occur when some conditional circumstances are met. The irrealis suffixes, on the other hand, are used for an event that has not occurred. In addition to these two types of suffixes, there is also a future tense suffix that is normally used in procedural narratives.

3.1.3.3.1. Realis suffixes

Usually a realis subject agreement suffix is attached to the verb stem without any other suffixes, in which case it communicates a simple past tense. Its meaning is then

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clarified by adding a tense adverb to the verb phrase. The adverbs shown in this chart also have meanings that can be separated from their function with the realis suffixes. Both *wundé* 'then' and *andé* 'now' have deictic usages while *bu* is used as a conjunction following a conditional suffix. In addition to the realis subject agreement suffixes, the imperfect aspect suffix and the dubitative modal suffix can also be attached to the verb. In the chart below I have shown the possible combinations of adverbs and realis suffixes.

Table 3-8. Final verb realis suffixes and tense adverbs.

Tense adverb	Suffix position relative to stem			Meaning
	1st	2nd	3rd	
wundé (past)	–	subject agreement suffixes	Ø (perfective)	Past perfective tense, 'did'
bu (perfect)				Present perfect tense, 'has done'
andé (present)				Recent past tense, 'just now did'
andé (present)			-i 'IMPF'	Present progressive tense, 'is doing'
–	-ké 'DUB'			Present dubitative, 'may do'

The major distinction in this chart is that the suffixes carry primarily aspect and modal information while the adverbs communicate tense information. There is a three-way tense distinction: Past, an event that was initiated and terminated in the past; perfect, a completed action with ongoing effects; and present, an event which overlaps current time. The realis subject agreement suffixes communicate perfective aspect unless they are followed by *-i*, which communicates imperfective aspect. In addition to the aspect distinction allowed by these suffixes, the modal suffix *-ké* also allows for an uncertain present tense.

The most common of the tense combinations shown above is the past perfective tense. This tense is used frequently in narratives and the use of the adverb seems to be primarily dictated by discourse considerations. Usually the adverb is immediately before the verb but in some cases a verb marked with the same subject simultaneous or non-sequential suffix may come between the adverb and the verb. Some examples of the past perfective tense are shown below.

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(3-36) Hawe sa-taka lé **wundé** yi-ta té-**lé**.
grub eat-SEQ 3SF **then** go-SIM stand-**3SF**
N V SS PRON **ADV** V SS V **(realis)**

'She ate and continued on her way.'

(3-37) Xé-taka ani **wundé** buyawura-**na** wu-mba xéri.
see-SEQ 1D **then** ford-**1D** that-LOC river
V PRON **ADV** V **(realis)** ADJ N

'We saw it and then we waded across this river.'

The adverb *bu* is homophonous with a clause level conjunction. When used as an adverb it usually follows a pronoun and encodes a past event with continuing effects in the present, the present perfect tense. The conjunctive function always follows a verb, usually one marked with the conditional suffix, and encodes a necessary condition. The conjoining usage of *bu* is shown in the first two examples below and the adverbial usage in examples (3-40) and (3-41).

(3-38) Yar héra-e hura **bu** yi-**na** suku -ka.
machete get-NSQ hold **then** go-**1D** morota-FOR
N V SS V **CONJ** V **(realis)** N

'Get your machete and hold it and then we (will) go for morota.'

(3-39) Héki xiya-e **bu** tu-**na**.
yam hit-NSQ **then** roast-**1D**
N V **CONJ** V **(realis)**

'I'm hitting the yam and then we (will) cook it.'

(3-40) També re-kwa dé, némbuli **bu** wa-**wu**.
piece sit-RELPRES 3SM shortly **PERF** talk-**1S**
N V PRON ADV **ADV** V **(realis)**

'Part (of the story) sits there, now I have talked.'

(3-41) Méni **bu** ya-**mé**.
2SM **PERF** come-**2SM**
PRON **ADV** V **(realis)**

'You have come.'

The third adverb that frequently occurs with the realis subject suffixes is the present tense adverb *andé* 'now'. It most often occurs in combination with the imperfective aspect

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suffix *-i*, in which case the clause is expressing the present progressive tense, an event that is currently in progress. When the present tense adverb occurs with only the realis subject agreement suffix it indicates the recent past tense, which is either a very recent past or an unending past event. Examples of the present progressive and the recent past tense constructions are shown below.

(3-42) Té-nda-ka wuni **andé** yaang-**e** ya-**w-i.**
stand-3P-CONJ 1S **now** runaway-**NSQ** come-**1S-IMPF**
V DS PRON **ADV** V SS V"

'They were there and I am running away and coming.'

(3-43) Némbuli hula yaré-mbu **andé** huru-**kwa-i.**
shortly hatchet machete-LOC **now** do-**1P-IMPF**
ADV N N **ADV** V

'Now we use hatchets.'

(3-44) Yak, wu-na gamba xé-wu-n-éngala-ka **andé** sapé **-wu.**
enough 1S-POSS ghost see-1S-RELPST-LIKE-FOR **now** story-**1S**
ADV POSS N N **ADV** V **(realis)**

'Enough, I now told my story about how I saw a demon.'

(3-45) xaku-ndé-ka némbuli atépék lo yak **andé** xaku-**ndé.**
come.upon-3SM-CONJ shortly all law enough **now** come.upon-**3SM**
V ADV QNT N EXCL **ADV** V **(realis)**

'... came up and shortly all law now commenced.'

Besides the cases shown above where a realis subject agreement suffix occurs with a tense indicating adverb, the realis subject agreement suffixes often occur in imperative clauses or following a conditional clause. Occasionally the realis subject agreement suffixes are used in independent clauses without any adverbs. In all of these cases, the realis subject agreement suffix adds definiteness to the meaning of the clause. Below, the realis subject agreement suffixes are shown with an imperative in the first and second examples, after a conditional in the third and fourth, and the final example shows the realis suffix with a comparative adverb.

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(3-46) Ani-ka **mé** hwe sa-**na**.
1D-FOR **IMP** give eat-**1D(realis)**
PRON PART V V

'Give it to us and we'll eat it.'

(3-47) dé angi wa **"Mé** xiya-**kwa."**
3SM like.this talk **"IMP** hit-**1P(realis)"**
PRON DEM V "PART V"

'... and he said this, "Let's shoot."

(3-48) Xak-a taka-mé-**t** suku huru-**wu**
place-NSQ put -2SM-**COND** morota do -**1S(realis)**
V SS V DS N V"

'If you heap and put it on, I will do the morota.'

(3-49) Wuni-ré hali huré-mé-**t** yikapi xaku-**wu,** Got-na maka-mbu."
1S-TO touch do-2SM-**COND** good come.upon-**1S** God-POSS face-LOC"
PRON V V DS ADJ V N N

'... if you touch me, I will become well in God's eyes.'

(3-50) Wun ikapre hundi hanjambu Got-na jémba huru du wapwi
that good speech earlier God-POSS work do man disclose
DEM ADJ N ADV N N V N V

puka-e wa-nda-n hundi wungi yataka-**nda**
break-NSQ talk-3P-RELPST speech like.that leave-**3P**
V SS N N ADV V **(realis)**

'This good message that the workmen of God had revealed before they likewise abandoned.'

The final construction using the realis subject suffixes is the present dubitative. This construction is very similar in usage to the irrealis dubitative construction, which is described in the next section, and is nearly identical in meaning when used in questions. These constructions differ, however, in which subject agreement suffixes they use and in the fact that the present dubitative is not used for prohibition, as is the irrealis dubitative. In the first example that follows, the present dubitative construction was used in a rhetorical question to ask about an event, a wedding, that was in progress. The meaning is somewhat sarcastic, 'To what man can we give this woman?'. In the second example the irrealis dubitative is used in a more

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literal way. The speaker is out of supplies, has just had several guests arrive and wonders out loud, 'What could I possibly give them?'

(3-51) Hélé takwa wa-na héndé du-ré wana hwe-**ké-kw-e**
who woman talk-1D who man-TO perhaps give-**DUB-1P-IMPF**
N N V WH N ADV V **(realis)**

'Who is this woman? To what man can we give her?'

(3-52) Méta-ré hwe-**k-uni**?
what-TO give-**DUB-1S(irrealis)**
WH V

'What could I give?'

3.1.3.3.2. Irrealis suffixes

The irrealis subject agreement suffixes, which were listed earlier in table 3-5, are not only longer than their realis counterparts but also differ from them syntactically in that they must co-occur with other suffixes. As can be seen in the following chart, the irrealis subject agreement suffixes are added to the verb after one of the irrealis mood suffixes. The adverbs are optional with the irrealis mood suffixes.

Table 3-9. The irrealis mood suffixes

Adverb/ Particle	Position 1st	Position 2nd	Meaning
andé 'now'	ta	subject agreement suffixes	Intentive, 'intend to' (INT)
yamba 'do not'	ké		Dubitative, 'do not' or 'how can?' (DUB)
–	hamba		Negative, 'did not' (NEG)

The most common of the irrealis suffix combinations involves the intentive suffix. The intentive construction is used in either independent clauses or after a conditional clause. The intentive suffix *-ta* is homophonous with the same subject simultaneous suffix, but differs from it in that the intentive suffix requires an irrealis subject agreement suffix and usually occurs on the last verb in the sentence. The present tense adverb *andé* 'near' may be used with the intentive to add immediacy to the meaning. Examples of the intentive suffix are shown below.

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(3-53) Wuni hupu yi-**ta-wuni**
1S jungle go-**INT-1S(IRR)**
PRON N V

'I want to go to the bush.'

(3-54) Wa-nda-n gwar **andé** wa-**ta-wuni.**
talk-3P-RELPST song **now** talk-**INT-1S(IRR)**
N N **ADV** V

'I want to sing the song they sang now.'

(3-55) Di Hopni hura té-nda-t bu ani hapu yi-**ta-ani.**
3P Hophni hold stand-3P-COND then 1D INT go-**INT-1D(IRR)**
PRON N V V CONJ PRON PART V

'If they hold Hopni and stay we ourselves will go.'

(3-56) Hélék wuni y-e hupu yi-njoka, yi-wu-t gamba
not.like 1S do-NSQ jungle go-PUR go-1S-COND ghost
V PRON V SS N V SS V SS N

wuni-ré xiya-**ta-lé.**
1S-TO hit-**INT-3SF**
PRON V

'I don't want to go to the jungle; if I go the demon will hit me.'

As mentioned in the previous section, the irrealis dubitative suffix is very similar to the present dubitative realis suffix. When it is in a statement without the prohibitive particle it has the same meaning as a mild negative command. When it is accompanied by the prohibitive particle *yamba*, the meaning becomes stronger, as in 'you are not able to' or 'you are not permitted to.' This suffix is also used in questions which are not necessarily negatively biased. One example of each of these uses of the dubitative suffix is shown below.

(3-57) Wa-na-ka dé angi wa, "Roo-**ké-mbéni**"
talk-1D-CONJ 3SM like.this talk "fear-**DUB-2D(IRR)**"
V DS PRON DEM V "V"

'We said (that) and he said this, "Don't fear." '

(3-58) Wali **yamba** giya-**ké-ndé.**
rain **prohibit** to.rain-**DUB-3SM**
N PART V

'The rain can't come down (its sunny out).'

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(3-59) Métaki ya-**ké**-me?
how do-**DUB**-1P
ADV V

'What will we do?'

The last irrealis suffix is the negative suffix. It usually occurs with an irrealis subject agreement suffix but not always. If the negative clause is repeated, the subject agreement suffix is often left off of the second clause. This suffix differs from the medial verb negative suffix in that it appears on a final verb and cannot be used as a relativizer. Examples of the negative suffix are shown below.

(3-60) Wali giya-**hamba**.
rain rain-**NEG**
N V

'It isn't raining (rain isn't coming down).'

(3-61) Hwe-lé-ka bér sa-**hamba**-mbér.
give-3SF-CONJ 3D eat-**NEG**-3D
V DS PRON V

'She gave (it to them) but they didn't eat it.'

3.1.3.3.3. Future tense suffix

The use of the future tense is usually restricted to events that are based on a sequence, as in a procedural discourse, or to an event that is imminent. The future tense suffix occurs by itself on the last verb in the sentence. It often occurs after a verb marked with a same subject suffix or after a verb marked with the different subject conditional suffix. This suffix can be used in questions when the action of the verb is imminent. An example of each of these uses is shown below.

(3-62) Hawi hura wuni wungi yi-**te**.
hammer hold 1S like.that go-**FUT**
N V PRON ADV V

'Holding the sago hammer I will therefore go.'

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(3-63) Noo xéli-wu-t dé xakri-**te**.
sago fell-1S-COND 3SM fall-**FUT**
N V DS PRON V

'When I finish cutting it, it will fall.'

(3-64) Méni yingi-ré yi-**te**?
2SM like.what-TO go-**FUT**
PRON WH V

'Where will you go?'

3.1.3.4. Relativizing suffixes

Hanga Hundi allows a wide variety of case roles to be relativized. There is some variation in the use of the relativizing suffix combinations but their use generally follows that shown in the chart below. It is rare for the present tense subject relativizer *-kwa* to be used for an object and also rare for the past tense object relativizer *-n* to be used for a subject. The suffix shown in the fourth position is optional and is used most often to stress the manner in which the event occurred. Besides the suffixes shown below, all of the relativizers that can be modified with the *-ngala* suffix can also accept the noun phrase clitics, either in addition to *-ngala* or instead of it. When a verb is relativized for the event with focus on the manner it is usually suffixed with *-ngala* 'like', and when a verb is relativized for location it is usually suffixed with the clitic *-mbu* 'at or on'.

Table 3-10. Relativizing suffixes.

Semantic Role	Tense	Position			
		1st	2nd	3rd	4th
Instrument	Present	–	–	–	–
Subject	Present	-kwa			
	Negative Present	-hapi			
	Past	–	Medial Verb Subject Suffix		
	Habitual	–		-ka	
Object, the Event, Location, or Time	Present	–		-ka	
	Past	–		-n	-ngala 'like'
	Future	-te		-ka	

The most common relativizing affixes are shown in the examples below. Example 3-65 shows the present tense relativized subject suffix *-kwa* in a relative clause that modifies

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a noun. Example 3-66 shows the suffix *-n* used to nominalize a clause in past tense. The relative clause in 3-66 is clearly nominalized because the final suffix, *-ka* 'for', is a post-position which normally attaches to the last element of a noun phrase.

(3-65) Dé kar huru-**kwa** du dé.
3SM car do-**RELPRES** man 3SM
PRON N V N PRON

'He is a car driving man.'

(3-66) Ya-ndé-ka wuni yak, lé -ré wundé sapé -wu gamba
do-3SM-DS 1S enough 3SF-TO then recount-1S ghost
V PRON ADV PRON ADV V N

hura-lé-n-**éngala**-ka.
hold-3SF-**RELPST-LIKE**-FOR
N

'It did that and I, enough, I recounted to her about how the demon held (me).'

Since there is no marking at all on the verb when the instrument is relativized, it could be argued that this is actually a form of compounding. Unlike other examples of compounding, however, this construction is very productive and can be used to relativize any regularly used instrument. Some examples of a relativized instrument are shown below.

(3-67) Nak géli waka hayé joo.
a dark design write stuff
QNT ADJ N V N

'One blue writing thing (pen).'

(3-68) Wuni mi saawi xé gukanyi-ka sapé-ta-wuni.
1S tree face see mirror-FOR story-INT-1S
PRON N N V N V

'I want to tell about a face seeing mirror.'

The present tense subject relativizing suffix also includes the idea of the habitual. It is probably best translated as 'one who does ...' This suffix is homophonous with the first person plural realis subject agreement suffix but there is no correspondence in meaning. Examples 3-65 and 3-69 demonstrate the use of the present tense relativizing suffix.

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(3-69) Ani wundé nandi-na xéri ré xéri-mbu re-**kwa** du
1D then go.down-1D river-TO river-LOC sits-**RELPRES** man
PRON ADV V N N ADJ N

takwa saawi xé-te.
woman face see-FUT
N N V

'We went down to the river to see the people who stay by the river.'

The negative present subject relativizing suffix *-hapi* is homophonous with the same subject negation suffix. When used as a relativizing suffix, it causes the clause to function as an adjective. It is frequently used in a copulative clause, as shown in the first example below. It is also used as part of the noun phrase in an active clause, as in the second example.

(3-70) Taitus tin pis sa-**hapi** dé
Taitus can fish eat-**NEG** 3SM
N [N N V]ADJ PRON

Taitus is one who doesn't usually eat canned fish.

(3-71) Méta maki xékélelaki du xékélelaki-**hapi** du mauli saréké-**hapi**
what kind know man know-**NEG** man heart think-**NEG**
WH ADJ V N V N N V

wungi maki du xakéngali hura me re, nak nak.
like.that kind man distress hold 1stPl sits a a
ADV ADJ N N V PRON V QNT QNT

'Whatever kind of wise man or foolish man or a man without concerns, we each have our distresses, each one.'

Unlike the present tense subject relativizer *-kwa*, the suffixes used for the past tense relativized subject are simply the realis subject agreement suffixes. However, when used in a relative clause these suffixes are never accompanied by an adverb. Also, when this form precedes a word starting with /n/, including a coronal prenasalized consonant, it is difficult to distinguish is from the past tense object relativizer, which uses the same subject agreement suffixes with the suffix *-n*. Some examples of a relativized past tense subject are shown below.

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(3-72) Marasin nyéréké-**ndé** baa dé yikapre ya.
medecine swallow-**3SM** this.one 3SM good do
[N V]ADJ PRON PRON ADJ V

'The one who swallowed the medicine became well.'

(3-73) Wungi wa-taka dé hiya-**ndé** du-na jikamba husén-e ...
like.that talk-SEQ 3SM die -**3SM** man-POSS throat force.open-NSQ
ADV V SS PRON [V]ADJ POSS N V SS

'He said that and then he opened the dead man's mouth and ...'

The relativized habitual subject construction has the same form as a medial verb with the different subject suffix *-ka* except that the following word is always *dé*. As the first example shows, the final pronoun is part of the relativizing structure and does not agree with the subject of the sentence.

(3-74) Wuni wulay té-wu-**ka** dé.
1S go.in stand-1S-**HAB** 3SM
PRON [V V]ADJ PRON

'I am one who usually enters and stays.'

(3-75) Mi tapwukwati hwa-ndé-**ka** dé.
tree float lay-3SM-**HAB** 3SM
N [V V]ADJ PRON

'Wood is something that usually lays floating (on water).'

The present tense relativized object form is also similar to a medial verb marked with the different subject suffix *-ka*. Unlike the habitual subject construction shown above, this construction does not require a following third person pronoun. It usually precedes or follows the noun it modifies. Examples of this construction are shown below.

(3-76) Nak nyama bandi-ka hungali-mbu wa-mbe-**ka**
a older.brother younger.sibling-FOR back-LOC talk-1P-**RELPRES**
[QNT N N N V]ADJ

hundi, haraki hundi wa-mbe-**ka** mé yataka.
speech bad speech talk-1P-**RELPRES** IMP leave
N [ADJ N V:ADJ]NP PART V

'The talk a brother says behind the back of his brother, the bad things we say, leave them behind.'

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The past tense relativized object construction, along with the present tense relativized subject construction described above, is one of the most common and easily recognized relativizing constructions. The suffix *-n* distinguishes it from a final realis verb, and it usually precedes or follows the noun it modifies.

(3-77) Wuni day-a rémbwi-wu-**n** noo -ka xé-ta-wuni.
1S go.down-NSQ make.blind-1S-**RELPST** sago-FOR see-INT-1S
PRON V [V]ADJ N V

'I want to go down and see the sago blind I made.'

(3-78) Wuni ale xiya-wu-**n** sayké-ré xiyapuka-ta-wuni.
1stSg this.fem hit-1S-**RELPST** cassowary-TO kill-INT-1S
PRON DEM [V]ADJ N V

'I want to finish off that cassowary I shot.'

The future tense relativized object uses suffixes that are found in other constructions, but the order of the suffixes is unique to this construction. The future tense suffix *-te* occurs without a subject suffix on a future tense verb and after the subject suffix in the different subject purpose construction. This construction, along with the habitual subject and the present tense object relativizers, also uses the different subject suffix *-ka* following a subject suffix. Some examples are shown below.

(3-79) Sapé-**te-wu-ka** hundi némbule nukwa yi-na-n-éngala.
story-**FUT-1S-CONJ** speech recently day go-1D-RELPST-LIKE
V **RELFUT** N ADV N N

'This story that I will tell is about where we went today.'

(3-80) Némbuli ané-mba ganémba wa-**te-wu-ka** hundi, yak
shortly this-LOC morning talk-**FUT-1S-CONJ** speech enough
ADV ADJ N V **RELFUT** N ADV

andu xi, xi-ka wuni wa.
this.one spear spear-FOR 1stSg talk
DEM N N PRON V

'The talk I will say on this morning, enough, this spear, I talk about the spear.'

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In some cases the purpose of relativizing the verb is to nominalize the entire predicate without any focus on the subject or object. This type of relativization uses the same suffix combinations as the object relativizers but its function resembles the English present participle. Nominalization is only performed by the suffix combinations which accept *-ka* or *-n* in the third position, as described in table 3-10. The suffixes *-kwa* and *-hapi* are never used for nominalization. This type of relativization can occur in past, present and future tense but it is most common in the past tense. Some examples of this type of nominalized verb are shown below.

(3-81) Got-na hundi lotu ya-mbe-**ka**-ka dé wa.
God-POSS speech worship come-1P-**RELPRES**-ABOUT 3SM talk
N N **[N:Obj V]NP:Obj** PRON V

'God's word talks about doing worship.'

(3-82) Wuni aplatak-naré Josep wali yi-na-**n**-éngala sapé -ta -wuni
1S Aplatak-TO Joseph with go-1D-**RELPST**-LIKE story-INT-1S
PRON **[N** **N** **V** **V]NP:Obj** V

'I want to tell about having gone to Aplatak with Joseph.'

(3-83) Wu-mba huli ge to-ndé-**n**-na jémbwa bu hényi
that-LOC new house build-3SM-**RELPST**-POSS work PERF finish
ADJ **[ADJ N** **V]NP+POSS** N ADV V

'This work of him building a new house is finished.'

(3-84) Wa-mé-ka mé-na haki wambula dé wae wa-mé-**ka-ngala.**
talk-2SM-CONJ 2SM-POSS shadow again 3SM yell talk-2SM-**RELPRES-LIKE**
V POSS N ADV PRON V **[V]ADJ**

'When you talk your echo again yells as you yelled.'

The object relativizing constructions can also be used to relativize the location of the event. This type of relativized verb usually precedes a noun that is marked by the locative clitic *-mbu*. Some examples of a relativized location are shown below.

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(3-85) Patika wuni wa "Mé yi-wu gamba té-lé-**ka** hapa-**mbu**.
do.in.vain 1S talk "IMP go-1S ghost stand-3SF-**RELPRES** place-**LOC**
ADV PRON V "PART V **[N V]ADJ:LOC** N

Hopelessly I said (to myself), "Go to the place where the demon stands."

(3-86) Waré-wu-ka lé-wa hambwe ya-e lé-wa
go.up-1S-CONJ 3SF-THIS snake come-NSQ 3SF-THIS
V PRON N V SS PRON

waré-wu-**n** yambu-**mbu** lé wungi hwa.
go.up-1S-**RELPST** path-**LOC** 3SF like.that lay
[V]Adj:LOC N PRON ADV V

I went up and this snake came and likewise laid on the path I had gone up.

The time of an event can also be relativized using the same combination of suffixes as for relativizing the object. In the examples below, the relativized verb modifies the head noun *nukwa* 'day'. The first example shows this relativization in the past tense and the second in the future tense.

(3-87) Ané wu-na ya-wu-**n** nukwa yambu yétyéti dé.
this 1S-POSS come-1S-**RELPST** day time four 3SM
DEM POSS **[V]NP:Time** N N QNT PRON

This is the fourth time that I've come here.

(3-88) Jisas ya-te-ndé-**ka** nukwa, yak, walémba dé.
Jesus come-FUT-3SM-**RELPRES** day enough near 3SM
N **[V]NP:Time** N ADV N PRON

The day of when Jesus will come, enough, it is close.

3.1.3.5. Imperatives

The imperative markers are not prefixes but they do combine with a limited set of verbs to form words that are not easily broken down into their component parts. There is no clear phonological criterion that determines which verb will take which imperative marker, so it is necessary to propose two classes of verbs to explain their distribution. The normal forms of the imperative marker are shown below.

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Table 3-11. Imperative markers.

	Class 1	Class 2
Normal imperative	mé, ma	sé, sa
Third person imperative	métaka	

The use of these imperatives is illustrated in the examples below.

```
(3-89) Sé  nandé  re!          Mé  sa!          Métaka ya  -ndé
       IMP godown sit          IMP eat          IMP3   come-3SM
       'Sit down!'             'Eat!'           'Let him come!
```

The irregular forms of the imperatives are shown below.

```
(3-90) Sai              Sikwa             Sina
       sa -yi           sé -yi-kwa        sé -yi-na
       IMP-go           IMP-go-1P         IMP-go-1D
       'Go!'            'Let's go!'       'Let's go!'

       Miya             Mekwa             Mena
       mé -ya           ma -yi-kwa        ma -yi-na
       IMP-ya           IMP-go-1P         IMP-go-na
       'Come!'          'Let's go!'       'Let's go!'
```

As was mentioned in section 2.3.2, these phonological alternations are significant in analyzing the phonology of Hanga Hundi but they do not help in determining word boundaries. The imperative markers function as independent words, as demonstrated by the fact that adverbs and pronouns often occur between the imperative marker and the verb, as shown below.

```
(3-91) Sa   guni yi       Mé   bari    ya
       IMP  2P   go       IMP  quickly come
       PART PRON V        PART ADV     V

       'You (pl.) go!'    'Come quickly!'
```

3.2. Derivational

Except for the system of relativizing suffixes, there is no evidence of suffixes or other word pieces that change the part of speech of the word. The verb directional suffixes add to the meaning of the root but do not affect it grammatically. One interesting derivational sequence does exist in the language, however, and that is found in a closed class of modifiers. This family is illustrated in the chart below.

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Table 3-12. The family of demonstratives and adverbs.

Proximal	Distal	Interrogative
a 'this'	wu 'that'	yi 'what'
an, ané 'this'	wun, wuné 'that'	yin 'which'
ambu 'here'	wumbu 'there'	yimbu 'where'
andu 'this here'	wundu 'that there'	yindu 'where is it'
angi 'like this'	wungi 'like that'	yingi 'like what'
andé 'now mas.'	wundé 'then mas.'	yindé 'when'
alé 'near time fem.'	wulé 'compl. time fem.'	
ale 'this one'(fem.)	wule 'that one'(mas.)	
ane 'this one'(mas.)	wune 'that one'(mas.)	
anéke 'this one' (medium distance)	wunéke 'that one' (medium distance)	

As the above chart illustrates, these modifiers are clearly related, and there seems to be some meaning attributable to the component parts. These components are not used on other word classes, however, and so do not participate in a productive derivational process.

There is one suffix that should probably be mentioned in this section. The noun possessor suffix *-na* is also found occasionally on verbs. Since verbs are relativized for the instrument case without any morphology, it seems reasonable to assume that these verbs have been relativized prior to the application of the possessor suffix. This use of the possessor suffix is rare, although it occurs three times in the first example.

(3-92) Atépék haraki saraki sémbut-mbu té-nda-ka dé du
all bad very.bad custom-LOC stand-3P-CONJ 3SM man
QNT ADJ ADJ N V PRON N

xiya-**na** sémbut-mbu, poo-**na**, laku-**na**, yak.
pierce.hit-**POSS** custom-LOC poison-**POSS** sanguma-**POSS** enough
V-POSS N V-POSS V-POSS ADV

They all stood in very bad customs, in the custom of shooting man, of poisoning, of sorcery, enough.

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(3-93) Di atépék ge-na du ya-e di hérangwanda re -ta
3rdPl all house-POSS man come-NSQ 3rdPl meet sits-SIM
PRON QNT N-POSS N V PRON V V

di bulé-ta di hiya-nda-**ka-na** mo -ka di sé.
3P discuss-SIM 3P die-3P-**RELPRES-POSS** base-FOR 3P determine
PRON V PRON V-POSS N PRON V

The men of all the villages came and gathered and sat discussing to determine the reason for the children's illness.

3.3. Clitics

Hanga Hundi clitics are usually attached to the last component of the noun phrase, which is normally a noun or a quantifier.[1] Occasionally, however, the clitics are attached to an abbreviated noun phrase which may contain only an adjective, a demonstrative, or a relativized verb. Because of this, the noun phrase clitics can be found attached to virtually any part of speech. This distinguishes the clitics from the possessor suffix *-na* which is only found attached to nouns, first and second person pronouns, and, infrequently, verbs. A table showing the noun phrase clitics is given below. The list of semantic roles is not intended to be exhaustive, but rather, a brief indication of the range of roles possible for each suffix. The most common role is indicated first.

Table 3-13. Noun phrase clitics.

Clitic	Meaning	Role it indicates
ré	to, toward	Recipient, goal, object
ka	for, about, to	Beneficiery, topic, recipient
mbu	at, on, with	Location, instrument, time

Because these clitics are found in many of the examples that have already been shown in this paper, I will not give examples of them here. They will be discussed further along with the appropriate case roles and grammatical relations in chapter 4.

[1] The noun phrase is described by the rule:
N" → (DEM) (ADJ') N (QNT')

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3.4. Compounding

The most common types of compounding found in Hanga Hundi are between an adjective and a noun or between two nouns. There are also a few examples of a noun and verb being compounded together or two nouns and a verb, but they are much less common. The order of roots in the compound, whether adjective plus noun or noun plus verb, is the same as would be expected in a noun phrase or sentence. Generally the meaning of the compound is related to the component roots but the relationship is not always obvious.

The first set of compound words all consist of an adjective root followed by a noun root. As these examples show, this combination normally produces a noun. The division between the roots is shown by a hyphen, and I have shown the literal and actual meanings.

Table 3-14. Compound words formed by adjective and noun

Word	Literal Meaning	Actual Meaning
aké-hama	'ripe bamboo'	'knife'
apa-ndu	'strong man'	'power'
géli-ndu	'dark man'	'police man'
géli-nyér	'dark sky'	'cloudless sky'
hak-lapu	'ripe banana'	'yellow'
huli-ngu	'fresh water'	'fresh water'
huli-noo	'fresh sago'	'sago powder'
huli-nyinga	'fresh leaf'	'bud'
néma-ndu	'big man'	'leader, lord'
néma-ngu	'big water'	'ocean, bay'
wama-ndu	'white man'	'European, white man'

(3-94) Compound formation #1.

Adj + N → N

The combination of two noun roots is the most common type of compounding. Often the relationship between the roots is that of possessor and possessed, and the result of the compound is a new noun. In this case the possessor usually, but not always, occurs before the possessed noun. In the chart below I have kept the relative order of the roots the same in the literal translation and have added the possessive marking to clarify the relationship between the roots.

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Table 3-15. Compound words formed by possession between two nouns

Word	Literal Meaning	Actual Meaning
apwi-ngék	'bird('s) egg'	'bird's egg'
baki-ngu	'ditch('s) water'	'stream'
ba-tamba	'stick('s) arm'	'branch'
dama-pa	'eye('s) bone'	'nose'
ge-ndu	'house('s) man'	'native'
séra-ngék	'chicken('s) egg'	'chicken's egg'
xéri-hamwi	'river('s) animal'	'fish'
hwiya-ngawu	'fat (of) palm branch'	'pith of palm branch'
hwiya-tamba	'fat (of) arm'	'palm of hand'

(3-95) Compound formation #2.

$N + N \rightarrow N$

In many cases the relationship between the two nouns used in the compound word is not clear. The meaning of the compound is associated with the meaning of the two noun roots but not necessarily in a way that is clear to people from a different culture. As with the previous examples, the result of compounding two nouns is a noun. Examples of the non-possessive noun compounds are shown below.

Table 3-16. Compound words formed by association of two nouns

Word	Literal Meaning	Actual Meaning
du-nge	'man house'	'relatives'
du-takwa	'man woman'	'people'
ge-ndu	'house man'	'native'
ge-tépa	'house coconut'	'village'
gu-njambé	'water platform'	'ship'
hépa-hwanjén	'ground pigeon'	'jewel babbler bird'
hépa-nge	'ground house'	'house on ground'
hépa-nyamwe	'ground dove'	'ground dove'
hunyi-ngu	'salt water'	'clear water'
lotu-nge	'worship house'	'church'
méngi-tamba	'rope arm'	'tendon'
mi-nge	'tree house'	'house on posts'
mo-tépa	'base coconut'	'birthplace'
saik-lapu	'cassowary banana'	'hatchet'
sépi-mali	'skin rib'	'body'
tapu-wur	'limbum string bag'	'limbum basket'
xi-mbali	'spear pig'	'wild pig'

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Another type of compound word is formed by the combination of a noun and a verb. Usually the noun is the object of the verb but occasionally it is the instrument. Whatever the semantic relationship between the roots, the final root apparently determines the word class. Some examples of this type of compounding are shown below.

Table 3-17. Compounds formed by a noun and a verb.

Word	Literal Meaning	Actual Meaning
de-no	'make jelly(v) sago(n)'	'jellied sago'(n)
hasa-hwe	'debt(n) give(v)'	'repay'(v)
hwati-se	'knee(n) plant(v)'	'kneel'(v)
to-mi	'build(v) tree(n)'	'house building wood'(n)
tu-no	'roast(v) sago(n)'	'roasted sago'(n)

(3-96) Compound formation #3.

$N + V \rightarrow V$

(3-97) Compound formation #4.

$V + N \rightarrow N$

The final type of compounding found in Hanga Hundi is when a word is formed by a combination of two nouns and a verb. This type of compounding is much less common than the types mentioned above, and the relationship between the component roots and the aggregate meaning is not always clear. However, these compounds can be produced by a sequential application of the compounding rules that have already been proposed. Examples of this type of compounding are shown below.

Table 3-18. Compounds formed by two nouns and a verb.

Word	Literal Meaning	Actual Meaning
du-hiya-takwa	'man(n) die(v) woman(n)'	'widow'(n)
takwa-hiya-ndu	'woman(n) die(v) man(n)'	'widower'(n)
hépa-kwa-ndu	'earth(n) RELPRES(v) man(n)'	'earth spirit'(n)
mi-kwa-ndu	'tree(n) RELPRES(v) man'(n)	'wood spirit'(n)
hwati-ma-se	'knee(n) leg(n) plant(v)'	'crawl'(v)

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3.5. Reduplication

One type of reduplication found in Hanga Hundi is different from that found in many languages. Often languages will begin the repeat with the first consonant or syllable of the word and perhaps continue through the whole word. In Hanga Hundi the entire word is usually repeated except that the first consonant is often changed. Often, the reduplicated form of the word indicates an intensification of the meaning. The chart below shows some examples of this type of reduplication.

Table 3-19. Reduplication with the first consonant changed

Root	Duplicated form	Gloss
mauli 'like'	mauli mauli	'love'
mauli 'like'	mauli sauli	'be excited about'
bari 'quickly'	bari hari	'very quickly'
haraki 'bad'	haraki saraki	'very bad'
wakwe 'explain'	wakwe sakwe	'show clearly'
yaké 'wash'	yaké naké	'nod'
unknown	yalinga talinga	'shrivel up'
unknown	nurka morka	'edible young coconut'
unknown	hwatukwak latukwak	'go stealthily'

Hanga Hundi also has many examples of other kinds of reduplication. It is far more common in Hanga Hundi for the entire word to be repeated than just a portion of the word. Also, there are many examples where the word no longer occurs by itself, but rather always occurs in the reduplicated form. Some additional examples of reduplication are shown below.

Table 3-20. Additional examples of reduplication.

Root form(s)	Duplicated form
huluki 'grasp'	hulihuluki 'hold tightly'
yéti 'two'	yétyéti 'four'
waki 'footprint'	waki waki 'follow footprints'
rapu 'remove skin'	rapu rapu 'young coconut'
unknown	wakwak 'inner elbow'
unknown	woso woso 'pride'
unknown	pakpak 'wrist'
sa 'eat', kut 'hold'	sasakutkut 'Adam's apple'
yi 'go', ya 'come'	yiyi yaya 'come and go about'

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3.6. Verb serialization

We now leave the word formation processes and turn to the behavior of verbs when they are adjacent to one another. Many Papuan languages report a medial verb form which is totally affix free and which may occur immediately before another verb; these are normally called serial verbs. Serial verbs are normally used when the verbs involved overlap in both subject and time. In Hanga Hundi, however, the verbs serving this function are usually suffixed with a medial verb suffix, even if they occur immediately before another verb. There are a few verbs in Hanga Hundi that do not appear to accept the same subject non-sequential medial verb suffix *-e*, giving the appearance of verb serialization. Often these verbs end with /e/ so it is difficult to say whether they were suffixed or not. Usually these verbs will be suffixed with one of the other same subject suffixes, especially the simultaneous suffix *-ta*. Some of the verbs that do not accept the non-sequential suffix are shown below along with some examples of their unaffixed sentence-medial occurrences.

Table 3-21. Verbs not accepting the non-sequential suffix.

Verb	Meaning
huluki	'grasp'
re	'sit'
roo	'fear'
wakwe	'explain'

(3-98) Wungi xé-taka wambula **roo** yaang-e gwande y-e ...
like.that see-SEQ again fear runaway-NSQ come.in go-NSQ
ADV V SS ADV V V SS V V SS

He saw that and was afraid again and ran away and went outside ...'

(3-99) Nalika trinde ganémba kos y-e **re** wuni raam-a ...
yesterday Wednesday morning course do-NSQ sit 1S get.up-NSQ
ADV N N N V V PRON V

Yesterday Wednesday morning I went to the course and sat and got up and...'

(3-100) di, yak, wama du **huluki** re-ta di
3P enough white man grasp sits-SIM 3P
PRON ADV ADJ N V V SS PRON

'...they sat grasping the white man and they ...'

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3.7. Summary

This chapter has provided a fairly detailed description of the morphology of Hanga Hundi. The most important feature of Hanga Hundi morphology is the subject tracking system that is incorporated in the verbal suffixes. On medial verbs, the switch reference suffixes not only track the subject but also determine the logical and temporal relationship between clauses. On final verbs, the subject agreement suffixes not only mark subject agreement but also determine the modality of the clause, either realis or irrealis. The focus on subject tracking, in both medial and final clauses, also incorporates chronological ordering, interclausal relationships, and modality. The proper use of these suffixes, then, is crucial to understanding Hanga Hundi syntax and discourse.

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4. SYNTAX

4.1. Introduction

The purpose of this chapter is to provide a sketch of the syntax of Hanga Hundi. This sketch will focus on the sentence level and lower structures. Chapter 5 will cover the discourse structures and will also give example texts. The formalisms presented here primarily follow X-bar syntax but the discussion includes comments about the case roles of the noun phrase constituents. I begin by presenting a short interlinearized text, and in the sections that follow I refer to the sentences in this text as examples of Hanga Hundi syntactic structures.

4.2. Sample text

(1) Wuni wu-na wasa-ré duwan hambwe huru-ndé-n-ka sapé-ta-wuni.
1S 1S-POSS dog-TO python snake do-3SM-RELPST-FOR tell-INT-1S

'I want to tell about when a python snake held my dog.'

(2) Hanja wuni wali wu-na takwa wali noo ani yi Pleko-ré.
before 1S with 1S-POSS woman with sago 1D go Pleko-TO

'Before, I went with my wife for sago, to Pleko.'

(3) Y-e wuni noo sék-a rapu wuni wungi bwa.
go-NSQ 1S sago cut.up-NSQ decorticate 1S like.that scrape

'We went and I cut and peeled the sago and therefore scraped it.'

(4) Noo bwa-séke-taka wuni wu-na wasa wakr-e hur-a wuni
sago scrape-ALL-SEQ 1S 1S-POSS dog call-NSQ hold-NSQ 1S

taku-ré wari.
top-TO go.up

'I scraped all the sago and then called and took my dog and I went to the top.'

(5) War-e wuni awu bembe wayi.
go.up-NSQ 1S sago.grove around go.around

'I went up and I went around the sago swamp.'

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(6) Way-a wuni xé néma mi tukwe-e re-ndé-ka dé
go.around-NSQ 1S see big tree break-NSQ sits-3SM-CONJ 3SM

yapa aiwa duwan hambwe dé mi eko-mbu dé té.
father mother python snake 3SM tree inside-LOC 3SM stand

'I went around and saw that a big tree was broken and sitting and the very biggest python snake stood inside it.'

(7) Té-ndé-ka lé wu-na wasa wulay-e yi-lé-ka dé duwan
stand-3SM-CONJ 3SF 1S-POSS dog go.in-NSQ go-3SF-CONJ 3SM python

hambwe wasa-ré wundé huru-ndé.
snake dog-TO then hold-3SM

'It stood and she, my dog, went inside and it, the python snake, grabbed the dog.'

(8) Hur-a dé wundé gi-ndé.
hold-NSQ 3SM then bind-3SM

'It held and it squeezed.'

(9) Gi-ndé-ka lé wasa wungi wanji.
bind-3SM-CONJ 3SF dog like.that scream

'It squeezed and she, the dog, therefore screamed.'

(10) Wanji-lé-ka wuni pétékér-a male y-e y-e y-e
scream-3SF-CONJ 1S run-NSQ only go-NSQ go-NSQ go-NSQ

wuni xé wasa-ré hur-a té-ndé-ka.
1S see dog-TO hold-NSQ stand-3SM-CONJ

'She screamed and I just ran and went and went and I saw it holding the dog and standing.'

(11) Xé-taka wuni wuni akwi yaang-e yi.
see-SEQ 1S 1S also runaway-NSQ go

'I saw and then I, I also ran away and went.'

(12) Wu-na wasa lé wanji-ta male wungi hwa.
1S-POSS dog 3SF scream-SIM only like.that lay

'My dog, she just lay like that screaming.'

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(13) Hwa-lé-ka wuni wu-na wasa-ka sarapa na-e wuni
lay-3SF-CONJ 1S 1S-POSS dog-FOR sorrow express-NSQ 1S

wambula y-e wuni wundé xiya-wu hambwe-ré.
again go-NSQ 1S then hit-1S snake-TO

'She lay and I was sorry for my dog and went again and hit the snake.'

(14) Xiya-e wuni wu-na wasa héra.
hit-NSQ 1S 1S-POSS dog get

'I hit and I got my dog.'

(15) Yak wu-na sapé-wu-n hundi yak.
enough 1S-POSS story-1S-RELPST speech enough

'Enough, my speech that I told is enough.'

4.3. Sentence structure

In Hanga Hundi discourse, sentences rarely contain only one clause. The Hanga Hundi switch reference suffixes, which were discussed in chapter three, section 3.1.3.2, function both as conjunctions and as complementizers. There is only one morphologically free clause level conjunction and this always co-occurs with one of the switch reference suffixes. The switch reference suffixes are concerned with inter-clausal relations and generally do not occur in the last clause of the sentence; for this reason they have been called medial verb suffixes in the description of similar languages (Wilson 1980, Staalsen 1965). The suffixes which communicate tense and aspect usually occur on the last verb of a sentence and have been called final verb suffixes. In example (13) above *hwaléka, nae,* and *ye* are considered medial verbs and *wundé xiyawu* is a verb phrase with a final verb marked for past tense.

The distinction between medial and final verbs is important in Hanga Hundi because homophonous suffixes perform drastically different functions in these two sentences positions. While the distinction is important, the terminology is confusing because the 'final' clause is not always the last clause. In example (10) the 'final' clause is *wuni xé* 'I saw ...' but it is followed by the complement clause *wasaré hura téndéka* '... it holding the dog and

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standing' which is marked with 'medial' verb suffixes. Because of the confusing nature of these terms, this description will adopt the terms used by Foley (1986:183-192); dependent verb for medial verbs, and independent verbs for final verbs.

This section will focus on sentence structure, which includes the simple sentence, conjoined clauses, subordinate clauses, complement clauses, and a note about tail-head linkage. Relative clauses are a special class of dependent clause often using morphology unique to relative clauses. The relative clause morphology is discussed in section 3.1.3.4 and its application to noun phrases is covered in section 4.5.1.

4.3.1. Simple sentence

The simple sentence, or inflectional phrase, typically contains only one clause which is usually marked with an independent, or final, verb suffix. A simple sentence might also contain relative clauses in the noun phrase or post-positional phrase constituents. Because the independent verb suffixes are discussed in chapter three, under the description final verb suffixes, only a brief restatement of their function will be given here. Independent verb suffixes are of two basic types, realis and irrealis. The realis suffixes express past and present tense. The irrealis suffixes express intent, future tense, and negation. In addition, when a verb is unmarked in the final position, it is expressing a simple past tense. For the purpose of generalization, we will represent both the realis and irrealis suffixes with INFL, as shown in the phrase structure rule below.

(R1) Simple Sentence (Inflectional Phrase):

$IP \rightarrow NP\ I'$

$I' \rightarrow VP+INFL$ $\quad INFL \in$ {subject agreement suffixes and independent verb suffixes}

$VP \rightarrow NP\ V'$

Since there are no simple sentences in the sample text, one is illustrated below.

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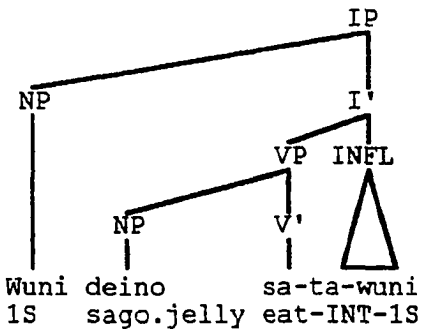

Figure 4-1. Diagram of an inflectional phrase:

4.3.2. Conjoined clauses

A sentence containing conjoined clauses will contain at least one dependent clause and one independent clause. As mentioned earlier, conjoining is usually accomplished through the use of the switch reference suffixes. The suffixes primarily responsible for conjoining are shown in (16) below. A more detailed discussion of these suffixes and their usage is included in chapter three under medial verb morphology.

Table 4-1. Suffixes used for conjoining clauses:

Suffix	Description	Meaning
-ta	Same subject, simultaneous action	'did while ...'
-e / -a	Same subject, non-sequential action	'and ...'
-taka	Same subject, sequential action	'and then ...'
-ka	Different subject, non-sequential action	'and ...'

The suffixes shown above occur multiple times in the sample text, where both *-e/-a* and *-ka* are very common. The simultaneous action suffix *-ta* only occurs in sentence (12) and the sequential suffix *-taka* only occurs in sentences (4) and (11).

As already mentioned, there is also a morphologically free sentence-level conjunction. This conjunction, *bu* 'then', always follows a verb that is suffixed with one of the switch reference suffixes, but not necessarily one of the suffixes shown in table 4-1. In example (4-1) *bu* is used after the non-sequential same subject suffix, and in example (4-2) it is used after the conditional different subject suffix *-t*.

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(4-1) Y-e bu sayké ra-e hur-a bu wungi ya-na.
go-NSQ then cassowary butcher-NSQ hold-NSQ then likewise come-1D"
V SS CONJ V V SS V SS CONJ ADV V"

'We will go and then cut the cassowary and hold it and then likewise come.'

(4-2) Méni jémba yike re-mé-t bu bulé-na.
2SM work not_know sits-2SM-COND then talk.about-1D
PRON N V V DS CONJ V

'If you don't have any work then we can talk.'

All of these suffixes, and the free conjunction, occur either as the final suffix on the verb or as the final element of the clause. As the last element of the clause, they are also between the two clauses that are being conjoined. Also, these suffixes encode subject agreement between clauses as well as information about the temporal relationship between clauses. For these reasons, they will be treated as a form of complementizer in a complementizer phrase. The phrase structure rules will now be expanded to include the complementizer phrase as follows:

(R1) Simple Sentence (Inflectional Phrase):

IP → NP I'

I' → VP+INFL INFL ∈ {subject agreement suffixes and independent verb suffixes}

VP → NP V'

(R2) Complementizer Phrase

CP → C' SPEC SPEC = undetermined

(R3) C' → IP COMP COMP ∈ {dependent verb conjoining suffixes}

A good example of a complementizer phrase, as defined in this section, is included in sentence (3) of the sample text. This complementizer phrase is diagrammed below.

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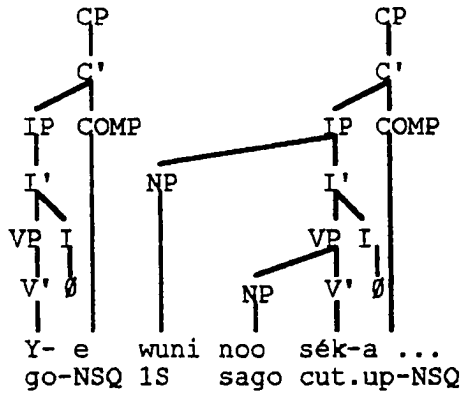

Figure 4-2. Diagram of a complementizer phrase (from sample sentence #3):

4.3.3. Dependent clauses

The sentences containing dependent clauses are very similar in structure to the conjoined clauses described above. The dependent clauses usually precede the independent, or final, clause and are also formed through the use of one of the switch reference suffixes. These suffixes are uncommon in narrative texts and no examples occur in the sample text included in this chapter. However, each of these suffixes is explained in greater detail in section 3.1.3.2. The switch reference markers that are used for dependent clauses are shown below.

Table 4-2. Dependent clause forming suffixes:

Suffix	Description	Meaning
-njoka	Same subject purpose	'In order to ...'
-mboka	Different subject negative purpose	'Lest ...'
-t (... bu)	Different subject conditional	'If ... (then) ...'
-te	Different subject future conditional	'If ... will ... '

There is apparently no syntactic difference between dependent clauses and conjoined clauses. It seems unnecessary, then, to propose different phrase structure rules. We will merely revise rule three so that it expresses both cases.

(R3.1) C' $\rightarrow$ IP COMP COMP $\in$ {dependent verb suffixes}

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4.3.4. Complement clauses

Complement clauses would be better described as complement sentences since they often include more than one clause. Example (6) of our text shows a complement sentence with three internal verbs, *tukwee*, *rendéka*, and *té*. A complement sentence functions as the object of the verb in the independent clause and usually occurs after the independent verb. When the complement sentence contains only one verb, that verb is usually marked with the different subject non-sequential suffix *-ka*. However, it is possible for a complement sentence to contain only a verb that is marked as an independent verb. In example (4-3), the complement clause *wasa bu hiya* is inflected for past imperfect tense, an independent verb inflection. In example (4-4), the verb phrase in the complement clause, *wundé sanda*, is inflected for past perfect tense, again, an independent verb inflection.

(4-3) Raapw-e lé xé wasa bu hiya.
uncover-NSQ 3SF see dog PERF die
[VP] SS [NP(SU) V **[NP(SU) [VP:ADV V]]**]

'She opened (it) and she saw the dog was dead.'

(4-4) Ya-e di xé wumbére nyan yéti-ré gamba wundé sa -nda
come-NSQ 3P see these.2 child two -TO ghost then eat-3P
[VP SS [NP(SU) V **[[[NP:DEM N QNT]-POST] [NP(SU)] [VP:ADV V+TNS]]**

'They came and they saw the ghosts ate these two children.'

Another type of sentence that also follows the same general format as these complement clauses is that of reported speech. When a quotation is given in a sentence it is usually preceded by a speech verb, which also functions as the independent clause. An example of a quotation sentence is shown below.

(4-5) Hwa-e wuni gan Jochebet-ér wa "Nyangwal sépélak di ya."
lay-NSQ 1S night Jochebet-TO talk "children plenty 3P come
V PRON N N V "N QNT PRON V

'We slept and at night I said to Jochebet, "Plenty of children came."'

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A quotation differs from a complement sentence in that a quotation can contain several sentences, while a complement sentence is limited to several clauses combined into one sentence. Quotation and complement sentences are alike, however, in that it is usually the independent verb of the main sentence, and not the verb of the complement or quote, that is repeated by the following main sentence in what we will call tail-head linkage, which will be covered next. In summary, then, Hanga Hundi allows complex sentences to be recursed back into the clause as the verbal object and these complement sentences are moved to the post-verbal position, where the complementizer would normally occur. This generalization is reflected in the phrase structure rules below.

(R1) Simple Sentence (Inflectional Phrase):

$IP \rightarrow NP\ I'$

$I' \rightarrow VP+INFL$ INFL $\in$ {subject agreement suffixes and independent verb suffixes}

(R2) Complement Phrase

$CP \rightarrow C'\ SPEC$ SPEC = undetermined

(R3) $C' \rightarrow IP\ COMP$ COMP $\in$ {dependent verb suffixes}

(R4) Verb Phrase:

$$VP \rightarrow \begin{Bmatrix} NP \\ CP \end{Bmatrix} V'$$

(R5) Complement Clause Movement:

Move all complement clauses to the empty COMP which follows the governing V'.

4.3.5. Tail-head linkage

One of the most striking features of Hanga Hundi discourse is the phenomenon that has been called tail-head linkage in the analysis of other Papuan languages (Wilson 1980, Foley 1986). This describes the practice of repeating the independent verb of the previous sentence as the first verb of the current sentence. This is demonstrated in sentences (3)

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through (14) of the sample text. As mentioned earlier, it is usually the independent verb of the core sentence, and not the complement sentence, that is repeated as the head of the following sentence. The example text illustrates both cases. The head verb of sentence (11) is *xétaka*, which repeats *xé* the verb in the independent clause of sentence (10). In sentence (7), however, the head clause *téndéka* repeats the final verb of the complement sentence *té*, which is the complement of the verb *xé* 'saw' in sentence (6). This break in the usual structure parallels a break in the story line, which may explain its use. When tail-head linkage is not used in the expected manner it usually signals a break in the narrative or it may also signal the peak of the narrative. Tail-head linkage normally connects clauses that are part of a chronological or logical sequence; therefore, it is more common in narrative discourse than expository or hortatory discourse.

In tail-head linkage it is usually just the verb that is repeated, although occasionally the object is also repeated. In our sample text, sentences (4), (6), (8), and (11) all begin by repeating the verb of a transitive clause, yet only the verb in sentence (4) is accompanied by its object. These verbs are marked for subject agreement, either by a same subject switch reference marker or by an overt subject agreement suffix with a different subject.

4.4. Clause constituent order

There are two main types of clauses in Hanga Hundi, verbal and non-verbal. A verbal clause usually contains only one verb as its head and may contain up to four phrasal constituents. The non-verbal clause, such as equative and descriptive clauses, usually contains two phrasal constituents and ends in either a pronoun or a demonstrative. The normal word order for verbal clauses is SOV but this can alternate with apparent SVO, OSV, and possibly even OVS word orders. The word order is stricter in dependent (CP) and non-verbal clauses. This discussion on clause structure starts first with active clauses, the most common clause structure in Hanga Hundi, proceeds to the other verbal clauses, and concludes with non-verbal clauses.

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4.4.1. Verbal clauses

As the name implies, all verbal clauses contain at least one verb. A very interesting constraint on verbal clause structures is that they apparently can have only four phrasal constituents, including the noun phrase direct object. The function of these phrases determines the clause type, whether active, unaccusative, locative, or emotive.

4.4.1.1. Active clause

The phrasal constituents found in active clauses have the case roles of subject, object, recipient, time margin, benefactor, instrument, location, and topic. These grammatical relations are marked by the noun phrase clitics, which were discussed in chapter 3. Because these clitics are crucial to an understanding of clause structure, I have repeated the table summarizing them in a modified form below. In table 4-3 the most common functions are listed first and the less common functions later.

Table 4-3. Noun phrase clitics.

Clitic	Meaning	Grammatical relation it indicates
∅	∅	Subject, object, time margin
ré	to, toward	Recipient, goal, object
ka	for, about, to	Beneficiary, topic, recipient
mbu	at, on, with	Location, instrument, time

The most common of the phrasal constituents are time margin, subject, recipient, and object, normally occurring in that order, as shown below.

```
(4-6)  Némbuli     méni hapu     ani-ré   xékélaki  hwe-mé-t
       shortly     2SM  EMPH     1D -TO   knowledge give-2SM-COND
       ADV         PRON INT      PRON     N         V
       [ADV(Time)  NP(SU):N+INT  NP(REC)  NP(Obj)   VP:V+SU+COMP]

       ani      jémbwa   ya-ta-ani.
       1D       work     do-INT-1D
       PRON     N        V
       [NP(SU)  NP(Obj)  VP:V+IRR+SU]

       'If you yourself now give knowledge to us, we will do work.'
```

As the example illustrates, a time adverb often replaces a full noun phrase for the time adjunct, a phrase which establishes a time reference for the clause. There is a relatively

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closed set of time adverbs and nouns which may function in this position in the clause. Any one of these words may occur alone or with another time word. The nouns often occur with a demonstrative while the adverbs never do. Frequently the adverbs serve as modifiers to the noun. The more common time words are listed in table 4-4, below, and example (4-7) shows a time adverb modifying a time noun phrase.

Table 4-4. Time adverbs and nouns.

Adverb	Gloss	Noun	Gloss
hanja	'before'	ganémba	'morning'
nalika	'yesterday'	gérambu	'afternoon'
némbleka	'earlier'	gan	'evening'
némbuli	'shortly'	nukwa	'day'
séri	'tomorrow'		
weka male	'just now'		

```
(4-7)  Némbuli ané-mba  ganémba  xi-ka      wa-ta-wuni.
       shortly this-LOC morning  spear-FOR  talk-INT-1S
       ADV     DEM      N        N          V

       'Now on this morning I want to talk about spears.'
```

The discussion thus far has assumed that the noun phrase direct object is a constituent of the verb phrase, a common assumption in generative grammars. In Hanga Hundi, this assumption is supported by the fact that the normal location of a direct object is immediately preceding the verb and its modifiers. However, there are many examples of clauses in which the direct object has been displaced by one or two of the other clause constituents. In sentence (1) of the text, the object of the relative clause is fronted before the subject, apparently depending on the clitic *-ré* to clarify the grammatical relations. In sentence (13) the object occurs immediately after the independent verb. The relevant parts of these sentences have been repeated below.

```
(1)    wu-na   wasa-ré       duwan  hambwe  huru-ndé-n-ka
       1S-POSS dog-TO        python snake   do-3SM-RELPST-FOR
       [[[NP(O):POSS N]+TO]  [NP(SU):N N]   VP:V+SU]+REL

       '...about when a python snake held my dog.'
```

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```
(13)   wuni       wundé xiya-wu hambwe-ré.
       1S         then  pierce.hit-1S snake-TO
       [[NP(SU)] [VP:ADV V]     [NP(O):N]+TO]
       '...I hit the snake.'
```

When an object occurs in the same clause as a locative post-positional phrase, the locative usually occurs between the object and the verb, as in the following two examples.

```
(4-8)  dé       sal    déka       tékalimbu      takandéka     sandéka
       dé       sal    dé -ka     tékali-mbu     taka-ndé-ka   sa -ndé-ka
       3SM      salt   3SM-POSS   tongue-LOC     put -3SM-CONJ  eat-3SM-CONJ
       [NP(SU)  NP(O)  [PP(LOC):[NP:POSS N]+ON]  V]            V

       '...he put the salt on his tongue and he ate it ...'
```

```
(4-9)  Wuni     saikéré        apakambu       xétaka
       wuni     saiké-ré       apaka -mbu     xé -taka
       1s       cassowary-TO   jungle-LOC     see-SEQ
       [NP(SU)  [NP(O)]+to     PP(LOC):N+on   V   SS

       'I saw a cassowary in the jungle and then ...'
```

Although rare, it is possible for more than one clause constituent to occur between the object and the verb. In example (4-10), the object occurs first and is followed by the subject and the recipient.

```
(4-10) Natapa male dawan wuni wu-na    nyayka tom-ka   halo
       one    only thigh 1S   1S-POSS  friend Tom-FOR  carry.in.bag
       QNT    INT  N      PRON POSS     N      N        V

       hur-a    wuni wundé ya-wu.
       hold-NSQ 1S   then  come-1S
       V    SS  PRON ADV   V

       'There was just one thigh that I carried and held for my friend Tom
       and I came.'
```

These examples have demonstrated the variation that is possible in clause constituent order. While in the majority of transitive clauses the direct object immediately precedes the verb and its modifiers, there are many examples in which the object does not precede the verb. There is, then, very little configurational evidence that the object noun phrase is a constituent of the verb phrase. The only other evidence supporting this hypothesis is the fact that, as mentioned earlier, the object noun phrase is occasionally repeated with the

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verb in tail-head linkage. Although the repetition of the object noun phrase is optional, the object is the only clause constituent besides the verb phrase that can be repeated in tail-head linkage. Therefore, Hanga Hundi appears to follow the generalization that the object is a constituent of the verb phrase.

As mentioned earlier, there is an apparent limit to the number of phrasal constituents that can occur in a clause. This limit is likely the result of a reluctance of native speakers to add more than one adjunct to the verb phrase. This reluctance seems to be caused by a constraint that limits the occurrence of any post-positional clitic to one phrase per clause. For example, while the clitic *-mbu* 'on' can be used for locative phrases as well as time margin phrases, it never occurs in both of these functions in any clause. Occasionally an entire phrase is repeated but in that case the clitic has only one function in the clause.

This discussion, then, has concluded that the direct object should be retained as a constituent of the verb phrase and that the variability of word order is due to constituent movement. Also, the limit on the number of constituents in a clause seems to be due to a restriction on multiple uses of the post-positional clitics in a single clause. This restriction will need to be expressed in the form of a filter and the phrase structure rules will need to be expanded to include the adjuncts.

(R1) Simple Sentence (Inflectional Phrase):

IP $\rightarrow$ NP I'

I' $\rightarrow$ VP+INFL INFL $\in$ {subject agreement suffixes and independent verb suffixes}

(R2) Complement Phrase

CP $\rightarrow$ C' SPEC SPEC = undetermined

(R3) C' $\rightarrow$ IP COMP COMP $\in$ {dependent verb suffixes}

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(R4) Verb Phrase, non-iterative, adds the object to the VP:

$$VP \rightarrow \begin{Bmatrix} NP \\ CP \end{Bmatrix} V'$$

(R5) Complement Clause Movement:

Move all complement clauses to the empty COMP which follows the governing V'.

(R6) Verb Phrase, iterative, adds adjuncts to the VP:

VP → PP VP PP = Post-positional Phrase

(R7) PP → NP+P P ∈ {*-ré* 'to', *-ka* 'for', *-mbu* 'on'}

(R8) Clitic Filter:

No clitic may be used more than once in a clause, except when the entire phrase is repeated.

(R9) Move α:

Exchange positions of any two clause constituents. Movement to positions at the beginning of the sentence or after the verb, to COMP, puts more emphasis on that constituent.

4.4.1.2. Unaccusative clause

This section describes the function of a limited set of Hanga Hundi verbs. These verbs, unlike most verbs in Hanga Hundi, can be used in both unaccusative and transitive clauses. An unaccusative clause is one in which the subject of the verb is also the patient of the verb, such as in the clause, 'The dish broke'. As we proceed through this section I will demonstrate that the unaccusative usage of these verbs is syntactically identical to an ordinary intransitive verb and will claim that this is the normal usage of these verbs. The analysis presented here concludes that these verbs are normally unaccusative and that the transitive usage can be derived from the unaccusative base.

The unaccusative is very uncommon in Hanga Hundi and only occurs with a limited set of verbs. Unaccusative verbs are frequently used with the present perfect adverb *bu*

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before the verb. When the unaccusative verb occurs with this adverb, the clause structure is identical to a normal intransitive clause. The first two examples below demonstrate normal intransitive clauses. The third and forth examples demonstrate unaccusative clauses.

(4-11) Dé bu hiya.
3SM PERF die

'He has died.'

(4-12) Jeremiah dé bu yi.
Jeremiah 3SM PERF go

'Jeremiah has gone.'

(4-13) Deino bu hényi.
sago.jelly PERF finish

'The sago jelly has finished.'

(4-14) Hanyandé bu pélam.
bowl PERF break

'The bowl has broken.'

The unaccusative usage does not require the past imperfect adverb; it may also occur with an unaffixed verb, which encodes a simple past tense. In the example below, the subject of the first clause, *wasa* 'dog' is marked on the first verb with the third person singular feminine suffix *-lé*. This distinguishes it from the subject of the second clause, *gu* 'soup', which is marked for subject agreement by the free pronoun *dé* 'third person singular masculine'.

(4-15) Wasa na-lé-ka gu dé bleké.
dog bump-3SF-CONJ soup 3SM spill

'The dog bumped it and the soup spilled.'

In examples (4-13), (4-14), and (4-15), we demonstrated the unaccusative usages of *hényi* 'finish', *pélam* 'break', and *bleké* 'spill'. The examples that follow demonstrate the transitive usages of these verbs.

(4-16) Wuni deino hényi-ta-wuni.
1S sago.jelly finish-INT-1S
PRON N V

'I want to finish the sago jelly.'

(4-17) Wuni hanyandé wuni pélam.
1S bowl 1S break
PRON N PRON V

'I broke the bowl.'

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(4-18) Némbuli Got dé-ka sarépana bu blek-a taka-ndé-ka
shortly God 3SM-FOR compassion PERF spill-NSQ put-3SM-CONJ
ADV N PRON N ADV V SAME V DS

ya-e hépa-mbu dé yi-ta re.
come-NSQ ground-LOC 3SM go-SIM sits
V SAME N PRON V SAME V

'Now God has poured out his compassion and it goes on this ground.'

The fact that these verbs can occur in both transitive and unaccusative constructions contrasts them with most of the other verbs in Hanga Hundi. For other transitive verbs it is possible to delete the direct object from the clause but not the subject. The subject will either be encoded by a noun phrase or by subject agreement on the verb. Examples of these types of transitive clauses are shown below.

(4-19) Méni séra-r bu xiya-mé?
2SM chicken-TO PERF hit-2SM
PRON N ADV V

'Have you killed the chicken?'

(4-20) Némbuli bu wa-wu
now PERF say-1S
ADV ADV V

'Now I have said (it).

(4-21) Deino bu sa-séke-nda
sago.jelly PERF eat-to.all-3P
N ADV V

'They have eaten the sago jelly.'

(4-22) *Deino bu sa.
sago.jelly PERF eat
N ADV V

*'The sago jelly was eaten.' (ungrammatical)

Though these verbs may resemble English passives in their translation, they are clearly not passives. Hanga Hundi verbs which are clearly transitive, as opposed to unaccusative, cannot undergo a process of passivization; which agrees with the generalization that Papuan languages do not have passives. Also, the default usage of the 'unaccusative' verbs is an ordinary intransitive construction in which they all share the notion of an unintentional or accidental action. Therefore, it seems reasonable to propose that these verbs are normally unaccusative and that the process involved is a switch from an unspecified to a specified subject, rather than a process of passivization applied to transitive verbs. This proposal is applied to examples (4-14) and (4-17) in the relational charts below.

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(4-22) Analysis of *Hanyandé bu pélam* 'The bowl has broken.'

	unspecified	hanyandé	bu pélam
stratum 1	1	2	P
stratum 2	∅	1	P

(4-23) Analysis of *Wuni hanyandé pélamétawuni* 'I want to break the bowl.'

	unspecified	wuni	Hanyandé	bu pélam
stratum 1	1		2	P
stratum 2	∅	1	2	P

This analysis is based on the Unaccusative Hypothesis of Relational Grammar, or Burzio's Generalization of X-bar theory (Burzio 1986), and does not require a modification of the phrase structure rules. The unaccusative verbs would need to be categorized as such in the lexicon.

4.4.1.3. Stative clause

The stative verbal clause is actually a subset of the syntax that has already been discussed. These clauses generally have a noun phrase subject, some kind of adjunct, and a verb phrase containing one of three posture verbs. The posture verbs are *re* 'sit', *hwa* 'lay', and *té* 'stand'. Two good examples of stative clauses occur in the sample text. In sentence (6), a portion of the complement clause is a stative clause expressing the location of the snake. In sentence (12) the stative clause expresses that the results of the previous clause continued on for some time. These portions are repeated below.

```
(6)     ... yapa   aiwa   duwan  hambwe dé   mi   eko-mbu   dé   té.
            father mother python snake  3SM  tree inside-at 3SM  stand
            N      N      N      N      PRON N    N-PP      PRON V

        '... the biggest python snake was there inside the tree.'

(12)    Wu-na   wasa lé   wanji-ta   male wungi     hwa.
        1S-POSS dog  3SF  scream-SIM only like.that lay
        PRON    N    PRON V          INT  ADV       V

        'My dog she just lay like that screaming.'
```

When the posture verb is used immediately after another verb phrase, as in sentence (12), it usually communicates a durative aspect, an ongoing action. When the posture verb

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occurs with a subject and an adjunct, it functions like a copulative clause with an overt verb. Stative clauses of this type are often used for descriptive and locative purposes. The use of the posture verbs contrasts with the present perfect tense, which uses the adverb *bu*, in that the stative clause emphasizes the duration of the event while the present perfect emphasizes the result of the event.

4.4.1.4. Illness and emotion clauses

Illness and emotion related clauses are presented as a separate class of clause because they cannot be interpreted on the same basis as other active clauses. While the syntactic structure is very similar to transitive clauses, the meaning is often quite different than what would be expected. In example (4-23), the sentence could literally be translated, 'I am doing chest.' In example (4-24) the literal meaning could be, 'I am dying sneezes.' There does not seem to be any way of predicting the meaning of these phrases based on the meanings of the constituents in other environments. Normally the subject of an emotion expressing clause is the person feeling the emotion. With illness, however, the subject is often displaced from the person as a whole to just the portion of the person that feels the malady. For example, in (4-25) the topic of the sentence is 'two boys' yet the subjects expressed in the clause are the abstract body parts, the head and bowels. Even though the subject is displaced, as in example (4-25), it is still understood by the context and the switch reference markers will continue to mark same subject even though different body parts are mentioned.

(4-23) Wuni mauli wuni y-e.
1S chest 1S do-PRES
PRON N PRON V

'I like it.'

(4-24) Wuni aséke wuni hiya-e.
1S sneeze 1S die-NSQ
PRON V PRON V

'I'm sneezing and sick.'

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(4-25) Anéngamba ti-ta dé di akwi guriké.
head bite-SIM 3SM feces also spill
N V **SS** PRON N CONJ V

'(Their) head hurt and (their) feces also spilled.'

Because the meaning of these phrases is unpredictable based on their structure, they will also have to be included in the lexicon.

4.4.2. Non-verbal clauses

Non-verbal clauses, or copulative clauses, are relatively uncommon in Hanga Hundi and are used primarily as independent clauses for equative or descriptive purposes. There is no overt copula in Hanga Hundi so a non-verbal clause can only be identified by its structure, which is fairly regular, especially in comparison to the verbal clauses. The lack of an overt copula also means that there is no tense marking in copulative clauses, though subject agreement is often marked by a pronoun at the end of the clause. Since the structure of copulative clauses varies depending on whether they are equative or descriptive, each will be described separately.

4.4.2.1. Equative clause

Equative clauses generally have three constituents; a noun phrase subject, a noun phrase complement, and a pronominal agreement marker. This type of clause is demonstrated in the following two examples.

(4-26) Wun joo level dé.
that stuff level 3SM
NP[DEM N] NP:N PRON

'That thing is a level.'

(4-27) Wuni America-na du wuni.
1S America-POSS man 1S
NP:PRON NP[POSS N] PRON

'I am an American man.'

The most common variation on this structure is for the subject noun phrase to be replaced by a demonstrative, as shown in the question and answer sequence below. These

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examples also illustrate the fact that question words are not moved in Hanga Hundi; they occur in the same location in the clause as the constituent they replace.

```
(4-28) (a)  Ané  méta dé?        (b)  Wun  hamapwe      dé.
            this what 3SM              that food.hanger 3SM
            DEM  WH   PRON             DEM  N           PRON

            'What is this?'            'That is a bilum hanger.'
```

While the previous examples demonstrate the typical structure of an equative clause, there are several other possible variations. The first is that the subject noun phrase may be completely omitted. The second is that the complement noun phrase may be replaced by a quantifier. The final variation is that the final pronoun may be replaced by a demonstrative, the negative *yingapwe* 'not', the uncertainty marker *wana* 'perhaps', or the interjection *yak* 'enough'. When the negative *yingapwe* occurs in the clause there seems to be a strong preference to delete the subject, so that *yingapwe* occurs with only one noun phrase. The examples below illustrate these variations in equative clause structure.

```
(4-29) Wuni yingapwe.              (4-30) Wu   mapa   wana"
       1S   not                          that possum perhaps"
       PRON ADV                          DEM  N      ADV"

       'I am without any.'                'That is a possum perhaps.'

(4-31) Wu-mba   gwalepa   du  dé-ka    nyangwal hupuk di
       that-LOC ancestors man 3SM-POSS children three 3p
       [[[DEM   ADJ       N]  PR-POSS] N]NP:SU  QNT   PRON

       'This old man's children were three (in number).'

(4-32) Wu-na   sapé-wu-n      hundi yak.
       1S-POSS tell-1S-RELPST talk  enough
       PR-POSS V:ADJ          N     PART

       'My recounted story is enough.'

(4-33) Yak    male, némbuli nani Weko yingapwe, yak.
       enough only  earlier 1P   Weko no        enough
       ADV    INT   ADV     PRON N    ADV       ADV

       'Enough, we are no longer (from) Weko, enough.'
```

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This last example demonstrates that an equative clause might also include a time adverbial, though these are relatively rare. Usually an equative clause will contain only the three expected constituents.

As mentioned above, the equative clause is difficult to generalize with the verbal clause because it carries no marking for tense or subject agreement. There is, however, an interesting parallel between the final element of the equative clause and the independent verb suffixes. Independent verbs are marked with either realis or irrealis suffixes and irrealis is further divided into negative and intentive. The final elements of equative clauses can also be described in this way. If the equative clause is claimed to be true, it is marked for subject agreement in the form of a pronoun. If the speaker is uncertain of the utterance, he uses *wana*, a modal marker, and does not include subject agreement. If the speaker is certain of the falsity of the statement, he uses *yingapwe*, again as a marker of modality, and omits subject agreement. The fact that the clause is marked for subject agreement or modality in the predicate position seems to indicate that Hanga Hundi has a non-overt copula. If we assume a non-overt copula BE, the equative clause can be described by the following phrase structure rules.

(R10) Inflectional Phrase for equative clauses:

$$IP \rightarrow \begin{Bmatrix} NP \\ DEM \end{Bmatrix} I'$$

(R11) Inflectional sub-phrase (I') for equative clauses:

$I' \rightarrow VP + INFL_{COP}$ $\quad INFL_{COP}$ = {PRON, DEM, *yingapwe* 'no', *wana* 'perhaps', *yak* 'enough'}

(R12) Verb Phrase for equative clauses:

$$VP \rightarrow \begin{Bmatrix} NP \\ QP \end{Bmatrix} BE$$ $\quad$ BE = non-overt copula, QP = Quantifier Phrase

These phrase structure rules are similar to the rules proposed for verbal clauses, but differ significantly enough that it would be difficult to produce a non-verbal clause without

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these added rules. The primary differences are that non-verbal clauses take a different set of inflection markers and quantifier phrases do not occur as the object of a verbal predicate.

4.4.2.2. Descriptive clause

The descriptive clause is very similar to the equative clause except that the noun phrase complement is replaced by an adjective phrase. The examples that follow demonstrate increasing variation from the typical descriptive clause. Example (4-34) is a descriptive clause with a noun phrase subject, an adjectival complement, and a pronoun as final constituent. In the next example, (4-35), the subject noun phrase has been replaced by a demonstrative. In example (4-36), the noun phrase subject is deleted. In the final example, a relative clause expressing habitual action has replaced the adjective.

(4-34) Hépa hambuk dé.
ground strong 3SM
N ADJ PRON

'The ground is strong.'

(4-35) Amba wiaku dé.
this light 3SM
DEM ADJ PRON

'This is light.'

(4-36) Yikapre dé.
good 3SM
ADJ PRON

'It is good.'

(4-37) Apwi wuré-ndé-ka dé.
bird fly-3SM-DS 3SM
N [V:HAB]ADJ PRON

'A bird is one that usually flies.'

In order to describe descriptive clauses, it is only necessary to modify rule 12 from the above description of equative clauses. This modification is shown below.

(R12) Verb Phrase for equative and descriptive clauses:

$$VP \rightarrow \begin{Bmatrix} NP \\ QP \\ AP \\ CP \end{Bmatrix} BE$$

BE = non-overt copula, QP = Quantifier Phrase
AP = Adjective Phrase CP = Complement Phrase

This phrase structure rule, like all of the other phrase structure rules discussed thus far, is head final. It would be possible, therefore, to generalize the verb phrase structure rule to the following:

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(R4.a) Verb Phrase:

VP → XP V' ; XP is a phrase defined by the subcategorization frame of V.

While this provides a good generalization of the structures involved, it provides this generalization at the cost of descriptive clarity. Since the primary purpose of this monograph is to provide a description that is accessible to a linguist from any theoretical background, this analysis will not make further use of the more general statement shown in (R4.a).

4.5. Phrase structure and word classes

The preceding discussion has assumed various word classes and phrase structures in order to discuss larger syntactic structures. This section will focus on the smaller syntactic structures, the noun phrase and the verb phrase, and will present evidence supporting each of the word classes proposed in this analysis. The discussion begins with the noun phrase.

4.5.1. Noun phrase

As the sample text illustrates, the most common form of the noun phrase is either an unmodified noun or a pronoun. Throughout most of the text there is little to talk about in terms of noun phrase structure. The only complex noun phrases occur in sentences (2), (6), and (15), which are repeated below. Sentence (2) has a conjoined noun phrase involving a pronoun and a noun phrase. Sentence (6) contains a noun phrase in which the head noun is modified by three descriptive nouns. Sentence (15) includes a relative clause functioning as an adjective in the noun phrase. The final example, (4-38), shows a noun phrase with a demonstrative, an adjective phrase, and a head noun.

(2) Hanja wuni wali wu-na takwa wali noo ani yi Pleko-r.
before 1S with 1S-POSS woman with sago 1D go Pleko-TO
ADV PRON CONJ PR-POSS N CONJ N PRON V N-TO

'Before I went with my wife to Pleko.'

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(6) ... re-ndé-ka dé yapa aiwa duwan hambwe dé
... sit-3SM-CONJ 3SM father mother python snake 3SM
... V DS PRON N N N N PRON

mi eko-mbu dé té.
tree inside-AT 3SM stand
N N P PRON V

'... sat there and he, the father and mother of all python snakes, he was standing inside the (fallen) tree.

(15) Yak, wu-na sapé-wu-n hundi yak.
enough, 1S-POSS tell-1S-RELPST talk enough.
ADV PR-POSS V:ADJ N ADV

'Enough, the story that I've told is enough.'

(4-38) Yikapre, wun wama male hunyi, sal.
good that white only salt salt
ADJ **DEM ADJ INT N** N

'Good, that pure white salt, called sal.'

In order to describe noun phrases it is necessary to propose the following word classes; demonstratives, adjectives, nouns, quantifiers, and an indefinite article. It is difficult to describe noun phrases with X-bar binary rules; therefore, rather than cloud the discussion with multiple binary rules, noun phrase structure will be described with a single multi-constituent phrase structure rule, as shown below. Although this does not follow standard X-bar format, the head-final generalization of other Hanga Hundi phrase structure rules still appears valid.

(R13) Noun Phrase (braces indicate a selection among optional constituents):

$$NP \rightarrow \begin{Bmatrix} Dem \\ NP_{POSS} \\ QntP \end{Bmatrix} \begin{Bmatrix} AdjP \\ CP_{REL} \end{Bmatrix} \begin{Bmatrix} N_1 \\ CP_{REL} \end{Bmatrix} \begin{Bmatrix} QntP \\ ART \\ INT \end{Bmatrix}$$

Dem = Demonstrative; NP_{POSS} = Possessive Noun Phrase; QntP = Quantifier Phrase; AdjP = Adjective Phrase; CP_{REL} = Relative Clause; N_1 = at least one Noun; ART = indefinite Article, INT = Intensifier.

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(R14) Conjoined Noun Phrase:

NP → NP (Conj) NP (Conj) Conj ∈ {*wali* 'with', *akwi* 'also', *bér* 'those two'}

(R15) Substitute Noun Phrase:

NP → PRON

(R16) Adjective Phrase:

AdjP → Adj_1 INT

(R17) Quantifier Phrase:

QntP → Qnt_1 INT Qnt = Quantifier

(R18) Intensifier Constraint:

Only one intensifier may be used in a noun phrase.

(R19) Quantifier Constraint:

Only one quantifier phrase may be used in a noun phrase.

In these rules there is a strong tendency for at most one item from a group of bracketed items to be included in a noun phrase. In addition, it is very rare for a demonstrative to occur with a quantifier or the indefinite article. While it is possible to elicit more than one adjective in a noun phrase, it is very rare to see more than one adjective in a noun phrase and there is no predictable ordering of the adjectives.

Though nouns, pronouns, adjectives, and demonstratives were mentioned in the previous chapter, they will be discussed briefly again here. The discussion on nouns required three basic subdivisions of nouns: family and clan titles, personal names, and other nouns. The primary basis for these distinctions is based on the morphology of the classes but is also relevant in determining which intensifier will be used immediately after the noun, if any. A personal or kinship noun will use the personal intensifier *hapu*, and other nouns will use the impersonal intensifier *male*. When more than one noun is found in the noun phrase, as in example (6) above, the more specific nouns usually precede the more generic, just as the positional nouns, such as *taku* 'top' and *eko* 'inside', are generic and follow the more specific

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nouns. However, names usually follow titles, as in *wuna yapa Andonimbi* 'my father Andonimbi'.

As the phrase structure rules indicate, a pronoun seems to substitute for an entire noun phrase. In addition, pronouns seem to agree with their antecedent in which intensifier they will use, whether *hapu* or *male*. Pronouns are often found at either end of the noun phrase as a recapitulation of the contents of the noun phrase. The morphology related to pronouns is discussed in chapter three, section 3.1.2.

The discussion on demonstratives in the previous chapter, found in section 3.2, showed that they represent a closed class of words and that they are morphologically related to the comparative adverbs. The forms starting with *wu-* are for distal or anaphoric reference, the forms starting with *a-* are for proximal or cataphoric reference, and the forms starting with *yi-* are interrogative forms. The following examples indicate usage of Hanga Hundi's two most common demonstratives, *wun* and *ané*.

(4-39) Joshua, **wun** méta dé?
Joshua that what 3SM
N DEM W PRON

'Joshua, what is that (distal)?' (see section 5.1.1.1., sentence #9)

(4-40) Té-ndé-ka lé, xé-taka wundé ɔa -lé **wun** hawe.
stand-3SM-DS 3SF see-SEQ then eat-3SF that grub
V PRON V SS ADV V DEM N

'He was there and she saw him and ate those (anaphoric) worms.' (see section 5.1.2.2., sentence #5)

(4-41) Hanja yapa-mbri, **ané** hépa héra-ta, waru ware-ta dɔ-ré
before father-PL this ground get-SIM argue fight-SIM man-TO
ADV N DEM N V SS V V SS N

di xiya.
3P pierce
PRON V

'Before as our fathers were getting this (proximal) ground and fighting, they killed men.'

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(4-42) Ané ganémba nani **ané** wa-te-mbe-ka hundi nani yike-seke
this morning 1p this talk-FUT-1P-DS speech 1P not.know-ALL
DEM N PRON DEM V N PRON V

ya-ta-me.
do-INT-1P
V

'This morning we will be completely ignorant of this (cataphoric) talk that we will say.' (see section 5.4.2., sentence #3)

The conjunctions form another closed class of word in Hanga Hundi. As indicated next to the phrase structure rule, there are only three noun phrase conjunctions. These conjunctions, *wali* 'with', *akwi* 'also', *bér* 'those two', are only used within a noun phrase. The only other conjunction in Hanga Hundi, *bu* 'then', is only used as a clause conjunction.

Little was said about adjectives in the previous chapter except that they do not accept any inflectional suffixes. The class of adjectives seems to form a continuum with the class of adverbs so that there are some words which may serve both functions and other words which are used in only one function. The example below shows the adjective *yikama* 'small' being used as an adverb to describe *séka* 'cut up'.

(4-43) Wuni wule bali héra-e wuni yikama yikama sék-a wuni ...
1S that pig get-NSQ 1S small small cut.up-NSQ 1S
PRON DEM N V SS PRON ADJ ADJ V SS PRON

'I took that pig and I cut it little little and ...'

The quantifiers and the indefinite article could be viewed as sub-classifications of a single word class. The primary distinction is based on where in the noun phrase they may occur and whether or not they can accept the noun phrase clitics. The indefinite article, *nak* or *hési*, usually occurs after the noun and is often suffixed with one of the clitics. Some of the quantifiers, which might be described as adjectival quantifiers, such as *naulak* 'some' and *sépélak* 'many', may occur either before or after the noun and can also be suffixed with a noun phrase clitic. In addition, the adjectival quantifiers can also function pronominally. The numerical quantifiers, like *natapa* 'one' and *yéték* 'two', can also occur either before or after the noun and can occur in a quantifier phrase with the intensifier *male* 'only', unlike the article

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or the adjectival quantifiers. Hanga Hundi only has single word quantifiers up to six; beyond this numbers are expressed in terms of numbers of fingers and toes, for example *angé tamba hupuk angé tamba yétiyéti* 'this hand three this hand four (seven)'. Because of the complexity of numerical expressions above six, most speakers borrow from Tok Pisin for larger numbers. Example (4-44) shows an occurrence of *nak* 'a' with a clitic, example (4-45) illustrates the pronominal use of *naula* (= *naulak*) 'some', and (4-46) gives an example of a numeric quantifier modified by the intensifier *male* 'only'.

(4-44) Séri séra nak-ré xiya-ta-méni?
tomorrow chicken a-TO pierce.hit-INT-2SM
ADV **N** **ART** V

'Will you kill a chicken tomorrow?'

(4-45) Xaakw-a ya-e di naula warmetali-mbu ya.
come.upon-NSQ come-NSQ 3P some Warmetali-LOC come
V SS V SS PRON **QNT** N V

'They commenced and came and some came to Warmetali.'

(4-46) Natapa male dawan wuni wu-na nyayka Tom-ka halo
one only thigh 1S 1S-POSS friend Tom-FOR carry.in.bag
QNT **INT** N PRON POSS N N V

hur-a wuni wundé ya-wu.
hold-NSQ 1S then come-1S
V SS PRON ADV V

'I carried and held just one thigh for my friend Tom and I came.'

In summary, then, there is good evidence for the word classes presented in the phrase structure rules, and some of these word classes, such as the nouns and quantifiers, demonstrate evidence of subcategorization. A sample listing of each of the word classes is given below.

(L1) Kinship Nouns (accept pluralization & personal intensifier):

$$\text{Noun}, \begin{bmatrix} +\text{kinship} \\ +\text{person} \end{bmatrix} \in \{\textit{gwal}\text{ 'grandparent'}, \textit{yapa}\text{ 'father'}, \textit{aiwa}\text{ 'mother'}, \ldots\}$$

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(L2) Personal Nouns (accept personal intensifier):

$$\text{Noun}, \begin{bmatrix} -\text{kinship} \\ +\text{person} \end{bmatrix} \in \{du \text{ 'man'}, takwa \text{ 'woman'}, \text{names of people}\}$$

(L3) Impersonal Nouns (accept impersonal intensifier):

$$\text{Noun}, \begin{bmatrix} -\text{kinship} \\ -\text{person} \end{bmatrix} \in \{wasa \text{ 'dog'}, hambwe \text{ 'snake'}, noo \text{ 'sago'}, taku \text{ 'top'}, ...\}$$

(L4) Adjectives, can accept impersonal intensifier:

Adj ∈ {*wama* 'white', *néma* 'big', *yalapu* 'little', *nyo* 'old', *huli* 'new', ...}

(L5) Demonstratives (see section 3.2):

Dem ∈ {*wun* 'that', *ané* 'this', *wumbu* 'there', *ambu* 'here', *wumbére* 'those two', ...}

(L6) Pronouns (see section 3.1.2):

PRON ∈ {*wuni* 'I', *ani* 'we two', *méni* 'you (masc.)', *nyéni* 'you (fem.)', ...}

(L7) Quantifiers, can accept impersonal intensifier:

Qnt[+int] ∈ {*sétapa* 'only one', *natapa* 'one', *yéték* 'two', *hupuk* 'three', *yétiyéti* 'four', *natamba* 'five', *gwongop* 'six'}

(L8) Quantifiers, cannot accept impersonal intensifier:

Qnt[-int] ∈ {*naula* 'some', *sépélak* 'many', *nakémba* 'another', *atépék* 'all', *hatika* 'how many?'}

(L9) Articles, cannot accept impersonal intensifier:

ART ∈ {*nak* 'a (masc.)', *hési* 'a (fem.)'}

(L10) Intensifiers:

INT ∈ {*male* 'only [-personal]', *hapu* 'only [+personal]'}

(L11) Conjunctions, noun phrase level:

Conj ∈ {*wali* 'with', *akwi* 'also', *bér* 'those two'}

(L12) Conjunctions, clause level:

Conj ∈ {*bu* 'then', switch reference suffixes}

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4.5.2. Verb phrase

Verb phrase structure was briefly mentioned earlier in the discussion about clause structure. There, it was determined that the noun phrase direct object should be included as part of the verb phrase. This discussion will focus on V', the verb and its modifiers. Another result of the earlier discussion was that verbal affixation, or inflection, was assumed to be a constituent of a larger structure, the inflectional phrase. This leaves only the imperative marker, the adverb, and the verb as constituents of V', as shown in the phrase structure rules below.

(R4) Verb Phrase (from section 4.4.1.1):

$$VP \rightarrow \begin{Bmatrix} NP \\ CP \end{Bmatrix} V'$$

(R20) Verb Sub-phrase (V'):

$$V' \rightarrow IMP_0{}^{1}\ Adv_0\ V$$

(R21) Verb Phrase with intensifier:

$$VP \rightarrow VP\ INT$$

Admittedly, rule 20 departs from X-bar syntax somewhat in that it allows a ternary branching node. Another possibility would have been to propose three levels of structure within the verb phrase but this seemed even less satisfactory. As it currently stands, rule 20 states that V' may contain at most one imperative, some adverbs, and one verb. The two examples below illustrate fully expanded V'.[1]

```
(4-47) Mé  bari     angi       hwatukwak latukwak y-e     bu   xiya-wu.
       IMP quickly like.this sneak     sneak     go-NSQ then hit-1S
       IMP ADV     ADV        V         V         V  SS  CONJ V
```

'Go quickly and stealthily and come and then I shoot.'

[1] As shown in example (4-48), one of the imperative markers, *mé*, is identical to the second person singular masculine subject agreement suffix. This may indicate that the two morphemes are historically related.

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(4-48) Wuni haraki wa-wu-t méni mé jémba wa-mé-t bu xéké-wu.
1S bad talk-1S-COND 2SM IMP well talk-2SM-COND then hear-1S
PRON ADV V DS PRON **IMP ADV V** DS CONJ V

'If I say something wrong you say it right so that I can hear it.'

The previous discussion on the noun phrase mentioned that adverbs and adjectives often overlap in their function. In these examples *haraki* is an adjective functioning as an adverb and *bari* and *jémba* have only been observed functioning as adverbs. The other adverb found in these examples, *angi* 'like this', is one of the comparative adverbs. The comparative adverbs are morphologically related to the demonstratives and to two of the tense adverbs. The comparative adverbs and tense adverbs never co-occur in the same verb phrase. When a manner adverb, such as *bari* 'quickly', occurs with a tense adverb, the manner adverb precedes the tense adverb.

In the previous discussion on unaccusative clauses in section 4.4.1.2, it was determined that a restricted set of verbs would need to be categorized as unaccusative. These verbs can occur in either transitive or intransitive clauses, but in intransitive clauses the noun phrase is semantically the object (patient) of the verb. In addition to these unaccusative verbs, Hanga Hundi also has transitive and intransitive verbs. There do not appear to be any verbs which are strictly transitive; all transitive verbs may be used without an object and are, therefore, optionally transitive. In example (4-43), the verb *xiya* 'hit' occurs without an object even though it is normally used in transitive clauses. Based on these observations, three categories of verbs are proposed: optionally transitive, intransitive, and unaccusative.

As mentioned in the previous chapter, there are four possible forms of the imperative marker. In addition, there is a third person imperative marker *métaka* 'let him', that is occasionally used. These always occur before any adverbs and never co-occur with each other. These imperative markers make up the closed class of words that are called imperatives in this analysis.

As with the previous section, this section will conclude with sample lexical listings.

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(L13) Transitive Verbs (optionally transitive):

V [+SU, ±OBJ] ∈ {*xiya* 'hit', *sa* 'eat', *huru* 'hold', *ta* 'cut', *yi* 'go', ...}

(L14) Intransitive Verbs:

V [+SU, -OBJ] ∈ {*pétékéré* 'run', *hwa* 'sleep', *re* 'sit', *té* 'stand', *wanji* 'scream', ...}

(L15) Unaccusative Verbs:

[±SU, +OBJ] ∈ {*tukwe* 'break', *pélam* 'shatter', *hényi* 'finish', *bleké* 'spill', ...}

(L16) Manner Adverbs (some overlap with adjectives):

Adv_{mnr} ∈ {*bari* 'quickly', *nakélak* 'slowly', *baka* 'uselessly', *sépéla* 'wrongly', ...}

(L17) Tense and Comparative Adverbs (see section 3.2):

Adv ∈ {*wungi* 'like that', *wundé* 'then', *angi* 'like this', *andé* 'now', ...}

(L18) Imperative Markers:

Imp ∈ {*mé, sé, ma, sa, métaka*} (*métaka* 'let him')

4.5.3. Post-positional phrase

The discussion of active clauses in section 4.4.1.1. began with a brief description of the noun phrase clitics. These clitics are primarily used to mark case, but they also function as post-positions. The subject and object of a transitive clause can both occur as unsuffixed noun phrases, but any other constituents must be marked with a post-positional clitic, except for time adverbials, which will be discussed in the next section. There are only three post-positions in Hanga Hundi; *-ré* 'to', *-ka* 'for, about', and *-bu* 'at, on'. To express more complex locational information Hanga Hundi uses locational nouns, such as *taku* 'top', *eko* 'inside', and *saku* 'side'. Post-positions were summarized by the rule 7, which is repeated below.

(R7) PP → NP+P P ∈ {*-ré* 'to', *-ka* 'for', *-mbu* 'on'}

4.5.4. Time adverbials

Time adverbials were already discussed in conjunction with active clauses, as were post-positional phrases. The earlier discussion noted that time adverbials, or adjuncts, could be divided into two types, adverbs and nouns. The adverbs function as clause adjuncts and

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cannot be used as adverbs within the verb phrase. The time adverbs, like the time post-positional phrases, generally appear as the first or second constituent of a clause. The time nouns function much the same as other nouns within a noun phrase. The listing to time adverbs and nouns is repeated below.

Table 4-4. Time adverbs and nouns.

Adverb	Gloss	Noun	Gloss
hanja	'before'	ganémba	'morning'
nalika	'yesterday'	gérambu	'afternoon'
némbleka	'earlier'	gan	'evening'
némbuli	'shortly'	nukwa	'day'
séri	'tomorrow'		
weka male	'just now'		

4.6. Summary

This section will summarize the phrase structure rules and sample lexical entries that were presented in the earlier sections.

(R1) Simple Sentence (Inflectional Phrase):

IP → NP I'

I' → VP+INFL INFL ∈ {subject agreement suffixes and independent verb suffixes}

(R2) Complement Phrase

CP → C' SPEC SPEC = undetermined

(R3) C' → IP COMP COMP ∈ {dependent verb suffixes}

(R4) Verb Phrase:

$$VP \rightarrow \begin{Bmatrix} NP \\ CP \end{Bmatrix} V'$$

(R5) Complement Clause Movement:

Move all complement clauses to the empty COMP which follows the governing V'.

(R6) Verb Phrase:

VP → PP VP PP = Post-positional Phrase

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(R7) PP -> NP+P P ∈ {*-ré* 'to', *-ka* 'for', *-mbu* 'on'}

(R8) Clitic Filter:

No clitic may be used more than once in a clause, except when the entire phrase is repeated.

(R9) Move α:

Move any clause constituent to the location of any other clause constituent but only within the same clause.

(R10) Inflectional Phrase for equative clauses:

$$IP \rightarrow \begin{Bmatrix} NP \\ DEM \end{Bmatrix} I'$$

(R11) Inflectional sub-phrase (I') for equative clauses:

$I' \rightarrow VP + INFL_{COP}$ $INFL_{COP} \in$ {PRON, DEM, *yingapwe* 'no', *wana* 'perhaps', *yak* 'enough'}

(R12) Verb Phrase for equative and descriptive clauses:

$$VP \rightarrow \begin{Bmatrix} NP \\ QP \\ AP \\ CP \end{Bmatrix} BE$$

BE = non – overt copula, QP = Quantifier Phrase
AP = Adjective Phrase CP = Complement Phrase

(R13) Noun Phrase (braces indicate a selection among optional constituents):

$$NP \rightarrow \begin{Bmatrix} Dem \\ NP_{POSS} \\ QntP \end{Bmatrix} \begin{Bmatrix} AdjP \\ CP_{REL} \end{Bmatrix} \begin{Bmatrix} N_1 \\ CP_{REL} \end{Bmatrix} \begin{Bmatrix} QntP \\ ART \\ INT \end{Bmatrix}$$

Dem = Demonstrative; NP_{POSS} = Possessive Noun Phrase; QntP = Quantifier Phrase; AdjP = Adjective Phrase; CP_{REL} = Relative Clause; N_1 = at least one Noun; ART = indefinite Article, INT = Intensifier.

(R14) Conjoined Noun Phrase:

NP → NP (Conj) NP (Conj) Conj ∈ {*wali* 'with', *akwi* 'also', *bér* 'those two'}

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(R15) Substitute Noun Phrase:

$NP \rightarrow PRON$

(R16) Adjective Phrase:

$AdjP \rightarrow Adj_1\ INT$

(R17) Quantifier Phrase:

$QntP \rightarrow Qnt_1\ INT$ Qnt = Quantifier

(R18) Intensifier Constraint:

Only one intensifier may be used in a noun phrase.

(R19) Quantifier Constraint:

Only one quantifier phrase may be used in a noun phrase.

(R4) Verb Phrase (from section 4.4.1.1):

$$VP \rightarrow \begin{Bmatrix} NP \\ CP \end{Bmatrix}\ V'$$

(R20) Verb Sub-phrase (V'):

$V' \rightarrow IMP_0^1\ Adv_0\ V$

(R21) Verb Phrase with intensifier:

$VP \rightarrow VP\ INT$

(L1) Kinship Nouns (accept pluralization & personal intensifier):

$$Noun, \begin{bmatrix} +kinship \\ +person \end{bmatrix} \in \{gwal \text{ 'grandparent'}, yapa \text{ 'father'}, aiwa \text{ 'mother'}, ...\}$$

(L2) Personal Nouns (accept personal intensifier):

$$Noun, \begin{bmatrix} -kinship \\ +person \end{bmatrix} \in \{du \text{ 'man'}, takwa \text{ 'woman'}, \text{names of people}\}$$

(L3) Impersonal Nouns (accept impersonal intensifier):

$$Noun, \begin{bmatrix} -kinship \\ -person \end{bmatrix} \in \{wasa \text{ 'dog'}, hambwe \text{ 'snake'}, noo \text{ 'sago'}, taku \text{ 'top'}, ...\}$$

(L4) Adjectives, can accept impersonal intensifier:

$Adj \in \{wama \text{ 'white'}, néma \text{ 'big'}, yalapu \text{ 'little'}, nyo \text{ 'old'}, huli \text{ 'new'}, ...\}$

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(L5) Demonstratives (see section 3.2):

Dem ∈ {*wun* 'that', *ané* 'this', *wumbu* 'there', *ambu* 'here', *wumbére* 'those two', ...}

(L6) Pronouns (see section 3.1.2):

PRON ∈ {*wuni* 'I', *ani* 'we two', *méni* 'you (masc.)', *nyéni* 'you (fem.)', ...}

(L7) Quantifiers, can accept impersonal intensifier:

Qnt[+int] ∈ {*sétapa* 'only one', *natapa* 'one', *yéték* 'two', *hupuk* 'three', *yétiyéti* 'four', *natamba* 'five', *gwongop* 'six'}

(L8) Quantifiers, cannot accept impersonal intensifier:

Qnt[-int] ∈ {*naula* 'some', *sépélak* 'many', *nakémba* 'another', *atépék* 'all', *hatika* 'how many?'}

(L9) Articles, cannot accept impersonal intensifier:

ART ∈ {*nak* 'a (masc.)', *hési* 'a (fem.)'}

(L10) Intensifiers:

INT ∈ {*male* 'only [-personal]', *hapu* 'only [+personal]'}

(L11) Conjunctions, noun phrase level:

Conj ∈ {*wali* 'with', *akwi* 'also', *bér* 'those two'}

(L12) Conjunctions, clause level:

Conj ∈ {*bu* 'then', switch reference suffixes}

(L13) Transitive Verbs (optionally transitive):

V [+SU, ±OBJ] ∈ {*xiya* 'hit', *sa* 'eat', *huru* 'hold', *ta* 'cut', *yi* 'go', ...}

(L14) Intransitive Verbs:

V [+SU, -OBJ] ∈ {*pétékéré* 'run', *hwa* 'sleep', *re* 'sit', *té* 'stand', *wanji* 'scream', ...}

(L15) Unaccusative Verbs:

[±SU, +OBJ] ∈ {*tukwe* 'break', *pélam* 'shatter', *hényi* 'finish', *bleké* 'spill', ...}

(L16) Manner Adverbs (some overlap with adjectives):

Adv_{mnr} ∈ {*bari* 'quickly', *nakélak* 'slowly', *baka* 'uselessly', *sépéla* 'wrongly', ...}

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(L17) Tense and Comparative Adverbs (see section 3.2):

Adv ∈ {*wungi* 'like that', *wundé* 'then', *angi* 'like this', *andé* 'now', ...}

(L18) Imperative Markers:

Imp ∈ {*mé, sé, ma, sa, métaka*} (*métaka* 'let him')

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5. DISCOURSE STRUCTURE

The primary purpose of this chapter is to provide a body of data for researchers who are interested in investigating Hanga Hundi further. In addition, this chapter will make some observations about the structure and organization of Hanga Hundi texts. Most of the texts presented here were transcribed from oral texts and were revised, with the aid of a consultant, to correct speech or transcription errors. Since many consultants were used in the production of these texts, I will give a brief description of each consultant before the text that he contributed. The discussion will start with narrative discourse and will then proceed to expository, hortatory, prayer, and song. The final section of this chapter contains some brief comments about the comparison of oral and written style in Hanga Hundi.

5.1. Narrative discourse

The text corpus used for this monograph includes over twenty narrative texts. When these texts are compared to one another, it is striking how similar in structure they are. The narrative typically starts with an aperture sentence similar to, "I'm going to tell you about ..." The aperture sentence is then followed by one or two introductory sentences. The introductory sentence usually means something like, "One day my friend and I went to ..." After the introductory sentence the narrative proceeds with a series of body sentences. The body sentences are connected to each other by tail-head linkage except, perhaps, at points in the narrative where there is a break or a peak in the story line. The narrative concludes with a closing sentence which is usually an equative clause with a meaning similar to, "Enough, this is my little story." The terms used here, aperture, peak, and body, are terms used by Longacre (1983) in his treatment of discourse grammar.

Another feature of narrative, particularly real-life and fictional narratives, is that participants tend to be introduced early by lexical noun phrases and then tracked with

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pronominal reference and by the switch reference suffixes. Both subject and object can be deleted from a clause when they can be supplied by the context. However, the verb is usually marked for subject agreement either by a subject agreement suffix or by a same subject switch reference marker. As mentioned earlier, the object is rarely repeated in tail-head linkage.

Another feature that is common to all Hanga Hundi discourse is the use of the marker *yak* 'enough'. This marker not only has a literal usage meaning 'enough', it is used frequently and appears to function as a pause filler to some extent. However, since some occurrences of *yak* are retained even after editing, it appears that it also has a significant discourse usage. It is generally used near the peak and the conclusion of a narrative, or to indicate a change in the train of thought. This marker occurs in the last sentence of all but one of the narratives, as well as in the expository and hortatory discourses. In contrast, *yak* does not occur at all in prayers or songs.

At this point the discussion on narratives will proceed in three different directions. The first section will consider real-life narratives further and will give examples of real-life narrative texts. The following section will discuss procedural narratives and some of the characteristics peculiar to them. The final section will briefly discuss fictional narratives.

5.1.1. Real-life narrative

This section discusses a type of narrative which I call real-life narratives. These narrative are distinguished from other types of narratives in that they are factual, told primarily in the past tense, and are generally eyewitness accounts of real events. The narratives shown in this section describe fairly recent events. Events which happened in the distant past and are not eyewitness accounts often take on a somewhat fictional or legendary character and are not included in this class of narrative.

In addition to the information already mentioned, real-life narratives have three distinguishing features. The first, and most obvious, is that they are usually called *hundi* 'talk'

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in the aperture sentence. If the aperture sentence does not use the word *hundi* then it will likely use a relative clause to briefly describe what event is the topic of the story. Another distinguishing feature is that real-life narratives are told entirely in the past tense, except for verbs in quoted utterances. Another feature is that subject tracking, through pronouns and the switch reference suffixes, is generally followed fairly closely. It is rare to have an unspecified subject in a real-life narrative. The texts that follow illustrate the structure and regularity of real-life narratives.

5.1.1.1. Real-life narrative #1: 'When Joshua saw a snake.'

This story was told by Joshua Wangel, who is approximately forty years old and lives in the village of Dumek. Joshua is literate in Tok Pisin because of the literacy efforts of some South Seas Evangelical Missionaries, but beyond this he has not had any formal education. Joshua is regarded as being an eloquent speaker of Hanga Hundi. I have no indication about the time reference for this story except that it is was not immediately prior to Joshua's recounting of it.

1) Wuni hambwe xé -wu-n -éka sapé -ta -wuni.
1S snake see-1S-RELPST-FOR story-INT-1S
PRON N N V

'I want to tell about when I saw a snake.'

2) Wu-na takwa wali ani yi yawi -ré.
1S-POSS woman with 1D go garden-TO
POSS N CONJ PRON V N

'My wife and I, we went to the garden.'

3) Yi-na-ka di apwi sékéra.
go-1D-DS 3P bird fly.away
V PRON N V

'We went and the birds scattered.'

4) Sékéra -nda-ka wuni wa, "Wu mapa wana".
fly.away-3P -DS 1S talk "that possum perhaps"
V PRON V "DEM N ADV"

'They scattered and I said, "Oh a possum perhaps."

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5) Na -e wuni wundé waré -wu.
express-NSQ 1S then go.up-1S
V SS PRON ADV V

'I said (that) and I went up.'

6) War -a wuni mo -mbu hwaa-ta wuni hwaké.
go.up-NSQ 1S base-LOC lay -SIM 1S search
V SS PRON N V PRON V

'I went up and, lying at the base (of a tree), I searched.'

7) Hwaké -patika wuni dawi -ré wungi waré.
search-FRUS 1S top.of.tree-TO like.that go.up
V PRON N ADV V

'Searching in vain I therefore went up to the top.'

8) Waré -wu-ka lé -wa hambwe ya -e lé -wa waré -wu-n
go.up-1S-DS 3SF-THIS snake come-NSQ 3SF-THIS go.up-1S-RELPST
V PRON N V SS PRON N

yambu-mbu lé wungi hwa.
path -LOC 3SF like.that lay
N PRON ADV V

'I went up and this snake came and likewise laid on the path I had gone up.'

9) Hwa-lé -ka lé wu-na takwa xé -taka lé wa,
lay-3SF-DS 3SF 1S-POSS woman see-SEQ 3SF talk
V PRON POSS N V SS PRON V

"Joshua, wun méta dé?"
"Joshua that what 3SM"
"N DEM WH PRON"

'She lay and my wife saw and then she said, "Joshua, what is that?"

10) Wa -lé -ka wuni wa, "Yindu?"
talk-3SF-DS 1S talk "where"
V PRON V "WH"

'She said that and I said, "Where?"'

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11) Wa -taka ya -sang -e wuni xé wungi hwa-lé -ka sara
talk-SEQ come-away.down-NSQ 1S see like.that lay-3SF-DS snake
V SS V SS PRON V ADV V N

hambwe.
snake
N

'I said that and then turned and saw sleeping there a python.'

12) Hwa-lé -ka xé -taka wuni wa, "Wu ma wurapék-a bu nak
lay-3SF-DS see-SEQ 1S talk "that IMP jump -NSQ then a
V V SS PRON V "DEM ADV V SS CONJ ART

mi -mbu huru-wu."
garamut.tree-LOC do -1S"
N V"

'She lay and (I) saw and then I said, "Oh jump up and hold on to a branch."'

13) Wungi wa -taka wuni wungi wurapéké.
like.that talk-SEQ 1S like.that jump
ADV V SS PRON ADV V

'I said that and then I likewise jumped.'

14) Wurapék-a wuni wa, "Wu ma huru-wu mi nak-mbu."
jump -NSQ 1S talk "that IMP do -1S tree a -LOC"
V SS PRON V "DEM ADV V N ART"

'I jumped and said, "Oh hold on to a branch."'

15) Huru-ta wuni na -e huru-wu-ka dé -wa mi wungi tukwe.
do -SIM 1S express-NSQ do -1S-DS 3SM-THIS tree like.that break
V SS PRON V SS V PRON N ADV V

'While holding it I thought and I held it and this branch likewise broke.'

16) Tukwe-ndé-ka wuni wungi xakri.
break-3SM-DS 1S like.that fall
V PRON ADV V

'It broke and I likewise fell.'

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17) Xakri-wu-ka lé -wa hambwe lé baka yaang -e lé
fall -1S-DS 3SF-THIS snake 3SF worthless runaway-NSQ 3SF
V PRON N PRON ADJ V SS PRON

wungi yi.
like.that go
ADV V

'I fell and this snake she ran away uselessly (without being killed) and she likewise went.'

18) Yak wuni hambwe-ré xé -wu-n yalapu sarsap andu.
enough 1S snake -TO see-1S-RELPST short.few story this.one
ADV PRON N N ADJ N DEM

'Enough, the little story of when I saw a snake is done.'

5.1.1.2. Real-life narrative #2: 'When Tom and I went to my garden.'

This story was told by Mark Taitus, a man in his mid-twenties from the village of Weko. Mark has finished six years of formal education and is literate in Tok Pisin and somewhat in English. Besides his six years of government schooling, Mark also attended a Bible school for two years. He told this story while we were sitting in his garden hut immediately after the events of this story had taken place. The story covers a duration of about three hours and the events recounted at the end of the story had taken place immediately prior to this story. This story is more of a report than a narrative.

1) Wuni hundi nak sapé -ta -wuni.
1S speech a story-INT-1S
PRON N ART V

'I want to tell a story.'

2) Gan hwa-e raamana wuni ganémba Tom-ka wuni haxé-ta re.
night lay-NSQ wake.up 1S morning Tom-FOR 1S wait-SIM sits
N V SS V PRON N N PRON V SS V

'At night I slept and got up and at morning I sat and waited for Tom.'

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3) Re -wu-ka dé dé dé -ka ge yataka-taka raam -a dé
sits-1S-DS 3SM 3SM 3SM-POSS house leave -SEQ get.up-NSQ 3SM
V PRON PRON POSS N V SS V SS PRON

wundé ya -ndé.
then come-3SM
ADV V

'I sat and he left his house and then coming up he came.'

4) Ya -e dé wu-na saawi xé wu-na ge -mbu.
come-NSQ 3SM 1S-POSS face see 1S-POSS house-LOC
V SS PRON POSS N V POSS N

'He came and saw my face at my house.'

5) Xé -ndé-ka wuni wa, "Sé nandé re -mé -t wu-na yar
see-3SM-DS 1S talk "IMP2 go.down sits-2SM-COND 1S-POSS machete
V PRON V "ADV V V DS POSS N

héra-wu-t bu yi-na."
get -1S-COND then go-1D"
V DS CONJ V"

'He saw and I said, "If you sit down I'll get my machete and then we'll go.'

6) Wa -wu-ka naand -e dé wundé re -ndé ge -mbu.
talk-1S-DS go.down-NSQ 3SM then sits-3SM house-LOC
V V SS PRON ADV V N

'I talked and he went down and sat at my house.'

7) Re -ndé-ka yar héra-wu-ka ani wundé gaya -na.
sits-3SM-DS machete get -1S-DS 1D then come.down-1D
V N V PRON ADV V

'He sat and I got my machete and we came down.'

8) Némbu gaya ani xéri mwe mwe wundé xale -na.
mountain come.down 1D river shore shore then come.up-1D
N V PRON N N N ADV V

'We came down the mountain crossed the river and came up.'

9) Xale ya -e ani wambula némbu xale.
come.up come-NSQ 1D again mountain come.up
V V SS PRON ADV N V

'We came up and came and again came up the mountain.'

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10) Némbu nak xale ani taku gaya ani wambula némbu gaya.
mountain a come.up 1D top comedown 1D again mountain comedown
N ART V PRON N V PRON ADV N V

'We came up a mountain and came down the peak and again came down a mountain.'

11) Némbu gaya ani némbu nak wari.
mountain come.down 1D mountain a go.up
N V PRON N ART V

'We came down the mountain and went up a mountain.'

12) Némbu nak war -e ani yawi xaku.
mountain a go.up-NSQ 1D garden come.upon
N ART V SS PRON N V

'We went up a mountain and came upon the garden.'

13) Yawi xaakw -a wulay-a ani ge -ko -mbu
garden come.upon-NSQ go.in-NSQ 1D house-INSIDE-LOC
N V SS V SS PRON N

naand -e jondu taka-taka re -ndé-ka wuni ya wundé
go.down-NSQ stuff put -SEQ sits-3SM-DS 1S fire then
V SS N V SS V PRON N ADV

hénjara -na.
make.fire-1D
V

'We came up to the garden and went in and went down to the (garden) house and put our stuff and he sat and I started a fire.'

14) Ya hénjara -na-ka xéréké-ta re -ndé-ka ani yawi -ré gwandi.
fire make.fire-1D-DS ignite-SIM sits-3SM-DS 1D garden-TO go.out
N V V SS V PRON V N

'We started a fire and it ignited and stayed and we went into the garden.'

15) Yawi -ré gwande ani héki-ka wundé ruwa -na.
garden-TO come.in 1D yam -FOR then unearth-1D
N V PRON N ADV V

'We went into the garden and went harvesting for some yams.'

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16) Héki-ka ruwa -e ani taka-taka wa -wu-ka dé bangi
yam -FOR unearth-NSQ 1D put -SEQ talk-1S-DS 3SM stick
N V SS PRON V SS V PRON N

héra-ndé-ka ani wundé xa -na.
get -3SM-DS 1D then dig-1D
V PRON ADV V

'We went lookimg for yams and I told him to get a stick and then we dug them up.'

17) Héki xa -e wuni taka-wu-ka ani wundé yata -na dé akwi.
yam dig-NSQ 1S put -1S-DS 1D then carry-1D 3SM also
N V SS PRON V PRON ADV V PRON CONJ

'We dug up some yams and I put some and we carried them, him also.'

18) Yata -ndé-ka héra-e hura ani wambula boro ge -ré gaya.
carry-3SM-DS get -NSQ hold 1D again lean.to house-TO come.down
V V SS V PRON ADV N N V

'He carried and got and held (the yams) and we again came down to the garden house.'

19) Gaya ani boro ge -mbu wulay-a re -ta ani héki
come.down 1D lean.to house-LOC go.in-NSQ sits-SIM 1D yam
V PRON N N V SS V SS PRON N

wundé tu -na ya -mbu.
then roast-1D fire-LOC
ADV V N

'We came down and went in and sat in the garden house and cooked some yams on the fire.'

20) Tu -na-ka héki ya -ndé-ka ani héra-e hura ani
roast-1D-DS yam come-3SM-DS 1D get -NSQ hold 1D
V N V PRON V SS V PRON

pwiyar -a taka-taka re -ta ani hundi naula wundé
take.fr.fire-NSQ put -SEQ sits-SIM 1D speech some then
V SS V SS V SS PRON N QNT ADV

bulé -na.
talk.about-1D
V

'We roasted and the yams cooked and we got and took them and removed them from the fire and put them down and then sat and had a talk.'

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21) Bulé -ta wa -wu-ka dé wundé hayé -ndé.
talk.about-SIM talk-1S-DS 3SM then write-3SM
V SS V PRON ADV V

'We conversed and I talked and he wrote.'

22) Nyinga-mbu hay -a taka-ta -ndé.
paper -LOC write-NSQ put -INT-3SM
N V SS V

'He wrote on a leaf (paper).'

23) Taka-ndé-ka re -ta ani yi-te -na-ka-ngala naula hundi wundé
put -3SM-DS sits-SIM 1D go-FUT-1D-DS-LIKE some speech then
V V SS PRON V QNT N ADV

bulé -na.
talk.about-1D
V

'He put it and we sat and talked about where we would go.'

24) Yak amba nukwa wun yi-na-n -éngala hundi andu, yak.
enough this day that go-1D-RELPST-LIKE speech this.one enough
ADV DEM N DEM N N DEM ADV

'Enough, this day, this talk about what we did is enough.'

5.1.2. Procedural narrative

Procedural narratives are similar to real-life narratives in that the aperture sentence will either call the text a *hundi* 'talk' or will briefly describe it with relative clause topic. The procedural texts differ, however, in that they usually use a combination of conditional and future tense to build the sequence of events. Also, though subject tracking is still maintained in a procedural narrative, it seems to be less prominent. The following texts give examples of procedural narratives.

5.1.2.1. Procedural narrative #1: 'How to harvest sago.'

This procedural narrative was told by Clement Yato, a man probably in his mid-forties who lives near the village of Weko. Clement is literate in Tok Pisin, again, probably because of missionary literacy efforts, and has attended a two-year Bible school in Tok Pisin. Clement gave this narrative while he was working on the sago hammer, a tool that is used to

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scrape the pith of the sago palm into a course sawdust. Sago harvesting is usually done at least every other week and is usually a family activity. The sago tree, and events associated with it, are a central part of Hanga Hundi culture.

```
1)      Bakula              wuni t  -e,  noo  bwa    ba.
        sago.hammer.stick   1S   cut-NSQ sago scrape sago.stick
        N                   PRON V   SS  N    V      N

        'I'm carving a sago scraper, a sago scraping stick.'

2)      Ba          ta -e   wuni, sékéhawi   hu    -solo  -te   noo  bwa
        sago.stick  cut-NSQ 1S    hammer.tip put.to-INSIDE-FUT  sago scrape
        N           V   SS  PRON  N          V                  N    V

        ba.
        sago.stick
        N

        'After I carve this I'll push the pipe into this sago scraping
        stick.'

3)      Sékéhawi   hu    -solo  -taka wuni, noo -ka   yi-te.
        hammer.tip put.to-INSIDE-SEQ  1S    sago-FOR  go-FUT
        N          V             SS   PRON  N         V

        'After I push the pipe in, I'll go to the sago tree.'

4)      Noo -ka   y -e   wuni, noo  xéli-te.
        sago-FOR  go-NSQ 1S    sago fell-FUT
        N         V  SS  PRON  N    V

        'When I go to the the sago tree, I will cut it down.'

5)      Noo  xéli-wu-t    dé   xakri-te.
        sago fell-1S-COND 3SM  fall -FUT
        N    V       DS   PRON V

        'When I finish cutting it, it will fall.'

6)      Xakri-ndé-t    wuni, sémé          hu    -te.
        fall -3SM-COND 1S    jungle.growth put.to-FUT
        V         DS   PRON  N             V

        'After it falls, I'll clean off the growth on it.'
```

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7) Sémé hu -taka wuni, misange héra-te.
jungle.growth put.to-SEQ 1S axe get -FUT
N V SS PRON N V

'After I clean off the vines, I'll get my axe.'

8) Misange héra-e wuni, noo séké -te.
axe get -NSQ 1S sago cut.up-FUT
N V SS PRON N V

'After I get my axe, I'll split the sago tree.'

9) Noo séké -taka wuni, suku sétéké.
sago cut.up-SEQ 1S morota cut.branches
N V SS PRON N V

'After I split the sago tree, I'll cut off the branches.'

10) Suku héra-e xéli-taka wuni, bélénga héra-te.
morota get -NSQ fell-SEQ 1S half.pangal get -FUT
N V SS V SS PRON N V

'After I get the morota and put it on the ground, I'll get some pangal sticks.'

11) Bélénga xéli-taka wuni, bangi -ka yi-te.
half.pangal fell-SEQ 1S bamboo-FOR go-FUT
N V SS PRON N V

'After I cut down the pangal, I'll go for a stick.'

12) Bangi héra-e wuni, bangi talé.
bamboo get -NSQ 1S bamboo sharpen
N V SS PRON N V

'After I get a stick, I'll sharpen the stick.'

13) Bangi talé -taka wuni, jaliwalépa rapu -te.
bamboo sharpen-SEQ 1S first.piece decorticate-FUT
N V SS PRON N V

'After I sharpen the stick, I'll peel back the bark.'

14) Jaliwalépa héreki -taka wuni, mwi noo rapu -te.
first.piece chase.out-SEQ 1S fat sago decorticate-FUT
N V SS PRON ADJ N V

'After I remove the bark, I'll open the sago meat.'

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15) Mwi noo rapu -taka wuni, walépa ta -te.
fat sago decorticate-SEQ 1S sago.bark cut-FUT
ADJ N V SS PRON N V

'After I open the sago meat, I'll cut the bark.'

16) Walépa ta -taka wuni, yar héra-te.
sago.bark cut-SEQ 1S machete get -FUT
N V SS PRON N V

'After I cut the bark, I'll get my knife.'

17) Yar héra-e wuni, walépa noo hété-te.
machete get -NSQ 1S sago.bark sago chop-FUT
N V SS PRON N N V

'After I get my knife, I'll chop the pith into little pieces.'

18) Walépa noo hété-taka wuni, yak, hawi héra-te.
sago.bark sago chop-SEQ 1S enough hammer get -FUT
N N V SS PRON ADV N V

'After I chop the pith into little pieces, enough, I'll get the sago hammer.'

19) Hawi héra-e wuni, mwi noo sépipu -te.
hammer get -NSQ 1S fat sago begin.scrape-FUT
N V SS PRON ADJ N V

'After I get the sago hammer, I'll start to scrape the pith.'

20) Sépipuw -a wuni, mwi noo bwa -te.
begin.scrape-NSQ 1S fat sago scrape-FUT
V SS PRON ADJ N V

'After I start scraping, I'll scrape the pith.'

21) Mwi noo bwa -wu-t dé, sépélak ya -te.
fat sago scrape-1S-COND 3SM plenty become-FUT
N N V DS PRON QNT V

'After I scrape the sago, it will become plenty.'

22) Ya -ndé-t lé, takwa mi xéli-te.
become-3SM-COND 3SF woman tree fell-FUT
V DS PRON N N V

'After it does, the wife will cut down a tree.'

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23) Apaka -na mi xél -e yoo péra -e hura ya -e
jungle-POSS tree fell-NSQ vine tear.down-NSQ hold come-NSQ
POSS N V SS N V SS V V SS

lé, mi baké -te.
3SF tree push.in.ground-FUT
PRON N V

'After she cuts down a bush tree, pulls vines, and comes, she'll assemble the stand.'

24) Mi baké -taka lé, lé -ka du -ka wa -te.
tree push.in.ground-SEQ 3SF 3SF-POSS man-FOR talk-FUT
N V SS PRON POSS N V

'After she assembles the stand, she'll call her husband.'

25) "Be mé lu -a héra-e xaké.
"lg.pangal IMP break.off-NSQ get -NSQ place
"N ADV V V SS V

'Bring a big piece of pangal, come and put it on.'

26) Xak -a taka-mé -t, suku huru-wu."
place-NSQ put -2SM-COND morota do -1S"
V SS V DS N V"

'If you heap and put it on I'll do the morota.'

27) Suku huru-taka sawi yali -wu-t, noo mé tapwe.
morota do -SEQ sago.stand put.on-1S-COND sago IMP split
N V SS N V DS N ADV ADJ

héra-e hura ya.
get -NSQ hold come
V SS V V

'After I do the morota and finish the sago stand, bring something to cover the back side.'

28) Héra-e hura ya -e wuka.
get -NSQ hold come-NSQ pile.up
V SS V V SS V

'When you get the sago pulp pile it here.'

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```
29)   Wuka   -mé -t    bu   jaxé   xiya  -e   noo  ma       -wu
      pile.up-2SM-COND PERF screen pierce-NSQ sago wash.sago-1S
      V           DS   ADV  N      V       SS   N    V

      tapu       yali  taka.
      black.palm under put
      N          N     V
```

'When you pile the sago pulp, get the coconut screen and put it onto the limbum.'

5.1.2.2 Procedural narrative #2: 'How to build a house.'

This procedural narrative was given by Micah Hipandu, who is approximately forty years old and lives in the village of Nungwaia. Micah is literate in Tok Pisin and somewhat literate in English. He has had some formal education, less than six years, and has also completed a two-year Bible school. He told this procedural narrative in response to my question about how he had recently built his house. This narrative starts in the first person and shifts to third person, changing the narrative from a personal account to a general procedure. The subject is not established until sentence #9, at which point Micah seems to have decided on a third person subject.

```
1)    Wuni ge    to   -ngala-ka   wun -éka  wa  -ta -wuni.
      1S   house build-LIKE -FOR  that-FOR  talk-INT-1S
      PRON N     V:ADJ            DEM       V

      'I want to talk about how to build a house.'
2)    Tale  ge    to   -wu  na     -e   ge    to    hapwa
      first house build-1S express-NSQ house build place
      ADV   N     V         V       SS  N     V     N

      hurukalék-a   taka-taka    wun  hépa   bw    -e    bw    -e
      fix      -NSQ put -SEQ     that ground scrape-NSQ scrape-NSQ
      V         SS  V    SS      DEM  N      V      SS    V      SS

      yaki      -taka ikapi hapwa xaku     -ndé-t    taka-taka
      throw.away-SEQ  good  place come.upon-3SM-COND put -SEQ
      V          SS   ADJ   N     V             DS   V    SS
```

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```
tomi  -ka   hwaar-ka   yi, du  apaka -r.
lumber-FOR  post -FOR  go  man jungle-TO
N           N          V   N   N
```

'First I thought about building a house I straightened up the house lot and flattened out the dirt and threw out the rubish and when it became a good place I went for the posts and lumber, the man to the jungle (an unconscious shift to third person).'

3)
```
Y -e   tomi   xél -e   hwaar séké   hure -e   taka-taka,
go-NSQ lumber fell-NSQ post  cut.up bring-NSQ put -SEQ
V  SS  N      V    SS  N     V      V     SS  V    SS

ge    to   -te   ya-ngala  hapwa hu    -taka yak,   wungi     taka.
house build-FUT do-LIKE   place put.to-SEQ  enough like.that put
N     V          ADJ       N     V      SS   ADV    ADV       V
```

'He went and cut down the lumber and trimmed the posts and brought them and put them, at the place where he will build the house there he put them.'

4)
```
Taka-taka tale  hwaar séké   hure -e    weko hura.
put -SEQ  first post  cut.up bring-NSQ  Weko hold
V    SS   ADV   N     V      V     SS   N    V
```

'He put them and then first trimmed the posts and brought them and dug the holes.'

5)
```
Weko-mbu  hu    -sanda.
Weko-LOC  put.to-all.down
N         V
```

'He put them down in the hole.'

6)
```
Hwaar hu    -sand    -e   taka-taka y -e   tomi
post  put.to-all.down-NSQ put -SEQ  go-NSQ lumber
N     V              SS  V    SS   V  SS  N

xél -e   hure -e   tomi   wu   taku-mbu  taka.
fell-NSQ bring-NSQ lumber that top -LOC  put
V    SS  V     SS  N      DEM  N         V
```

'He put the posts down and then went and cut the lumber and brought it and put it on top.'

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7) Tomi, hwanji, dawan, xaké -taka tomi harék-a hwanji
lumber ridgepole support place.on-SEQ lumber raise-NSQ ridgepole
N N N V SS N V SS N

taka.
put
V

'The lumber, ridgepole, top plate he put on and then raised the lumber and put on the ridgepole.'

8) Xaké -taka -taka hépé hure -e, yak hépé-mbu gi,
put.on-COMPL-SEQ vine bring-NSQ enough vine-LOC bind
V SS N V SS EXCL N V

wungi gi.
like.that bind
ADV V

'He put it up and then got some vines and, enough he fastens with vines, therefore fastened it.'

9) Giy -a hutapék -a taka-taka, yak, ge to -ndé du
bind-NSQ construct-NSQ put -SEQ enough house build-3SM man
V SS V SS V SS ADV N V N

hapu wundé yi-ndé apaka -r.
alone then go-3SM jungle-TO
INT ADV V N

'He fastened it and finished the framing and then, enough, just the man who built the house went to the jungle.'

10) Y -e bali xiya -e hamwi hura re taka-taka dé
go-NSQ pig pierce.hit-NSQ meat hold sits put -SEQ 3SM
V SS N V SS N V SS V V SS PRON

du -ka w -e, "Nak nukwa mé ya -ngu-t bu wu-na
man-FOR talk-NSQ "a day IMP come-2P -COND PERF 1S-POSS
N V SS "ART N ADV V DS ADV POSS

ge ha -kwa."
house roof-1P"
N V"

'He went and shot a pig and got some animals and brought them and put them and said to the men, "One day come and then we'll put the roof on my house."'

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11) Wa -ndé-ka di du ya -e di apaka -r y -e di
talk-3SM-DS 3P man come-NSQ 3P jungle-TO go-NSQ 3P
V PRON N V SS PRON N V SS PRON

suku yat -e hura ya.
morota carry-NSQ hold come
N V SS V SS V

'He said that and the men came and carried and brought sago palm leaves.'

12) Du suku yat -e hure -e yaki -taka
man morota carry-NSQ bring-NSQ throw.away-SEQ
N N V SS V SS V SS

ha -njoka.
roof-PUR
V SS

'The men carried the palm leaves and threw them down in order to put the roof on.'

13) Té -nda-ka di détakwa di yawi -r o senga -r
stand-3P -DS 3P women 3P garden-TO or old.garden-TO
V PRON N PRON N ADV N

nyaa -ka di yi.
greens-FOR 3P go
N PRON V

'They were there and the women went to the new garden or old garden for some vegetables.'

14) Y -e hure -e hénoo humbwi-njoka.
go-NSQ bring-NSQ food cook-PUR
V SS V SS N V SS

'They went and brought it in order to cook the food.'

15) Té -nda-ka di du ge haa -ta té.
stand-3P -DS 3P man house roof-SIM stand
V PRON N N V SS V

'They stayed and the men were roofing the house.'

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16) Ge haa -ta té -nda-ka di détakwa hénoo humbw-e
house roof-SIM stand-3P -DS 3P women food cook-NSQ
N V SS V PRON N N V SS

hure -e di du -r hwe -nda-ka sa -taka di ge ha-e.
bring-NSQ 3P man-TO give-3P -DS eat-SEQ 3P house roof-NSQ
V SS PRON N V V PRON N V

'They were roofing the house and the women cooked the food and gave it to the men and they roofed the house.'

17) Ge haa -ta té -nda-ka di wambula détakwa noo tai.
house roof-SIM stand-3P -DS 3P again women sago gel
N V SS V PRON ADV N N V

'They were roofing they house and the women again made some sago jelly.'

18) Noo taiy-a hamwi sax -e hure -e di du -r hwe.
sago gel -NSQ meat boil-NSQ bring-NSQ 3P man-TO give
N V SS N V SS V SS PRON N V

'They made the sago jelly and boiled the meat and brought it and gave it to the men.'

19) Atépék du raam -a suku harék-a ge ha -séke-ké-taka
all man get.up-NSQ morota raise-NSQ house roof-ENTIR-DUB-SEQ
QNT N V SS N V SS N V SS

gay -e di du -ka angi wa, "Guni atépék gu -na
come.down-NSQ 3P man-FOR like.this talk 2ndPl all 2P -POSS
V SS PRON N ADV V PRON QNT POSS

ge -r yi-ké -nguni. Ambu re-ngu-t hénoo yakwa-mbe-t
house-TO go-DUB-2P here sits-2P-COND food feed.well-1P-COND
N V DEM V DS N V DS

sa-taka."
eat-SEQ
V SS

'All the men got up and lifted up the sago leaves and finished roofing the house and came down and they said to the men, "You all cannot go to your houses. If you sit here then we'll prepare some food and you can eat it."'

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20) Gay -e re -nda-ka dé ge -na yapa hapu gwande
come.down-NSQ sits-3P -DS 3SM house-POSS father alone come.in
V SS V PRON POSS N INT V

dé hénoo atépék détakwa humbw-e hure -e dé -ka
3SM food all women cook-NSQ bring-NSQ 3SM-FOR
PRON N QNT N V SS V SS PRON

ge -ko -mbu taka-nda-n hénoo héra-ta di naula-r
house-INSIDE-LOC put -3P -RELPST food get -SIM 3P some -TO
N N N V SS PRON QNT

hwe na héra na yi.
give and get and go
V CONJ V CONJ V

'They came down and sat and the house owner brought the food that the women had cooked and put in his house and got it and gave it all away.'

21) Hwe -ndé-ka sa -taka di yak di wungi yi ge -r,
give-3SM-DS eat-SEQ 3P enough 3P like.that go house-TO
V V SS PRON ADV PRON ADV V N

de-ka ge -r, nak nak.
3P-POSS house-TO a a
POSS N ART ART

'He gave it and they ate and then, enough, they then went home, to their houses, each one.'

22) Yi-nda-ka dé ge to -ndé yapa hapu dé re -ndé-ka naula
go-3P -DS 3SM house build-3SM father alone 3SM sits-3SM-DS some
V PRON N V N INT PRON V QNT

nukwa yi-ndé-ka dé re dé dé hapu saré́k-a dé angi
day go-3SM-DS 3SM sits 3SM 3SM alone think-NSQ 3SM like.this
N V PRON V PRON PRON INT V SS PRON ADV

wa, "Wuni ge yatépi -ta -wuni."
talk "1STSg house build.walls-INT-1S"
V "PRON N V"

'They went and the man who built the house stayed and some time later when he himself decided he said, "I will wall in the house."'

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23) Wa -taka dé dé hapu y -e dé awu -r y -e
talk-SEQ 3SM 3SM alone go-NSQ 3SM sago.grove-TO go-NSQ
V SS PRON PRON INT V SS PRON N V

dé gawu yat -e hure ya -e dé ge yatépi rami
3SM pangal carry-NSQ bring come-NSQ 3SM house build.walls nail
PRON N V SS V V SS PRON N V N

hure -e dé wundé xiya -ndé gawu -mbu.
bring-NSQ 3SM then pierce.hit-3SM pangal-LOC
V SS PRON ADV V N

'He said that and then he himself went to the sago swamp and carried some palm branches and brought them and got some nails for making walls and brought them and then nailed the palm branches.'

24) Yatép -e yatép -e taka-taka dé awula wulai
build.walls-NSQ build.walls-NSQ put -SEQ 3SM near go.in
V SS V SS V SS PRON N V

gwande yambu tépi-taka dé jambé ya-taka dé yak dawi
come.in path shut-SEQ 3SM bed do-SEQ 3SM enough house.peak
V N V SS PRON N V SS PRON ADV N

hét -a yak na -e dé dé -ka (nyan)
cover.over-NSQ enough express-NSQ 3SM 3SM-POSS (child)
V SS ADV V SS PRON POSS (N)

takwa-ka nyambali-ka w -e, "Yak.
woman-FOR kids -FOR talk-NSQ "enough
N N V SS "EXCL

'He made the walls and completed them and went in and covered the doors and made the beds and, enough, he covered the top of the house and, enough, he said to his wife and children, "Enough."'

25) Ma wulai-kwa huli ge -r.
IMP go.in-1P new house-TO
IMP V ADJ N

'Let's move into the new house.'

26) Tale nyo ge -mbu di re yak di wula -e huli ge -mbu
first old house-LOC 3P sits enough 3P go.in-NSQ new house-LOC
ADV ADJ N PRON V ADV PRON V SS ADJ N

re -ta mauli sauli ya-ta re.
sits-SIM heart.like excited do-SIM sits
V SS N ADJ V SS V

'Before they lived in the old house, enough, they went into the new house and they were very happy there.'

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```
27)   Yak     wu  -mba huli ge    to   -ndé-n      -na   jémbwa bu   hényi
      enough that-LOC new  house build-3SM-RELPST-POSS work   PERF finish
      ADV    ADJ      ADJ  N     POSS                 N      ADV  V

      yak.
      enough
      ADV

      'Enough, this work of him building a new house is finished, enough.'
```

5.1.3. Fictional narrative

Fictional narratives are distinguishes from real-life and procedural narratives in that they are not described in the aperture sentence by the word *hundi* 'talk'. A fictional narrative is called *sarsap* 'story' and the verb used for 'tell' is *sapé* instead of *wa* 'to talk'. Though the word *sarsap* is occasionally applied to real-life narratives, it seems to imply that the story is of dubious reliability. Other than this distinction in terms, which occurs in the first sentence of the narrative, fictional narratives are very similar to real-life ones.

5.1.2.1. Fictional narrative #1: 'The ghosts who ate the children.'

This story was told by Sailas Manjo, who is in his mid-forties and lives in the village of Dumek. Although Sailas has had only two years of formal education, he has continued to educate himself informally so that he his currently literate in Tok Pisin and English. In addition, Sailas is a recognized leader in the church and in the village. He told this story to me so that he could transcribe it as part of his literacy training in Hanga Hundi. Apparently, parents may tell their children a story like this at night for entertainment.

```
1)    Wuni sarsap nak sapé -ta -wuni.
      1S   story  a   story-INT-1S
      PRON N      ART V

      'I want to tell a story.'
```

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2) Nakémba nukwa atépék du takwa bangu héti -te di yi nak
another day all man woman tambaran dance-FUT 3P go a
QNT N QNT N N N V PRON V ART

tépa -ré.
village-TO
N

'One day all of the people went to a place to dance a spirit dance.'

3) Atépék ge -na du takwa wundé yi-nda bangu héti -te.
all house-POSS man woman then go-3P tambaran dance-FUT
QNT POSS N N ADV V N V

'All of the people of the village went to dance the spirit dance.'

4) Yi-nda-ka lé gwalepa takwa lé -ka gwal yéti hura lé
go-3P -DS 3SF ancestors woman 3SF-POSS grandchild two hold 3SF
V PRON N N POSS N QNT V PRON

ge -mbu hura hwa.
house-LOC hold lay
N V V

'They went and an old woman stayed and slept with her two grandchildren at her house.'

5) Hura hwa-lé -ka bér hénoo ya-ndé-ka bér géra.
hold lay-3SF-DS 3D food do-3SM-DS 3D cry
V V PRON N V PRON V

'She stayed and slept and the two were hungry and cried.'

6) Géra-mbé-ka lé, ya sérke lé, tuno wundé tu -lé, gan.
cry -3D -DS 3SF fire ignite 3SF roasted.sago then roast-3SF night
V PRON N V PRON N ADV V N

'They cried and she started a fire and roasted some sago at night.'

7) Tale tu -lé -n pwiyar -a lé puka -e lé
first roast-3SF-RELPST take.fr.fire-NSQ 3SF break-NSQ 3SF
ADV N V SS PRON V SS PRON

hwe bér-ka.
give 3D -FOR
V PRON

'The sago she roasted first she removed from the fire and broke it and gave it to them.'

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8) Hwe -lé -ka bér, sa -hamba-mbér.
give-3SF-DS 3D eat-NOT -3D
V PRON V

'She gave it to them but they didn't eat it.'

9) Wu gamba di hura sa, tu -lé -n tuno.
that ghost 3P hold eat roast-3SF-RELPST roasted.sago
DEM N PRON V V N N

'Some ghosts ate the sago she roasted.'

10) Hwe -taka lé wambula tu.
give-SEQ 3SF again roast
V SS PRON ADV V

'She gave and then roasted again.'

11) Tu -lé -ka dé wambula yané.
roast-3SF-DS 3SM again cook
V PRON ADV V

'She roasted it and again it was cooked.'

12) Ya -ndé-ka lé puka -e lé bér-ka hwe.
cook-3SM-DS 3SF break-NSQ 3SF 3D -POSS give
V PRON V SS PRON POSS V

'It cooked and she broke it and gave it to them.'

13) Hwe -lé -ka di gamba di hura sa.
give-3SF-DS 3P ghost 3P hold eat
V PRON N PRON V V

'She gave it and the ghosts took and ate it.'

14) Hukmbu wambula tu -lé -ka ya -ndé-ka lé bér-ka angi wa,
later again roast-3SF-DS cook-3SM-DS 3SF 3D -FOR like.this talk
ADV ADV V V PRON PRON ADV N

"Béni -ka wundé hwe -wu.
"2ndDl-FOR then give-1S
"PRON ADV V

'Later she roasted again and it cooked and she said to them, "I have given to you.'

15) Ané wuni sa -ta -wuni."
this 1S eat-INT-1S"
ADV PRON V"

'I'll eat this one."'

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16) Wa -lé -ka bér lé -ka gwal yéti angi wa, "Ani-ka
talk-3SF-DS 3D 3SF-POSS grandchild two like.this talk "1D-FOR
V PRON POSS N QNT ADV V "PRON

mé hwe sa -na."
IMP give eat-1D"
ADV V V"

'She said that and her two grandchildren said this, "Give it to us and we'll eat it."

17) Wa -mbé-ka lé angi wa, "Wun hwe -wu-n hénoo méta
talk-3D -DS 3SF like.this talk "that give-1S-RELPST food what
V PRON ADV V "DEM N N WH

béni ya?"
2D do"
PRON V"

'They said that and she said this, "What did you do with the food I gave you?"

18) Wa -taka lé ya héra-e hapale lé xé, gamba-na saawi-ré
talk-SEQ 3SF fire get -NSQ light.up 3SF see ghost-POSS face -TO
V SS PRON N V V PRON V POSS N

'She said that and got a firebrand and waved it and saw the ghosts' faces.'

19) Xé -taka lé bambun ge saak-a lé wungi yaang -e
see-SEQ 3SF back.of house open-NSQ 3SF like.that runaway-NSQ
V SS PRON ADJ N V SS PRON ADV V SS

lé yi bangu héti -ta té -nda-n tépa -ré.
3SF go tambaran dance-SIM stand-3P -RELPST village-TO
PRON V N V SS N N

'She saw and went out the other side of the house and ran away and went to the place where they were dancing the spirit dance.'

20) Lé -ka gwal yéti-ré gamba wundé ti -a sa -nda.
3SF-POSS grandchild two -TO ghost then bite-NSQ eat-3P
POSS N QNT N ADV V SS V

'The ghosts bit and ate her two grandchildren.'

21) Lé yaang -e lé wungi yi.
3SF runaway-NSQ 3SF like.that go
PRON V SS PRON ADV V

'She ran away and went like that.'

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22) Gwande lé bangu héti -ta té -nda-n, Amer gwande lé
come.in 3SF tambaran dance-SIM stand-3P -RELPST Amer come.in 3SF
V PRON N V SS N N V PRON

de-ka hangapu -mbu lé xakr-e lé wungi hiya.
3P-POSS dance.area-LOC 3SF fall-NSQ 3SF like.that die
POSS N PRON V PRON ADV V

'She went in and she went into the place where they were dancing the spirit dance, Amer, and fell onto their dance place and fainted.'

23) Du takwa gwaré hu -ta té -nda-n waréngén
man woman sing put.to-SIM stand-3P -RELPST be.amazed
N N V V N V

na -e di wa, "Takwa hési bu hiya."
express-NSQ 3P talk "woman a.woman IMPR die"
V SS PRON V "N ART ADV V"

'The people were standing singing and trembled and said, "A woman has died."

24) Wa -taka hura re-nda-ka lé yika mauli ya-ndé-ka raam-a
talk-SEQ hold sits-3P-DS 3SF good heart.like do-3SM-DS get.up-NSQ
V SS V V PRON ADJ N V V SS

lé wa, "Wu-na gwal yéti-ré gamba di hura sa.
3SF talk "1S-POSS grandchild two -TO ghost 3P hold eat
PRON V "POSS N QNT N PRON V V

'They said that and got her and sat and she revived and got up and said, "Some ghosts have eaten my two grandchildren.'

25) Té -nda-ka wuni andé yaang -e ya -w -i."
stand-3P -DS 1S now runaway-NSQ come-1S-PRES"
V PRON ADV V SS V"

'They were there and now I have run away and come."

26) Wungi wa-lé-ka dé xingéré-ndé-ka di wungi ya
like.that talk-3SF-DS 3SM predawn-3SM-DS 3P like.that come
ADV V PRON V PRON ADV V

de-ka ge -ré.
3P-POSS house-TO
POSS N

'She said that and the day dawned and they came to their houses.'

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27)   Ya  -e   di   xé  wumbére nyan  yéti-ré  gamba wundé sa -nda.
      come-NSQ 3P   see these.2 child two -TO  ghost then  eat-3P
      V    SS  PRON V   DEM     N     QNT      N     ADV   V

      'They came and saw the two children the ghosts had eaten.'

28)   Wu-na    sapé -wu-n       hundi  yak.
      1S-POSS  story-1S-RELPST  speech enough
      POSS     N                N      ADV

      'My story that I've told is enough.'
```

5.1.2.2 Fictional narrative #2: 'The cassowary gives birth to a boy.'

This story was told by Timothy Aaron, a man in his early twenties who lives in the village of Weko. Timothy is one of the most educated men living in the village, having completed tenth grade and two years of vocational school. Because of this, Timothy is literate in Tok Pisin and English. This high level of education means that he has spent at least six years outside of the Hanga Hundi language area, which does not seem to have affected his command of Hanga Hundi. Timothy told this story to me as part of his literacy training in Hanga Hundi. As background to this story, cassowaries are large birds similar to the emu. In Papuan fiction, cassowaries are often equated with a wild jungle spirit woman.

```
1)    Sarsap nak sapé -ta -wuni.
      story  a   story-INT-1S
      N      ART V

      'I want to tell a story.'

2)    Hanja, nakémba nukwa saiké     wundé yi-lé   apaka -ré.
      before another day   cassowary then  go-3SF  jungle-TO
      ADV    QNT     N     N         ADV   V       N

      'Before, one day a cassowary went to the jungle.'

3)    Y -e   lé   xé, apaka -mbu  yi-ta  t    -e   lé   xé  du
      go-NSQ 3SF  see jungle-LOC  go-SIM stand-NSQ 3SF  see man
      V  SS  PRON V   N           V  SS  V     SS  PRON V   N

      nakémba hiya-e   re  -ndé-ka.
      another die -NSQ sits-3SM-DS
      QNT     V    SS  V

      'She went and saw, she went and in the jungle saw that a man died
      and remained there.'
```

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4) Hiya-e re -ndé-ka dé -ka sépi-mbu hawe male hawe
die -NSQ sits-3SM-DS 3SM-FOR skin-LOC grub only grub
V SS V PRON N N INT N

hurukiti-ta dé wungi té.
infest -SIM 3SM like.that stand
V SS PRON ADV V

'He died and sat there and worms were swarming on his skin covering it and eating him.'

5) Té -ndé-ka lé, xé -taka wundé sa -lé wun hawe.
stand-3SM-DS 3SF see-SEQ then eat-3SF that grub
V PRON V SS ADV V DEM N

'They were there and she saw them and ate the worms.'

6) Hawe sa -taka lé wundé yi-ta té -lé.
grub eat-SEQ 3SF then go-SIM stand-3SF
N V SS PRON ADV V SS V

'She ate and went and stayed.'

7) Yi-ta té -lé -ka dé nyan wungi gi lé -ka biya -mbu.
go-SIM stand-3SF-DS 3SM child like.that bind 3SF-FOR belly-LOC
V SS V PRON N ADV V PRON N

'She left and stayed and a child formed in her belly.'

8) Nyan gi -ndé-ka lé, yi-ta t -e lé nyan wungi
child bind-3SM-DS 3SF go-SIM stand-NSQ 3SF child like.that
N V PRON V SS V SS PRON N ADV

héra, du -na nyan.
get man-POSS child
V POSS N

'The child formed and she went about and bore the child, the man's child.'

9) Héra-e lé, apaka -mbu hura yi-ta té, aiwa wali.
get -NSQ 3SF jungle-LOC hold go-SIM stand mother with
V SS PRON N V V SS V N CONJ

'She bore it and took it and went in the jungle with his mother.'

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10) Hura yi-ta té -lé -ka dé aiwa -na munya s -e
hold go-SIM stand-3SF-DS 3SM mother-POSS breast eat-NSQ
V V SS V PRON POSS N V SS

yi-ta té.
go-SIM stand
V SS V

'She took him and went about and he drank his mother's milk and went about.'

11) Yi-ta t -e dé wungi némaapwi ya.
go-SIM stand-NSQ 3SM like.that huge become
V SS V SS PRON ADV ADJ N

'He went about like that and became big.'

12) Nakémba nukwa ge -na du nak wundé yi-ndé.
another day house-POSS man a then go-3SM
QNT N POSS N ART ADV V

'One day a village man went.'

13) Y -e dé xé apaka -mbu waki -ré, xé dé -ka waki.
go-NSQ 3SM see jungle-LOC footprint-TO see 3SM-FOR footprint
V SS PRON V N N V PRON N

'He went and saw his footprints in the jungle.'

14) Xé -taka dé wa, "Amba nyan héndé wali dé yi-ta té."
see-SEQ 3SM talk "this child who with 3SM go-SIM stand"
V SS PRON V "DEM N WH CONJ PRON V SS V"

'He saw and then said, "Who is this child going about with?"'

15) Wa -taka y -e dé xé aiwa wun saiké -na waki -ré.
talk-SEQ go-NSQ 3SM see mother that cassowary-POSS footprint-TO
V SS V SS PRON V N DEM POSS N

'He said that and then saw the cassowary's footprints.'

16) Xé -taka dé wa, "Ake, saiké wana, saiké lé héra,
see-SEQ 3SM talk "oh cassowary perhaps cassowary 3SF get
V SS PRON V "DEM N ADV N PRON V

saiké lé hura yi-ta té."
cassowary 3SF hold go-SIM stand"
N PRON V V SS V"

'He saw and then said, "Oh! A cassowary perhaps, a cassowary gave birth, a cassowary takes him about."'

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17) Xé -taka dé wa, "Métaki ya huru-ta -wuni amba nyan."
see-SEQ 3SM talk "how do do -INT-1S this child"
V SS PRON V "ADV V V DEM N"

'He saw and then said, "How can I get a hold of this child?"'

18) Wa -taka nakémba yambu y -e dé dé -ka yawi -mbu dé
talk-SEQ another path go-NSQ 3SM 3SM-POSS garden-LOC 3SM
V SS QNT N V SS PRON POSS N PRON

xé lapu ak lapu péri péri -ta lé lé -ka
see banana ripe/heavy banana peel.off peel.off-SIM 3SF 3SF-POSS
V N ADJ N V V SS PRON POSS

nyan -ka hwe.
child-FOR give
N V

'He said that and then went on a road and saw her in his garden peeling bananas and giving them to her son.'

19) Hwe -lé -ka dé wundé sa -ndé.
give-3SF-DS 3SM then eat-3SM
V PRON ADV V

'She gave them and he ate them.'

20) Wun xé -taka y -e dé wekwa bu xa.
that see-SEQ go-NSQ 3SM hole PERF dig
DEM V SS V SS PRON N ADV V

'He saw and then went and dug a hole.'

21) Wekwa xa -e taka-taka dé nyinga héra-e dé samé samé taka.
hole dig-NSQ put -SEQ 3SM paper get -NSQ 3SM cover cover put
N V SS V SS PRON N V SS PRON V N V

'He dug a hole and put it and got some leaves and covered it over.'

22) Taka-ndé-ka dé, yak, nakémba nukwa, lé ya -e lé,
put -3SM-DS 3SM enough another day 3SF come-NSQ 3SF
V PRON ADV QNT N PRON V SS PRON

yak, lé -ka nyan hura yi.
enough 3SF-POSS child hold go
ADV POSS N V V

'He put them and, enough, one day she came and took her son and went.'

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23) Y -e dé, yak dé lapu sa -njoka hénoo ya-ndé-ka
go-NSQ 3SM enough 3SM banana eat-PUR food do-3SM-DS
V SS PRON ADV PRON N V SS N V

lapu sa na héra na pér -e s -e dé
banana eat and get and peel.off-NSQ eat-NSQ 3SM
N V CONJ v CONJ V SS V SS PRON

wekwa-ré héséké.
hole -TO fall.into
N V

'He went and, enough, in order to eat bananas he was hungry and went to eat bananas and fell into the hole.'

24) Wekwa-mbu naand -e dé wungi té.
hole -LOC go.down-NSQ 3SM like.that stand
N V SS PRON ADV V

'He went down into the hole and stayed there.'

25) Té -ndé-ka lé, yak aiwa métaki hura xale -ké -lé?
stand-3SM-DS 3SF enough mother how hold come.up-NEGINT-3SF
V PRON ADV N ADV V V

'He stood there and, enough, how could his mother get him and bring him up?'

26) Huru huru-patika lé wumbu wungi hwa.
do do -FRUS 3SF there like.that lay
V V PRON DEM ADV V

'She tried and tried in vain and laid there.'

27) Wumbu wu -mba du wundé yi-ndé.
there that-LOC man then go-3SM
DEM ADJ N ADV V

'Then this man went.'

28) Y -e dé xé, aiwa lé taku-mbu hwa-lé -ka.
go-NSQ 3SM see mother 3SF top -LOC lay-3SF-DS
V SS PRON V N PRON N V

'He went and saw her lying on the top.'

29) Xé -taka dé wa.
see-SEQ 3SM talk
V SS PRON V

'He saw her and said.'

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30) Xé -ndé-ka lé wungi hoo ya -ta namba.
see-3SM-DS 3SF like.that rage.fight come-SIM chase
V PRON ADV ADV V SS V

'He saw her and she started chasing him and fighting.'

31) Namba-lé -ka dé, dé xi hari -ndé-n ware ware dé
chase-3SF-DS 3SM 3SM spear take.to-3SM-RELPST fight fight 3SM
V PRON PRON N N V V PRON

wundé xiya -ndé lé -ré.
then pierce.hit-3SM 3SF-TO
ADV V PRON

'She fought him and he fought with the spear he brought and shot her.'

32) Xiya -taka dé yesende dé wu -mba nyan héra-e hura dé.
pierce.hit-SEQ 3SM lift.up 3SM that-LOC child get -NSQ hold 3SM
V SS PRON V PRON ADJ N V SS V
PRON

'He shot her and lifted up the child and took him and held him.'

33) Mauli y -e hura dé ge -ré héra-e.
heart.like do-NSQ hold 3SM house-TO get -NSQ
N V SS V PRON N V

'He liked him and took him to his house.'

34) Héra-e yakwa -ndé-ka dé wu -mba nyan némaapwi ya.
get -NSQ feed.well-3SM-DS 3SM that-LOC child huge become
V V PRON ADJ N ADJ N

'He took him and fed him and this child became big.'

35) Yak sarsap andu.
enough story this.one
ADV N DEM

'Enough, the story is done.'

5.2. Expository

Expository texts are similar to narratives in that they often begin with an aperture sentence, usually one similar to, "This morning I want to talk about ..." Expository differs from narrative, however, in that it generally does not involve a sequence of chronologically related events. For this reason, tail-head linkage is much less common in expository.

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Expository discourse is also more likely to use the purpose suffixes, *njoka* 'in order to' and *mboka* 'lest', than are narrative discourses. Subject tracking is maintained in expository and may include shifts to the second person. Examples of expository texts are included below.

5.2.1. Expository #1: 'Why I need a level.'

This brief expository was given to me by Jonathan Wapi. Jonathan is approximately forty years old and lives in the village of Weko. Jonathan is literate in Tok Pisin and has attended a two-year Bible course. This expository is Jonathan's explanation of why he needs to borrow my level.

```
1)    Wuni huli ge    nak to   -ta -wuni. Némbuli hwaar wuni séké.
      1S   new  house a   build-INT-1S    shortly post  1S   cut.strip
      PRON ADJ  N     ART V               ADV     N     PRON V

      'I want to build a new house.       Now I cut the posts.'

2)    Hwaar sék   -a    hora-e    wekwa hura bu   sand  -e
      post  cut.up-NSQ  hold-NSQ  hole  hold PERF put.dn-NSQ
      N     V      SS   V    SS   N     V    ADV  V      SS

      taka-wu-ka  dé   té.
      put -1S-DS  3SM  stand
      V           PRON V

      'Cut the posts and hold and make the hole and put them down and it
      stays.'

3)    Wuni joo   nak-ka   wuni yingapwe y -e.   Wun  joo   level dé.
      1S   stuff a  -FOR  1S   no       do-PRES that stuff level 3SM
      PRON N     ART      PRON ADV      V       DEM  N     N     PRON

      'One thing I am lacking.                  That thing is a level.'

4)    Ana     ge   -ka   wakwe dé   x  -e    hwaar xatéké -te -wu-ka.
      1D.POSS house-FOR  show  3SM  see-NSQ  post  cut.off-FUT-1S-DS
      PRON    N          V     PRON V   SS   N     V

      'It shows about the house and sees the post that I will cut.'

5)    Wu   level héra-e,  wu   yak,   ge    to   -ta -wuni.
      that level get -NSQ that enough house build-INT-1S
      DEM  N     V    SS  DEM  ADV    N     V

      'I get that level and, that's enough, I want to build a house.'
```

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5.2.2 Expository #2: 'Why I am from the black fantail clan but live in Nungwaia.'

This expository text was given to me by Timothy Halek, a man in his mid-thirties who lives in Nungwaia. Timothy has had little formal education but is literate in Tok Pisin and has attended the two-year Bible course. This text is Timothy's explanation of why he, a member of the *hwanyi* clan, lives in the village of Nungwaia, which is mostly occupied by the *watuku* clan.

1) Wuni wu-na jambu hwanyi wuni.
1S 1S-POSS clan black.fantail 1S
PRON POSS N N PRON

'My clan is the black fantail.'

2) Wuni hanja wu-na gwal re -ndé-n -éka
1S before 1S-POSS grandfather sits-3SM-RELPST-FOR
PRON ADV POSS N N

yalapu hundi wa -ta -wuni.
short.few speech talk-INT-1S
ADJ N V

'I want to say a little talk about where I and my grandfather sat before.'

3) Hanja wu-na gwal dé anwar-mbu dé té, wuni Weko wuni.
before 1S-POSS grandfather 3SM above-LOC 3SM stand 1S Weko 1S
ADV POSS N PRON N PRON V PRON N PRON

'Before my grandfather stayed up above and I was Weko.'

4) Wumbu t -e dé némbuli ya -e gaya Weko yataka-taka
there stand-NSQ 3SM shortly come-NSQ come.down Weko leave -SEQ
DEM V SS PRON ADV V SS V N V SS

gaya némbuli Nungwaia-mbu t -e dé wu-na yapa -ré héra.
come.down shortly Nungwaia-LOC stand-NSQ 3SM 1S-POSS father-TO get
V ADV N V SS PRON POSS N V

'He stayed and now he came and came down and left Weko and came down and stayed at Nungwaia and got my father.'

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5) Héra-e taka-ndé-ka némbuli wu-na yapa re taka-ndé-ka dé
get -NSQ put -3SM-DS shortly 1S-POSS father sits put -3SM-DS 3SM
V V ADV POSS N V V PRON

bu hiya-ndé-ka némbuli wuni ambu Nungwaia-mbu wuni re.
PERF die -3SM-DS shortly 1S here Nungwaia-LOC 1S sits
ADV V ADV PRON DEM N PRON V

'He got him and put him and now my father stayed and put and he died and now I sit here at Nungwaia.'

6) Re némbuli wambula wu-na nyan wu-na nyangwal nani némbuli
sits shortly again 1S-POSS child 1S-POSS children 1P shortly
V ADV ADV POSS N POSS N PRON ADV

Nungwaia me.
Nungwaia 1P
N PRON

'Sitting now again my child my children we now are Nungwaia.'

7) Hanja Weko-mbu dé té, wu-na gwal.
before Weko-LOC 3SM stand 1S-POSS grandfather
ADV N PRON V POSS N

'Before he stayed at Weko, my grandfather.'

8) Némbuli Nungwaia-mbu me re, nani Nungwaia me.
shortly Nungwaia-LOC 1P sits 1P Nungwaia 1P
ADV N PRON V PRON N PRON

'Now we sit at Nungwaia, we are Nungwaia.'

9) Wu-na jambu hwanyi wuni.
1S-POSS clan black.fantail 1S
POSS N N PRON

'My clan is the black fantail.'

10) Yak, némbuli re némbuli nani male Nungwaia me.
enough shortly sits shortly 1P only Nungwaia 1P
ADV ADV V ADV PRON INT N PRON

'Enough, now sitting, now we are just Nungwaia.'

11) Di wali sékér me re.
3P with touch 1P sits
PRON CONJ V PRON V

'We sit right with them.'

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12) Yak male nani Weko yingapwe, yak.
enough only 1P Weko no enough
ADV INT PRON N ADV ADV

'Enough we are no longer Weko, enough.'

5.3. Hortatory

Hortatory texts generally involve several illustrative narratives as portions of the text and cannot usually be considered as one coherent text. Hortatory does not usually begin with an aperture sentence, at least not in the obvious sense as used by narratives. Also, hortatory uses a great deal more of the second person whereas narrative normally uses either the first or third person. As with expository, hortatory does not usually have a great deal of tail-head linkage. Because the sermon texts are very long, only one short sermon is given here as an example.

5.3.1. Hortatory: A short sermon

This hortatory text was provided by Timothy Halek, the source of the previous expository text. Timothy told me this sermon after he had previously given it on a Sunday morning. Since he had already given it once, it is shorter and, in my opinion, more organized than the typical Sunday morning sermon.

1) Wuni némbuli Got-na hundi yalapu hundi wa -ta -wuni.
1S shortly God-POSS speech short.few speech talk-INT-1S
PRON ADV POSS N ADJ N V

'I now want to give a little of God's talk (sermon).'

2) Got-na hundi wa -ta -wuni.
God-POSS speech talk-INT-1S
POSS N V

'I want to tell God's talk.'

3) Got-na hundi lotu ya -mbe-ka-ka dé wa.
God-POSS speech worship come-1P -DS-ABOUT 3SM talk
POSS N N N PRON V

'God's word talks about how we should worship.'

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4) Na-na lotu méta maki me y -e, némbuli?
1P-POSS worship what kind 1P go-NSQ shortly
POSS N WH ADJ PRON V SS ADV

'Our worship is like what now?'

5) Hanja na-na lotu wundu Samaria-na du takwa yi-ta
before 1P-POSS worship that.there Samaria-POSS man woman go-SIM
ADV POSS N DEM POSS N N V

yi-ta ani wundu lotu ya -nda-n ani némbu -mbu
go-SIM 1D that.there worship come-3P -RELPST 1D mountain-LOC
V SS PRON DEM N N PRON N

mi mo -mbu némapwi haus lotu ge -mbu wundé wungina
tree base-LOC big house worship house-LOC then these.here
N N ADJ N N N ADV DEM

ge -mbu male lotu ya-nda-ka dé.
house-LOC only worship do-3P -DS 3SM
N INT N V PRON

'Before, our worship was like the people of Samaria, we went and went and worshiped as they did on the mountain at the base of trees in a big temple just as they worshiped in a house.'

6) Némbuli amba ganémba Got-na hundi xéké-te -mbe-ka, némbuli amba
shortly this morning God-POSS speech hear-FUT-1P -DS shortly this
ADV DEM N POSS N V ADV DEM

ganémba lotu ya-mbe-ka-ka saréké-ta -me lotu ya-mbe-ka
morning worship do-1P -DS-ABOUT think -INT-1P worship do-1P -DS
N N N V N V

méta maki lotu ya-ta -me.
what kind worship do-INT-1P
WH ADJ N V

'Now on this morning the word of God (that) we will hear, now on this morning think about how we will worship, what kind of worship will we do?'

7) Némbuli wungina -mbu male yamba té -ké -me.
shortly these.here-LOC only not.allowed stand-NEGINT-1P
ADV DEM INT ADV V

'Now let us not stand just as they did.'

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8) Yak némbuli lotu ya-mbe-ka na-na yikapre sémbut wali na-na
enough shortly worship do-1P -DS 1P-POSS good custom with 1P-POSS
ADV ADV N V POSS ADJ N CONJ POSS

yikapi biya mauli wali, lotu na-na biya -ka ya-ta -me.
good belly heart.like with worship 1P-POSS belly-FOR do-INT-1P
ADJ N N CONJ N POSS N V

'Enough, now as we worship let us worship in our hearts with our good customs and our good thoughts.'

9) Jisas héra-e jémbwa na-na biya nyéndé-ka nyéndé-mbu
Jesus get -NSQ work 1P-POSS belly middle-FOR middle-LOC
N V SS N POSS N N N

taka-taka bu lotu ya-kwa.
put -SEQ PERF worship do-RELPRES
V SS ADV N ADJ

'Get Jesus and put him well right in the middle of our hearts and then we can worship.'

10) Jisas hapu dé angi wa, "Némbuli nukwa dé sépélak
Jesus EMPH 3SM like.this talk "shortly day 3SM plenty
N INT PRON ADV V "ADV N PRON QNT

nukwa yak nak maki nak maki lotu bu ya-ngu yak
day enough a kind a kind worship PERF do-2P enough
N ADV ART ADJ ART ADJ N ADV V ADV

némbuli wuni-ka male mé guni lotu ya-ta wu-na
shortly 1S -FOR only IMP 2P worship do-SIM 1S-POSS
ADV PRON INT ADV PRON N V SS POSS

nukwa-ka haxé-ta té.
day-FOR wait-SIM stand
N V SS V

'Jesus himself said this, "Now is the time, for many days you will worship in many different ways, enough, now you must worship me only and wait for my day.'

11) Yak wuni ya nukwa walémba dé."
enough 1S come day near 3SM"
ADV PRON V N N PRON"

'Enough, the day of my coming is close."'

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12) Jisas wungi dé wa.
Jesus like.that 3SM talk
N ADV PRON V

'That is what Jesus said.'

13) Wa -ndé-n -éka yak némbuli jisas-ka haxé-ta
talk-3SM-RELPST-FOR enough shortly Jesus-FOR wait-SIM
N ADV ADV N V SS

té -ta, dé -ka male saréké-ta, méta jémbwa ya-te -mbe-ka
stand-SIM 3SM-FOR only think -SIM what work do-FUT-1P -DS
V SS PRON INT V SS WH N V

méta maki mauli saréké-te -mbe-ka, Jisas-ka male saréké.
what kind heart.like think -FUT-1P -DS Jesus-FOR only think
WH ADJ N V N INT V

'As he said, enough, now as we wait for Jesus as we think only of him, whatever work we will do, whatever thoughts we will have, think only of Jesus.'

14) Haraki saraki mauli xéké-mbe-n nak nyama
bad very.bad heart.like hear-1P -RELPST a older.brother
ADJ ADJ N N ART N

bandi -ka hungali-mbu wa -mbe-ka hundi, haraki hundi
younger.sibling-FOR back -LOC talk-1P -DS speech bad speech
N N V N ADJ N

wa -mbe-ka mé yataka.
talk-1P -DS IMP leave
V ADV V

'The evil things we have felt in our hearts, the talk a brother says behind the back of his brother, the bad things we say, let us leave them behind.'

15) Némbuli biya hwe, biya nakélak huru, méta-ka dé nyéndé-ka
shortly belly give belly slowly do what-FOR 3SM middle-FOR
ADV N V N ADV V WH PRON N

nyéndé té -ndé-t walémba walémba Jisas-ka male saréké.
middle stand-3SM-COND near near Jesus-FOR only think
N V DS N N N INT V

'Now give your heart, get peace, let him be right in the middle get closer and closer and think only of Jesus.'

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16) Jisas ya -te -ndé-ka nukwa yak walémba dé.
Jesus come-FUT-3SM-DS day enough near 3SM
N V N ADV N PRON

'The day of Jesus coming is close.'

17) Yak némbuli sépélak joo némbuli xékélake xé -ta -me atép
enough shortly plenty stuff shortly understand see-INT-1P all
ADV ADV QNT N ADV V V QNT

xakéngali andé xaku -ta -ndé.
distress now come.upon-INT-3SM
N ADV V

'Enough, now many things that we will see, all distress will be commencing.'

18) Jisas ya -te -ndé-ka nukwa yak, walémba dé.
Jesus come-FUT-3SM-DS day enough near 3SM
N V N ADV N PRON

'The day of Jesus coming, enough, it is close.'

19) Nani xékélake xé -hamba-me wun nukwa.
1P understand see-NOT -1P that day
PRON V V DEM N

'We don't know the day.'

20) Dé -ka yapa hapu dé xékélake hora dé re.
3SM-POSS father EMPH 3SM understand hold 3SM sits
POSS N INT PRON V V PRON V

'His father alone holds this knowledge.'

21) Wun nukwa, ya -te -ndé-ka nukwa, hura re -ta dé
that day come-FUT-3SM-DS day hold sits-SIM 3SM
DEM N V N V V SS PRON

nani-ka dé haxé-ta dé re.
1P -FOR 3SM wait-SIM 3SM sits
PRON PRON V SS PRON V

'This day, the day of his coming, he holds for us and waits.'

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22) Nani wungi maki té -ta yiyi yaya wambula yi-ta
1P like.that kind stand-SIM going coming again go-SIM
PRON ADV ADJ V SS V V ADV V

wambula ya -ta Jisas-ka yéna ya -ta wungi yamba
again come-SIM Jesus-FOR false come-SIM like.that not.allowed
ADV V SS N ADV V SS ADV ADV

yi-ta té -ké -me.
go-SIM stand-NEGINT-1P
V SS V

'We stay like that and as we come and go and as we come to Jesus again let us not come falsely.'

23) Wungi té -mbe-t sérikéma dé -ka biya mauli wi
like.that stand-1P -COND future 3SM-POSS belly heart.like boil
ADV V DS N POSS N N V

wundé re.
then sits
ADV V

'If we stay like that in the future his wrath is there.'

24) Némbuli Got dé -ka sarépa na bu blek -a taka-ndé-ka
shortly God 3SM-FOR sorry express PERF spill-NSQ put -3SM-DS
ADV N PRON ADV V ADV V V

ya -e hépa -mbu dé yi-ta re.
come-NSQ ground-LOC 3SM go-SIM sits
V SS N PRON V SS V

'Now God has poured out his compassion and it goes on this ground.'

25) Wun dé -ka sarapa-naré héra-e, atépeki du takwa jémbwa
that 3SM-FOR sorrow-TO get -NSQ all man woman well
DEM PRON N V SS QNT N N ADV

té -ta -me.
stand-INT-1P
V

'If we get this compassion then all of us men and women will be blessed.'

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26) Dé -ka hundi -ka héléké ya-taka, wu yingapwe nani
3SM-POSS speech-FOR not.like do-SEQ that no 1P
POSS N V V SS DEM ADV PRON

yaang -e y -e paku-te -mbe-ka hapa yingapwe.
runaway-NSQ go-NSQ hide-FUT-1P -DS place no
V SS V SS V N ADV

'If we don't heed his words, oh no way, we would run away to where we would be lost, non-existent.'

27) Yak nani, Jisas ya -ndé-t yak ané hépa -mbu, sérikéma
enough 1P Jesus come-3SM-COND enough this ground-LOC future
ADV PRON N V DS ADV DEM N N

némapwi xakéngali xaku -ta -ndé.
big distress come.upon-INT-3SM
ADJ N V

'Enough, we, if Jesus comes, enough, on this ground in the future a big distress will commence.'

28) Yak némbuli ané Got-na hundi xéké-mbe-n -éka saréké
enough shortly this God-POSS speech hear-1P -RELPST-FOR think
ADV ADV DEM POSS N N V

saréké naa -ta bu yi-taka yataka-ta té -kwa, Jisas
think express-SIM then go-SEQ leave -SIM stand-RELPRES Jesus
V V SS CONJ V SS V SS ADJ N

ya -ta -ndé, yak.
come-INT-3SM enough
V ADV

'Enough, now this talk we have heard of God meditate on and talk about as we come and go and stay, Jesus will come, enough.'

5.4. Prayer

Prayer, as it currently exists in Hanga Hundi, is a text genre that is not native to the language. However, prayer has picked up characteristics that resemble hortatory. Prayer does not usually make use of tail-head linkage and, of course, involves frequent use of the second person. Unlike hortatory, prayer usually begins with a brief greeting and concludes with a formulaic statement *ména xi Jisas* 'your name is Jesus'. Two prayers are given as examples below.

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5.4.1. Prayer #1: 'Give us wisdom to do this work.'

This prayer was said by Timothy Aaron, the source of fictional narrative #2, immediately prior to beginning work on translation of the New Testament.

1) Got yapa di -mé -na hwaru.
God father GREET-2SM-POSS parrot
N N POSS N

'Good day father God.'

2) Némbuli ané -mba nukwa ganémba-mbu ya -e ané nyéndék
shortly this-LOC day morning-LOC come-NSQ this middle
ADV ADJ N N V DEM N

nukwa xaku -ndé-ka hénoo sa -taka wambula ani Tom wali
day come.upon-3SM-DS food eat-SEQ again 1D Tom with
N V N V SS ADV PRON N CONJ

wuni wali jémbwa ya-njoka méni-ka andé wa -n -e.
1S with work do-PUR 2SM -FOR now talk-1D-PRES
PRON CONJ N V SS PRON ADV V

'Now this morning came and the noon has come up and we have eaten and in order to work Tom and I are talking to you again.'

3) Némbuli méni hapu ani-ré xékélaki hwe -mé -t ani jémbwa
shortly 2SM EMPH 1D -TO know give-2SM-COND 1D work
ADV PRON INT PRON V V DS PRON N

ya-ta -ani.
do-INT-1D
V

'Now if you yourself give to us the knowledge we will do work.'

4) Ané hundi ge -na hundi wambula yawuleké, we dé.
this speech house-POSS speech again turn.over difficult 3SM
DEM N POSS N ADV V ADJ PRON

'Turning this talk, this village talk is difficult.'

5) Wungi -ka méni-ka andé wa -w -i.
like.that-FOR 2SM -FOR now talk-1S-PRES
ADV PRON ADV V

'Therefore I am talking to you.'

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6) Mé -na hamunya taka-mé -t gaya bu ani-ré yikapre
2SM-POSS spirit put -2SM-COND come.down PERF 1D -TO good
POSS N V DS V ADV PRON ADJ

xékélelaki wakwe dé, Tom akwi wuni akwi.
wise show 3SM Tom also 1S also
V V PRON N CONJ PRON CONJ

'If you send your spirit he will come down and show us good knowledge, to Tom and me also.'

7) Mé -na yikapre xi Jisas.
2SM-POSS good name Jesus
POSS ADJ N N

'Your good name, Jesus.'

5.4.2. Prayer #2: 'You alone are able to do this.'

This prayer was spoken by Micah Hipandu, the source of procedural narrative #2. As with the preceding prayer, this prayer was said immediately before beginning work on the New Testament translation.

1) Yapa di -mé -na hwaru, ané ganémba, nani xékélelaki yingapwe.
father GREET-2SM-POSS parrot this morning 1P wisdom no
N POSS N DEM N PRON N ADV

'Father, good day, this morning we do not have knowledge.'

2) Méni hapu néma mauli saréké méni hapu -mbu dé té.
2SM alone big heart.like think 2SM alone-LOC 3SM stand
PRON INT ADJ N V PRON INT PRON V

'You alone, on you alone does great knowledge reside.'

3) Ané ganémba nani ané wa-te -mbe-ka hundi nani yike-seke
this morning 1P this talk-FUT-1P-DS speech 1P not.know-ALL
DEM N PRON DEM V N PRON V

ya-ta-me.
do-INT-1P
V

'This morning we will be completely ignorant of this talk that we will say.'

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4) Méni hapu xékélelaki sémbut hura-e mauli
2SM alone wisdom custom hold-NSQ heart.like
PRON INT N N V N

saréké-mé -ka-ngala métaki métaki wa -te -na-ka-ngala wakwe
think -2SM-DS-LIKE how how talk-FUT-1D-DS-LIKE show
ADJ ADV ADV ADJ V

sakwe-ta -méni.
show -INT-2SM
V

'You alone are wise in your actions and in whatever you think and you show us in whatever things we will say.'

5) Méni Got méni atépék xékélelaki-na mo dé.
2SM God 2SM all wisdom -POSS base 3SM
PRON N PRON QNT N N PRON

'You, God are the basis for all things.'

6) Nani ané hépa -na du nani yike -seke me y -e.
1P this ground-POSS man 1P not.know-ALL 1P go-NSQ
PRON DEM POSS N PRON V PRON V SS

'We men of the ground are completely ignorant.'

7) Wungi -ka ganémba méni ya -e walémba-mbu ha -te
like.that-FOR morning 2SM come-NSQ near -LOC roof-FUT
ADV N PRON V SS N V

té -ta, angi dé angi dé.
stand-SIM like.this 3SM like.this 3SM
V SS ADV PRON ADV PRON

'Therefore come close to us on this morning and take care of us like this and like this.'

8) Naulak hundi wa -njoka bulé -njoka yike -seke ya-na-t
some speech talk-PUR talk.about-PUR not.know-ALL do-1D-COND
QNT N V SS V SS V V DS

méni hapu angi wa -ta -méni, ané angi dé.
2SM alone like.this talk-INT-2SM this like.this 3SM
PRON INT ADV V DEM ADV PRON

'If we are completely ignorant of some talk that we would like to make you yourself will tell us, this is like this.'

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9) Wungi ani mé -na xi harék-a ané -mba ganémba andé
like.that 1D 2SM-POSS name raise-NSQ this-LOC morning now
ADV PRON POSS N V SS ADJ N ADV

wa -n -e.
talk-1D-PRES
V

'Therefore on this morning we speak and lift up your name.'

10) Yapa, méni hapu, méni némapwi méni.
father 2SM alone 2SM big 2SM
N PRON INT PRON ADJ PRON

'Father, you alone, you are great.'

11) Anwar-na andéla -na, a hépa -na, nak du méni maki
above-POSS downbelow-POSS this ground-POSS a man 2SM kind
POSS POSS DEM POSS ART N PRON ADJ

yingapwe.
no
ADV

'Above, below, of this ground, not one man is like you.'

12) Nani atépék méni maki yingapwe. Mé -na xékélelaki némapwi dé.
1P all 2SM kind no 2SM-POSS wisdom big 3SM
PRON QNT PRON ADJ ADV POSS N ADJ PRON

'All of us are not like you. Your wisdom is great.'

13) Wundé wa -mé.
then talk-2SM
ADV V

'You have spoken.'

14) Mé -na hundi -mbu angi méni wa, "Mé -na xékélelaki
2SM-POSS speech-LOC like.this 2SM talk "2ndSgMas-POSS wisdom
POSS N ADV PRON V "POSS N

anwar nyir maki dé.
above sky kind 3SM
N N ADJ PRON

'In your word you said this, "Your wisdom is like a cloud above.'

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15) Andéla gu -na nyamba maki dé.
downbelow 2ps-POSS depths kind 3SM
N POSS N ADJ PRON

'Like the depths below you.'

16) Nandi -pati dé.
go.down-FRUS 3SM
V PRON

'It is too far down.'

17) Nani mokola x -e xé -ké -me.
1P bottom see-NSQ see-NEGINT-1P
PRON N V SS V

'We cannot see the bottom of it.'

18) Di -mé -na hwaru.
GREET-2SM-POSS parrot
POSS N

'Good day.'

19) Méni hapu y -e hat -e té -mé -t méta méta hundi
2SM alone go-NSQ care.for-NSQ stand-2SM-COND what what speech
PRON INT V SS V SS V DS WH WH N

wa -te -na-ka ané ganémba, wuni wali Tom wali, ana nyambali
talk-FUT-1D-DS this morning 1s with Tom with 1D.POSS kids
V DEM N PRON CONJ N CONJ PRON N

naula andé re méni hapu hat -e té -ta -méni.
some now sits 2SM alone care.for-NSQ stand-INT-2SM
QNT ADV V PRON INT V V

'If you yourself go and watch over whatever talk we will make this morning, Tom and I, and some of our children who are here you will care for.'

20) Yikapre xékélelaki hwe -ta wakwe sakwe-ta -méni.
good wisdom give-SIM show show -INT-2SM
ADJ N V SS V V

'You will give and show us good knowledge.'

21) Yak, di -mé -na hwaru.
enough GREET-2SM-POSS parrot
ADV POSS N

'Enough, good day.'

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22) Ani hundi yingapwe.
1D speech no
PRON N ADV

'We have no more talk.'

23) Mé -na xi, Jisas.
2SM-POSS name Jesus
POSS N N

'Your name, Jesus.'

5.5. Song

Songs are generally very short and involve the repetition of a few lines of text. Though it is unusual for tail-head linkage to be used, it can be used when the song covers narrative material. The melody associated with many of these songs has a relatively slow and uneven rhythm so that it is difficult for a European to follow. Unfortunately, the actual recordings of these songs were left in Papua New Guinea so it is impossible to include any musical notation with the songs. Though songs have been involved in some of the former tribal beliefs, songs now are used mostly for entertainment around the home and for worship at church. The songs given in this section are examples of the Christian songs written by Hanga Hundi speakers.

5.5.1. Song #1: 'Before our ancestors did not know about Jesus.'

1) Hanja hanja na-na gwalepa yike di y -e.
before before 1P-POSS ancestors not.know 3P do-NSQ
ADV ADV POSS N V PRON V SS

'Long ago our ancestors did not know.'

2) Némbuli Jisas dé hiya.
shortly Jesus 3SM die
ADV N PRON V

'Later Jesus died.'

3) Hiya-e dé yambu wakwe.
die -NSQ 3SM path show
V SS PRON N V

'He died and showed the way.'

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4)      Wakwe-ndé-ka  atép du  takwa di   mauli       ya.
        show -3SM-DS  all  man woman 3P   heart.like come
        V             QNT  N   N     PRON N           V

        'He showed and all people like it.'
```

5.5.2 Song #2: 'I listened and Jesus spoke to me.'

```
1)      Wuni xéké-wu-ka  jisas wuni-ka   dé   w   -e.
        1S   hear-1S-DS  Jesus 1S  -FOR  3SM  talk-NSQ
        PRON V           N     PRON      PRON V    SS

        'I listened and Jesus spoke to me.'

2)      Wuni-ka   dé   w   -e.      (2x)
        1S  -FOR  3SM  talk-NSQ     (2x)
        PRON      PRON V    SS      (2x)

        'He spoke to me.'

3)      Wuni xéké-wu-ka  jisas wuni-ka   dé   w   -e.
        1S   hear-1S-DS  Jesus 1S  -FOR  3SM  talk-NSQ
        PRON V           N     PRON      PRON V    SS

        'I listened and Jesus spoke to me.'

4)      Wuni dé   wali yi-ta -wuni. (3x)
        1S   3SM  with go-INT-1S    (3x)
        PRON PRON CONJ V            (3x)

        'I want to go with him.'

5)      Wuni xéké-wu-ka  jisas wuni-ka   dé   w   -e.
        1S   hear-1S-DS  Jesus 1S  -FOR  3SM  talk-NSQ
        PRON V           N     PRON      PRON V

        'I listened and Jesus spoke to me.'

6)      Wuni dé   wali yi-ta -wuni.
        1S   3SM  with go-INT-1S
        PRON PRON CONJ V

        'I want to go with him.'
```

5.5. Comparison of oral and written styles

Hanga Hundi has not been a written language and does not have a body of literature that could be compared to the oral texts recorded above. However, in the process of developing an orthography for Hanga Hundi, I asked native speakers to try their hand at

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writing short texts. While the initial efforts tended to consist mainly of short sentences with no tail-head linkage, as the writers became more practiced the texts closely resembled the oral narrative texts. Most of the texts were written as first person accounts and made good use of tail-head linkage to connect the sentences. Unfortunately, only real-life narratives were produced in these trial efforts at literacy.

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