A SKETCH OF AU MORPHOLOGY AND SYNTAX

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INTRODUCTORY REMARKS

Au is an unusual Papuan language spoken by some 4,100 inhabitants living in the East-West Wapei Council area east of Lumi, the subprovince headquarters of the West Sepik Province in Northern Papua New Guinea.

The data used in this paper are the result of research in Au carried out by the author and his wife from 1968 to 1977. Fieldwork has been done primarily in the Central dialect in the village of Tumentonik. Other dialects include the Eastern dialect and the Southern dialect which are all mutually intelligible. All research has been conducted under the auspices of the Summer Institute of Linguistics.

Much of the data was extracted from the morpheme by morpheme concordance of Au consisting of 43,332 words of text made on the IBM 1410 Computer at the University of Oklahoma by the Linguistic Information Retrieval Project and partially funded by National Science Foundation Grant GS-934.

I gratefully acknowledge the assistance of several men from Tumentonik and a number of linguists from the Summer Institute of Linguistics in Papua New Guinea, without whom the analysis upon which this paper is based could not have been done.

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0. GENERAL INTRODUCTION

The Au language is spoken by 4,100 people living in the East-West Wapei Council area east of Lumi, the subprovince headquarters of the Sandaun Province in Papua New Guinea. There are three dialects: the Eastern spoken by 2,300 people living in eight villages, the Western spoken by 600 people living in three villages, and the Central, upon which this analysis is based, spoken by 1,200 people living in eight villages.

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Au is a member of the Wapei family, which together with other languages make up the Wapei-Palei stock, part of the larger Torricelli Phylum. These languages are spoken along the Torricelli mountains. Laycock (1973:7), an authority on the area states, "The Torricelli group appears to have no related languages outside of the Sepik-Ramu area...the phonology differs from that of most other Sepik groups in permitting vowel sequences and in having a large number of vowel phonemes". In a later volume (1975:768) he states, "The Torricelli Phylum appears to constitute a genetic group in itself; that is, no other languages in the New Guinea area appear to be even distantly related to it". Earlier in the same volume (1975:178) a very detailed comparison is given of features separating Australian, the Trans-New Guinea Phylum, the Sepik-Ramu Phylum and Melanesian (an Austronesian subgrouping). In having compared the chart of general characteristics outlined by Wurm with Au, we find the results suggest that Au does not compare favourably with any of them. (See Section 4. for a detailed explanation.) Apart from the survey work carried out by Laycock (1967-68, 1970-71), none of the languages of the Torricelli Phylum have been studied in detail. As part of the Torricelli Phylum, Au is part of a little studied genetic group different from any other phylum of Papua New Guinea languages. Both the Trans-New Guinea Phylum and the Sepik-Ramu Phylum have medial verb forms and a rigid subject-object-verb word order. Au has no medial verb forms, and its basic word order is rigidly fixed as subject-verb-object. Although these features would therefore make Au seem like an Austronesian type language, it remains distinct by virtue of other criteria.

0.1. Theory

The analysis presented in the following sections describes in detail the word classes, phrases and clauses, or an overview of the basic grammatical structure of Au, using a format adapted from the tagmemic model of Pike (1967).

The analysis presented here uses a simple prose description for word classes and phrases unless there are several classes of fillers for the phrases. In such cases and for clauses, a bi-dimensional array of the internal structure of the construction which is under consideration is also given, followed by the normal prose elaboration of the array. In every case, examples of the external distribution of the constructions are given.

0.2. Contrastive features

Contrastive features are those features which distinguish the various types of classes or constructions within a level. The general rule which has been followed is taken from Longacre (1964:47), who states that there must be at least two contrastive features between constructions and at least one of these differences must involve the nuclear and/or obligatory tagmas (constituents). Contrastive features which distinguish distinctive types of constructions for the levels above word are:

(1) Contrastive categories, functions and distribution of constituents.
(2) Number of obligatory constituents and their potential expansion.
(3) Number of optional constituents and their potential expansion.

These are all related to the internal structure of the construction. External distribution is also important and is the primary criterion of formation for

word classes which will be discussed in sections 2 and 3. Chart A summarises the contrastive features used within each level. Tense restrictions, subject restrictions and linking devices have been omitted from consideration because they are pertinent only on levels above clause.

Contrastive features	Phrase	Clause	Sen	Para	Discourse
Kinds of constituents	X	X	X	X	X
Number of obligatory constituents	X	X	X	X	X
Number of optional constituents	X	X	X	X	X

Chart A: Contrastive features

0.2.1. Kinds of constituents

The kinds of constituents and their relationships to one another is a very significant contrastive feature and is the basis for distinguishing types of constructions on each level. The name of the constituents reflects as much as possible the contrastive categories, functions and relationships that exist between constituents in a given construction type so that these features are more quickly recognised. For example, an intensive pronoun phrase indicates that the word class pronoun has a particular function (intensive) and is a phrase level construction.

0.2.2. Number and potential expansion of obligatory constituents

The number and potential expanion of obligatory constituents is significant in that some types of constructions have more obligatory constituents than others. Most constructions at each level have at least two obligatory constituents. Also, in some types the obligatory constituents have optional expansion possibilities. For example, the Counter 1 of a general numeral phrase may occur up to six (6) times, whereas the Counter 2 may occur only once.

0.2.3. Number of optional constituents and their potential expansion

The number of optional constituents and their potential expansion is significant in that some types have no optional constituents while others do. In some constructions the optional constituents are potentially aboe to occur more than once, while in others they may occur only one time.

0.2.4. Linking devices

Although linking devices are primarily manifested at the sentence level or higher, they are one of the phenomena which distinguish Au from other languages in Papua New Guinea, especially non-Austronesian languages. Most of these languages have special forms for the verbs which occur medially in the sentence. These serve to chain together sentences which are part of a larger unit. In Au although there are no medial verb forms, there is the common Papuan phenomenon known as recapitulation, a type of chaining that links sentences together within higher units. When this occurs, the final verb of the final clause (and occasionally two to three final clauses) is repeated at the beginning of the next sentence. Clause level constituents other than the verb may also occur in the recapitulation, including the subject of the final clause. Often the recapitulation linkage may carry new information which is an amplification of the previous clause.

Juxtaposition is another linking device. Clauses are usually chained together in this manner, and the pronominal subject markers, which normally occur in the clause, will be omitted in subsequent clauses.

0.3. Presentation

In our outline and presentation of Au grammar in this paper, an inventory of Au phonemes is given first, followed by comments on stress (which is predictable), and concluded with the few basic morphophonemic rules that occur.

Section 1 treats verb classes first from the perspective of derivation; following that, the verb classes are considered in relation to their inflection.

Section 2 treats non-verbal word classes in a manner parallel to section 1, looking both at derivation and inflection.

Section 3 outlines the basic phrase types and shows the extensive agreement of numerals, personal pronouns and all noun-adjuncts to the nuclear or primary constituent (or head) of the constructions under consideration.

Section 4 focuses on the Au clauses. Clauses are described by dividing them into independent and dependent clauses and describing them from the perspectives of transitivity and mode. Subject cross-reference is also discussed with examples used to reflect its operation between constituents, particularly reference back to the subject.

Section 5 is a summary of the syntactic and morphological features which have been described in the earlier sections with an explanation of their significance in the overall function of Au grammar.

Section 6 outlines features described up to this point in the grammar, as well as additional features not discussed earlier by comparing them to other Papuan languages. The results of this comparative study show that Au has many aberrant features which give a solid basis for Laycock (1975:768) to rate the Torricelli Phylum as a linguistic group separate from other Papuan languages.

0.3.1. Segmental phonemes

There are 17 phonemes which represent the phonological system for Au; there are eight consonants, two semivowels and seven vowels. These are indicated below:

Consonants: stops   : /p/ /t/ /k/
               fricatives :   /s/ /g/ (voiced velar fricative)
               nasals   : /m/ /n/
               flap   :   /r/

Semivowels: /w/ /y/

Vowels: high front close unrounded   : /i/
             high central close unrounded   : /ɨ/
             high back close rounded   : /u/
             mid central close unrounded   : /ʌ/ symbolised /e/
             mid back close rounded   : /o/
             low central close unrounded   : /a/
             low central close unrounded   : /aa/ (lengthened vowel)

The lengthened vowel symbolised as /aa/ has two distinct manifestations. In the central dialect, the lengthened vowel is interrupted by a glottal stop. /aʔa/, but in the phonological analysis has been considered as a single syllabic unit. This phenomenon does not occur in the Eastern dialect.

0.3.2. Stress

Stress normally occurs on the first syllable of a word, which may have up to four syllables. Some exceptions are noted below:

(a) The vowel /ɨ/ is never stressed unless the only vowels in the word are /e/ or another /ɨ/. Examples are:

(1) mɨ́tɨk *man*   (4) k-ɨ́rɨr   *he-flees*

(2) mɨ́te *woman*   (5) k-ɨsáwɨn *he-hides*

(3) hɨ́ne *knife*   (6) k-átɨp   *he-talks*

(b) The vowel /e/ is never stressed unless the only other vowels are /ɨ/ or another /e/. Examples are:

(7) népere *dog*   (9) k-ewát *he-gives*

(8) pérpere *flying fox* (10) k-ekíntɨp *he-steals*

0.3.3. Morphophonemics

Stem reductions and vowel alternations are the two most important types of changes occurring in Au when affixation occurs on verb stems.

(a) Stem reduction — there are two types which occur:

(1.) The last vowel /ɨ/ is lost when a suffix is attached to the verb stem.* Examples are:

(11)   k-atɨn   k-etn-ɫwek   *he cuts it*
       he-cuts   he-cuts-it

       *This happens only to the vowel /ɨ/.

(12)   k-ɨnkatɨn   k-inketn-ɫwek   *he hunts for it*
       he-hunts for   he-hunts for-it

(2.) The final vowel of the initial word of any sequence is dropped when the
next word begins with a vowel. Examples are:

(13)   pɨke   pɨk   ano   *I will return*
       again   again   I-will go

(b)   Vowel alternation

(1.) Initial verb stem vowel a alters to e and initial verb stem vowel u alters
to ɨ when followed by p (the continuous aspect marker) or when a pronoun object
is suffixed to the verb as in example (16). Examples are:

(14)   k-atɨp   k-e-(p)-tɨp   *he keeps on talking*
       he-talks   he-cont-talks

(15)   k-uwaai   k-ɨ-(p)-waai   *he keeps on sleeping*
       he-sleeps   he-cont-sleeps

(16)   k-atɨn   k-etn-ɫwek   *he cuts it*
       he-cuts   he-cuts-it

(2.) All initial verb stem vowels alter to a when future tense/aspect is
formed. The subject-marking prefix is also reduplicated, and this second form
appears immediately following the altered stem vowel. Examples are:

(17)   k-ewat   k-(a)-k-wat   *he will give*
       he-gives   he-(give)-will-give

(18)   k-uwaai   k-a-k-waaɨ   *he will sleep*
       he-sleeps   he-(sleep)-will-sleep

(c)   Vowel epenthesis, or the insertion of a vowel, occurs in some forms when
the future tense/aspect is formed. This is to separate homorganic stops or
nasals from occurring juxtaposed and causing one of them to be deleted.
Examples are:

(19)   n-en   n-an-ɬno   *they will go*
       they-go   they-will-()-go

(20)   k-akɨp   k-akɨ-kɨp   *he will strike him*
       he-hit-him   he-will-hit-him

       base forms: before epenthesis

                    n-an-no   *they will go*
                    k-ak-kɨp   *he will hit him*

(d)   Vowel raising

(1.) Initial verb stem vowels which are low or mid-central are raised when the
imperative aspect prefix e is affixed to the initial verb stem. Examples are:

(21)   k-entar   e-k-ɨntar
       he-because   imp-he-because

(22) k-erp   e-kɨrp
      he-stands imp-*he-stands*

(2.) The last low or central vowel in verb stems raises to e when an object is affixed to the stem. The last central vowel in the verb stem raised to ɨ when an object suffix with a front or central vowel is affixed to the verb stem. Examples are:

(23) k-entar   k-enter-ik
      he-on   *he-on-it*

(24) k-ɨnain   k-ɨnein-ɨk
      he-fears   *he-fears-it*

(25) k-ises   k-isɨs-a
      he-follows *he-follows-me*

(26) k-ehimɨtan   k-ehimɨten-ɨwek
      he marks   *me-marks-for him*

1. VERBAL WORD CLASSES

1.1. Introduction

In Au the verb is the most diverse and interesting of all the word classes; verbs are interesting because of their unusual inflectional activity. Within the verbal framework, there are various classes distinguished on the basis of the different inflectional affixes which may occur, and also on the basis of the stem changes and formation, along with the distribution of verbs in higher level constructions. The verb classes are: (1) transitive, (2) ditransitive, (3) intransitive, and (4) stative. The various affixation phenomena which appear with each class will be discussed in pertinent subsections below. These affixes include subject markers, tense/aspect markers, object markers, plural/ diversification markers, and reciprocation marking affixes.

Before considering the verbal classifications in any detail, it is first necessary to comment on word formation. Several of these words in the above named classes do not follow the normal pattern of affixation and need to be explained on the basis of word derivation.

1.2. Derivation

Verbs may be formed in Au through compounding into noun-verb, verb-noun or verb-verb combinations. The restrictions on affixation will be discussed under each of the appropriate sections as the various compound words are considered.

1.2.1. Noun-verb compounds

The nouns which combine with the verbs to make up this set of compound words are restricted to body parts. The verb inflects for the person, gender and number of the noun which it follows, and describes the state of that noun. Examples of these compounds are:

    (27) han   - k-aa   *forgets*
           heart - it-dies

    (28) han   - tewen-ɨn   *likes; feels affection toward*
           heart - bends-pl

    (29) hemkre - m-enep-am   *desires strongly; covets*
           blood - they-hit-recip.

1.2.2. Verb-noun compounds

    In this set of compound words, the verb occurs in primary position and the noun (again limited to body parts) acts as qualifier of the action. Since most nouns do not inflect (see section 3.3.), no concord is shown between the verb and the noun. The verb, however, does take on an affix and inflects for person, gender and number of the subject of the construction in which it appears as the predicate. Examples are:

    (30) k-eket   - han   *he remembers*
           he-digs out - heart

    (31) k-ewen   - naan *he spys on*
           he-bends down - eye

    (32) k-uwaaɨ   - naan *he looks around*
           he-lays down - eye

    (33) k-ewɨr   - his   *he punches*
           he-throws - hand

    (34) k-uwaaɨ   - hɨt   *he kicks*
           he-lays down - leg

    (35) k-ɨkɨa-m   - naan *he looks up*
           he-lifts-them - eye

1.2.3. Verb-verb compounds

    This set of compounds is different from those in previous sets. Both of these verbs inflect; in the other sets only one constituent took on affixation. Both of these verbs must inflect identically for person, gender and number of the subject of the construction in which they appear. They manifest the predicate in clause constructions. Examples are:

    (36) k-enke - k-ari   *he hangs upside down*
           he-falls - he-pulls

    (37) k-atɨp - k-ises   *he gossips*
           he-talks - he-follows

    (38) k-ewɨrnak - k-eitet   *he warns against*
           he-throws - he follows

1.3. Inflection

Inflectional affixation, as mentioned in the introduction of this section, is one of the primary bases for distinguishing classes of verbs. Even though some of the verbs have subject or object markers as part of their construction, there are others which may optionally infix the object markers preceding the final syllable of the word. There are co-occurrence restrictions which occur with some of these classes, which will be handled as each type is described.

It is interesting to note that in their uninflected state, all verbs begin with a vowel while all the nouns begin either with a semivowel or a consonant.

1.3.1. Inflectional affixation

Before any of the classes of verbals can be adequately described, it first will be necessary to show the order in which the affixes occur in relation to the verb stem. There are three types of affixes: prefixes, infixes and suffixes.

(a) Prefixes

Prefixes are subject markers which inflect in accordance with the cross-reference system which occurs in Au. These prefixes mark the subject of a clause, as well as optionally marking tense/aspect. See Chart B.

	Singular	Dual	Plural
1st person	h-	w-	m-
2nd person	h-	y-	y-
3rd person			
masc	k-	t-	n-
fem	w-	n-	
neut	k-	m-	m-

Chart B: Subject marking prefixes

Examples are:

    (39) k-ɨr *he-sees;*   k-ak-ɨr *he-will-see*

    (40) k-enep *he-hits;*   k-ak-nep *he-will-hit*

(b) Infixes function in two ways, either by marking the verb for tense/aspect, or by marking the object within the verb stem. Aspect marker p occurs optionally following the first vowel of the verb. Examples are:

    (41) k-atɨ-p *he talks*   k-e-(p)-tɨp *he keeps on*
          he-talks   *he-talks-*(cont)*-talks*   *talking*

    (42) k-au *he sits*   k-e-p-u *he keeps on*
          he sits   *he-sits-*(cont)*-sits*   *sitting*

Infixed object markers optionally occur preceding the last syllable of the verb. Only certain transitive verbs take these markers in this position (see section 1.3.2.-(d)). They only occur when the object of the verb in a clause level construction is a bound form.

(c) Suffixes

There are four types of suffixes: (1) resultative (first order), (2) benefactive (second order), (3) objective (third order), and (4) reciprocal action. The reciprocal action suffix generally appears alone, and is mutually exclusive with benefactive and objective, but occurs occasionally following resultative.

Resultative suffix is formed by duplicating the final consonant of the verb and adding a vowel to maintain a pattern of vowel harmony. If the final syllable contains a high vowel, the reduplicated vowel will be /ɨ/, but if it is a low or mid vowel, the reduplicated vowel will be an /e/. Resultative suffix refines the basic semantic content of the verb. Examples are shown below.

(43) k-erekir   *he cuts it*;   k-erekir-ɨr   *he cuts in into*
      he-cuts-it   he-cuts-it-re   *pieces*

(44) k-eniuwes   *he laughs*;   k-eniuwes-ɨs   *he laughs and*
      he-laughs   he-laughs-pl   *laughs*

Benefactive suffix occurs affixes only to ditransitive verbs. Examples of these forms can be seen in 1.3.3. Chart C below indicates their formation.

	Singular	Dual	Plural
1st person	-o / -au	-awɨr	-ai / -aiu
2nd person	-ut / -it	-i	-i
3rd person			
masc	-uwek	-uwekɨt	-or / -ɨr
fem	-uwe	-or / -ɨr	
neut	-uwek	-ɨrem	-ɨrem

Chart C: Benefactive suffixes

Objective suffixes follow benefactive suffixes when they co-occur affixed to ditransitive verbs. Examples of these forms can be seen in 1.3.3. Suffixes manifesting 3rd person singular and dual have several manifestations which are phonologically determined. See Chart D.

	Singular	Dual	Plural
1st person	-a/-aa	-awɨr	-ai/-aiu
2nd person	-it	-i	-i
3rd person masc	-ek/-ik/-ɨk/ -aak	-et/-es/ -ikɨt/-aakɨt	-i
fem	-ep/-ip/ -ie/-aa	-i	
neut	-ek/-ik/ -ɨk/-aak	-em	-em

Chart D: Objective suffixes

Reciprocal action suffix occurs as the final syllable in intransitive, transitive and ditransitive verbs when it occurs. The allomorphic variations are phonologically determined; the base form is /-an/. The suffix -an may not occur contiguous with vowels of the verb (which violates vowel harmony and would cause the rule of final vowel deletion to be activated). Therefore, w is placed between the verb and -an when the vowel of the verb is a back vowel, and h is placed before the suffix following central vowels of the verb. The suffix -an occurs elsewhere. Examples are:

(45) n-atip-an   *they talk together, discuss*
     they-talk-recip

(46) n-ene-han   *they argue*
     they-scold-recip

(47) n-enwo-wan   *they have sexual intercourse*
     they-copulate-recip

1.3.2. Transitive verbs

There are seven subclasses of transitive verbs, each distinguished by various affixes which co-occur with them, or by subject and and object markers which occur obligatorily as part of the verb stem.

(a) Subclass one transitive verbs may take a bound pronoun object affixed in place of a free pronoun. Chart E indicates their distribution. Examples are:

(48) k-ɨr   *he sees;*   k-ɨr-ek   *he sees it*
     he-sees   *he-sees-it*

(49) k-ewɨr   nan   *he throws stone;*   k-ewɨr-ek   *he throws it*
     he-throws stone   *he-throws-it*

(b) Subclass two transitive verbs may only take free noun objects. Examples are:

> (50) k-ɨrak   tukɨn   *he beats the slit gong drum*
>   he-beats slit gong
>
> (51) k-enep   sak   *he shot the pig*
>   he-shot   pig

(c) Subclass three transitive verbs have discontinuous morphemes as their stems; the infixed pronoun refers to the subject, not the object as is the case in other transitive verbs. Examples follow where ɨnatɨn is the stem for *to hunt*.

> (52) k-ɨn-(k)-atɨn   sak   *he hunts for pigs*
>   he-hunts-(he)-hunts pig
>
> (53) w-ɨn-(w)-atɨn   weise   *she hunts for grasshoppers*
>   she-hunts-(she)-hunts   grasshoppers

(d) Subclass four transitive verbs have an object occurring as part of the verb stem. These objects occur only in the third person and may be singular, dual or plural. These are indicated in Chart E.

	Singular	Dual	Plural
3rd person			
masc	-k-	-t-	-n-
fem	-h-	-n-	
neut	-k-	-m-	-m-

Chart E: Verb stem object markers

Examples are:

> (54) k-ere-k-ir   *he cuts it*
>   he-cuts-it-cuts
>
> (55) k-a-k-ɨp   *he hits him*
>   he-hits-him-hits

(e) Subclass five transitive verbs optionally take infixed object pronouns in place of free pronouns. These verbs take the benefactive object pronouns as an infix while at the same time taking direct object pronouns as a suffix. Examples are:

> (56) k-it-uwek-hi-em   *he asks him about them*
>   he-asks-him-asks-of them
>
> (57) k-emit-uwek-pɨn   *he lies to him*
>   he-lies-to him-lies

(f) Subclass six transitive verbs take no subject marking or tense/aspect prefixes. These are composed of derived verbs. See section 2.2.1. for a full explanation. Examples are:

(58) han   k-aa   hɨne kɨrak   *he forgot his knife*
      heart it-dies knife it-his

(59) han   tewen-en nɨkan k-ɨre   *she mourns for her son*
      hear bends-pl son   it-hers

(g) Subclass seven transitive verbs are irregular. The stem changes for each person because the object pronoun is wholly integrated into the verb and as such is indistinguishable from it. See Chart F for examples.

	Singular	Dual	Plural
1st person	k-eiyep *he-hit-me*	k-ewep-ɨr *he-hit-us (two)*	k-ewep *he-hit-us (pl)*
2nd person	k-itep *he-hit-you*	k-iyep *he-hit-you (two)*	k-iyep *he-hit-you (pl)*
3rd person masc	k-akɨp *he-hit-him*	k-aksɨp *he-hit-them (two)*	k-anɨp *he-hit-them (pl)*
fem	k-aaup *he-hit-her*	k-anɨp *he-hit-them (two)*	k-anɨp *he-hit-them (pl)*
neut	k-akɨp *he-hit-it*	k-amɨp *he-hit-them (two)*	k-amɨp *he-hit-them (pl)*

Chart F: Irregular stem verb

1.3.3. Ditransitive verbs

Ditransitive verbs do not divide into classes. They take both benefactive and direct object suffixes optionally in place of free nouns that normally occur in that position. Examples are:

(60) k-etp-uwek-em   *he tells something to him*
      he-tells-to him-them

(61) k-ewet-uwe   menmen *he gave food to her*
      he-gave-to her food

1.3.4. Intransitive verbs

There are two subclasses of intransitive verbs, regular and irregular. Intransitive verbs manifest the predicate constituent of intransitive clauses.

(a) Subclass one intransitive verbs are regular in that the stem does not change when co-occurring with future tense/aspect affixation. Examples are:

(62) k-ekɨr   *he washes;*   k-ak-ɨkɨr   *he will wash*
      he washes   *he-will-wash*

(63) k-ɨrɨre   *he dances;*   k-ak-rɨre   *he will dance*
      he dances   *he-will dance*

Note the morphophonemic rules in operation in the future tense examples of the above verbs. See section 0.3.3. on rules of vowel alternation.

(b) Subclass two intransitive verbs are irregular in that the stem changes when co-occurring with future tense/aspect affixation. Examples are:

(64) k-en   *he goes;*   k-ak-no   *he will go*
      he-goes   *he-will-go*

      basic stem: -en   altered stem: -ano

(65) k-an   *he comes;*   k-ak-nen   *he will come*
      he-comes   *he-will-come*

      basic stem: -an   altered stem: -anen

2. NON-VERBAL CLASSES

2.1. Introduction

Non-verbal word classes are distinguished on the basis of their external distribution in phrase and clause level constructions, and by the internal structure of the particular word class. Some words are grouped into subclasses on the basis of additional distribution and internal structure (inflection versus non-inflection). Since non-inflecting words do not demonstrate concord with other constituents of higher level constructions (i.e. clauses and sentences) in which they appear, they are totally dependent on their juxtaposed constituents (on the levels, particularly phrase) to show how they relate to these higher level constructions. In Au, the largest class of non-inflected words appearing in the lexicon are nouns, although other classes or words also have members which do not inflect; these include some adverbs and adjectives.

Words which may inflect constitute the most important classes which occur in Au. The inflection which marks the words for person, gender and number makes up the main component of the cross-reference system which operates on the clause and sentence levels. As has been previously demonstrated in section 2, the verbal word classes are very complex, taking affixation which not only includes prefixes and suffixes, but infixes as well; they may have instances of up to five syntactic categories marked by inflection in one word. The non-verbal classes, however, when inflected, have affixation preceding or following the word, and such affixation is limited to one occurrence per word.

In this section we will consider the derivation of non-verbal words, and then relate inflection to the word classes as they are applicable.

2.2. Derivation

Non-verbal words can be formed in Au through compounding. This involves grouping words such as non-adjective, noun-noun, and the reduplication of words and stems.

2.2.1. Reduplicated stems

Most non-verbal words in Au are uninflected free forms which are complete units in themselves. There are, however, a few reduplicated stems which occur, such as the following classes:

(a) Adjectives

    (66) yain-<u>yain</u>   *lazy*

    (67) wei-<u>wei</u>   *soft*

(b) Adverbs

    (68) main-<u>main</u>   *slowly; quietly*

    (69) was-<u>was</u>   *quickly*

(c) Nouns

    (70) kukɨr-<u>kukɨr</u>   *noise (of footsteps)*

    (71) tapin-<u>tapɨn</u>   *gooseflesh bumps*

    (72) ker-<u>ker</u>   *noise (of pounding)*

    (73) hɨn-<u>hɨn</u>   *arrow design*

(d) Verbs

    (74) han-<u>han</u>   *desire; love*

    (75) ehɨn-<u>hɨn</u>   *to be startled*

    (76) eper-<u>per</u>   *shake with fear*

    (77) etari-<u>tari</u>   *to be insensible; crazy; drunk*

The morphophonemic rule of vowel deletion occurs in the formation of verbs (75)-(77); this rule is discussed in section 0.3.3.

2.2.2. Noun-adjective compounds

The words which combine with adjectives are limited to body part nouns. These form new words which describe a state of being or a condition. Examples are:

    (78) hɨt - noki-m   *a long way*
          leg - long-them

    (79) han   - enu-k   *unhappy; angry*
          heart - bad-it

    (80) yɨnk - enu-m   *embarrassed*
          skin - bad-them

    (81) yɨnk - sisi   *fever*
          skin - hot

2.2.3. Noun-noun compounds

These compounds combine a noun in primary position which takes the role of qualifier. There are others which reduplicate and show a function of diversification or plurality. Both of these are described below.

(a)   Noun-noun qualifier compound

This compound involves a noun in primary position containing a generic term, followed by a noun expressing a specific name or relation. Examples are:

(82)   mani Opan   *Opan river*
       river Opan

(83)   maam   n pu   *clan hero; great grandparent*
       grandparent appendage

(84)   nɨkan suware   *man's sister's son; nephew*
       son   chicken

(85)   hore hɨm   *eagle; hawk*
       bird mouth

(86)   meni nɨkan   *Tumbuan son figure*
       Tumbuan son

(87)   sak miyak   *animals*
       pig marsupial

(b)   Noun-noun compound — diversification/plurality

This compound involves reduplicating the first word to produce the effect of diversification or plurality. Examples are:

(88)   wit   – wit   *everywhere; in all villages*
       village - village

(89)   wi ham – wɨ – ha-m *sometimes*
       day some - day - some-them

(90)   ekrit   – ekrit   *daily; every morning*
       morning - morning

(91)   n-iutɨp   n-iutɨp   *everyone; each one; one each*
       they-one - they-one

(92)   tipmain   tipmain   *forever; a long time from now*
       later   - later

2.3. Inflection

The most frequently occurring class of inflecting non-verbal words is the pronoun. This class includes general pronouns (subject), reflexive pronouns, demonstrative pronouns and possessive pronouns, all of which occur as free forms. The interrogative pronouns (also free forms) are described below in the section on interrogatives. The bound pronoun forms occurring as affixes in conjunction with verbals include both benefactive and objective classes which have been discussed in section 1.3.1.-(c) where verbs and their affixation are described.

Other word classes which may be inflected include adjectives, nouns (including numeral and locational) and interrogatives. Inflection will be discussed in relation to how each of the above classes manifest it.

2.3.1. Nouns

Numerals and locational nouns may inflect for person, personal nouns inflect only for number. These are the only classes of nouns that inflect. Their description follows.

(a) General personal nouns change their basic form to show number and appear in most noun phrases. The few forms which occur manifest no consistent pattern of inflectional endings. Examples are:

(93) mɨt   *men* (plural)
     men

(94) mɨtɨk   *man*
     man

(95) mɨtɨkɨt   *men*
     men

(96) mɨte   *woman*
     woman

(97) miyepɨr   *women* (dual and plural)
     women

(b) Kinship personal nouns have the same co-occurrence restrictions as the general personal nouns. These kinship nouns are obligatorily possessed. They also inflect to show number as illustrated in (99) and (101). In this class rer (plural) is the only form suffixed to show plurality. Examples are:

(98) maam   k-ai   *my grandfather*
     grandparent he-mine

(99) maam-rer   n-aiu   *our ancestors*
     ancestor-pl they ours

(100) haai   k-ɨrak   *his father*
      father he-his

(101) haai-rer n-aiu   *our fathers, our leaders*
      father-pl they-ours

(c) Locational nouns function as the main locational and modifier constituents in general locative phrases (examples 102-104) and in the main locational position in the positional locative phrase (example 105). Examples are:

(102) k-ɨnɨk   wɨnak   *under the house*
      it-under house

(103) k-entar yeno   *on the bed*
      it-on   bed

(104) k-ɨrapɨt wɨnak   *next to the house*
      it-adjoins house

(105) menep ein   *near there*
       near there

(d) Numerals inflect for gender and number, but the person expressed is always
third person. Only the primary numerals one and two inflect. Examples are as
follows:

(106) k-iutɨp   *one*
       he/it-one

(107) p-iutɨp   *one*
       she-one

(108) wiketer-es   *two*
       two-dl.male

(109) wiketer-em   *two*
       two-dl.neut

(110) wiketer-i   *two*
       two-dl.fem

2.3.2. Adjectives

Adjectives function as modifiers in phrase level constructions and inflect
for the gender and number of the constituent which they modify. In some
instances, adjectives function the same as adverbs by intensifying the quality
of the modifier (examples 113-114). Examples of adjectives as modifiers are:

(111) paap noki-k   *long stick*
       stick long-īt

(112) menmen enu-m   *bad food*
       food bad-them

(113) wɨnak weini-k   *empty house*
       house empty-īt

Examples of adjectives functioning the same as adverbs are:

(114) noki-m   enu-m   *very long*
       long-them very-them

(115) toki-k enu-k   *very old*
       old-it very-it

2.3.3. Interrogatives

There are five interrogative forms, translated by the question words 'who,
what, why, where, when and how', and these function as interrogative constituents
in clause level constructions. Some examples are:

(116) k-ewaai meruri   *when?*
       it-when

(117) k-enmak   *why?*
       it-why

(118) k-erkeik   *how; where?*
       it-how

(119) k-eimɨn   *who?*
       he-who

(120) meka-k   *what?*
       what-it

2.3.4. Free pronouns

Free pronouns are the most frequently occurring class of words in Au. Since they always occur in clause constructions manifesting subject or object constituents, they are vital to the smooth operation of the cross-reference system. This will be explained in detail in section 5.

There are four subclasses of free pronouns. These generally substitute for nouns but, unlike nouns, may not be modified by adjectives. Pronouns may manifest subject and object constituents in clause level constructions, and intensifier, possessive and specifier constituents in phrase level constructions. The classes of bound pronouns which occur affixed to verbs have been described previously in section 1.3.1. The four subclasses of free pronouns are described below.

(a) General pronouns manifest subject constituents in clause level constructions, and Head 1 in co-ordinate phrases when substituting for a noun. Chart G indicates the basic pronoun forms.

	Singular	Dual	Plural
1st person	hi	hawɨr	haiu
2nd person	ti	yi	yi
3rd person			
masc	hɨrak	hɨrakɨt	hɨr
fem	hɨre	hɨr	
neut	hɨrak	hɨrem	hɨrem

Chart G: Personal pronouns

(b) Reflexive pronouns (subclass two) function only as intensifier constituents in the intensive pronoun phrases (i.e. you yourself, he himself, etc.) which are described in section 3. Chart H indicates the basic pronoun forms.

	Singular	Dual	Plural
1st person	hɨra-kes	hɨra-kses	hɨra-s
2nd person	hɨra-kes	hɨra-s	hɨra-s
3rd person masc	hɨra-kes	hɨra-kses	hɨra-s
fem	hɨra-hes	hɨra-s	
neut	hɨra-kes	hɨra-mes	hɨra-mes

Chart H: Reflexive pronouns

(c)   Subclass three demonstrative pronouns function as qualifier constituents in the general noun phrases (i.e. *these* things, *those* things, etc.). Chart I indicates the basic forms.

	Singular	Dual	Plural
this	ik	it	im
that	eik	eit	eim

Chart I: Demonstrative pronouns

(d)   Subclass four pronouns are possessive which funtion as possessive constituents in general noun phrases.

Of all word classes which are non-verbal, the possessive pronouns are the most complex and occur more often than nouns in phrase constructions. The initial consonant marks the gender and the number of the item possessed, and the remainder of the word marks the person, gender and number of the possessor. Chart J illustrates this by means of two parameters: the horizontal parameter indicates the item possessed, while the vertical parameter indicates the possessor. This class set as a whole illustrates the concord between constituents more clearly than any other class of inflecting words.

	Masc-Neut Singular	Feminine Singular	Masculine Dual	Masc-Fem Plural	Neuter Plural
1st sing	k-ai	p-ai	t-ai	n-ai	m-ai
2nd sing	k-it	p-it	t-it	n-it	m-it
3rd sing masc/neut	k-ɨrak k-ɨrak	p-ɨrak p-ɨrak	t-ɨrak	n-ɨrak	m-ɨrak
fem	k-ɨre	p-ɨre	t-ɨre	n-ɨre	m-ɨre
1st dual	k-awɨr	p-awɨr	t-awɨr	n-awɨr	m-awɨr
2nd dual	k-i	p-i	t-i	n-i	m-i
3rd dual masc	k-ɨrakɨt	p-ɨrakɨt	t-ɨrakɨt	n-ɨrakɨt	m-ɨrakɨt
fem	k-ɨr	p-ɨr	t-ɨr	n-ɨr	m-ɨr
neut	k-ɨrem	p-ɨrem	t-ɨrem	n-ɨrem	m-ɨrem
1st pl	k-aiu	p-aiu	t-aiu	n-aiu	m-aiu
2nd pl	k-i	p-i	t-i	n-i	m-i
3rd pl masc/fem	k-ɨr	p-ɨr	t-ɨr	n-ɨr	m-ɨr
neuter	k-ɨrem	p-ɨrem	t-ɨrem	n-ɨrem	m-ɨrem

Chart J: Possessive pronouns

3. PHRASE LEVEL CONSTRUCTIONS

3.1. Introduction

The first three sections have been primarily concerned with describing word classes in Au, including derivation (word compounding). We also took note of the inflectional affixation when words are incorporated into different phrase level constructions and manifest person, number and gender to show agreement or concord with other constituents of these constructions.

In this section we will outline the various types of phrase level construc-
tions which are manifested by the verbal and non-verbal word classes. The
phrase level is not complicated enough, for the most part, to warrant a bi-
dimensional chart (Longacre 1972) and therefore, a simple prose description will
normally be used to describe phrases, immediately followed by examples. When
multiple fillers exist for any of the constituents, some confusion may arise
for the more complex constructions, and therefore, a bi-dimensional chart will
precede the prose description. In such charts names of the constituents, as
well as their optional or obligatory status, are indicated along the horizontal
parameter. The names of the class fillers which we have observed in the data
are listed along the vertical parameter. An example of a bi-dimensional chart
appears below.

Constituents	+ A	+ B	+ C
Classers of fillers	X	Y	Z

Model bi-dimensional chart

The system of agreement between constituents will be illustrated on the
phrase level. The phrase is potentially composed of two or more words: when
the construction is binary (only two constituents possible), both constituents
are obligatory and they are considered nuclear to that construction; when there
are more than two constituents, the nuclear item or items are obligatory, and
the peripheral items occur optionally and expand or modify the nuclear items.

An Au phrase is defined as a construction in the grammatical hierarchy
between the word level and the clause level. Phrase constructions generally
manifest constituents in clause level constructions, although there is frequent
recursion or embedding of phrases within other phrase level constructions, as
can be seen, for example in the general noun phrase.

Since phrases are constituents of clause level constructions, they will
necessarily fit into the cross-reference system operating on that level. Thus,
if the phrase manifests Instrument in a clause, this grammatical relationship
will be reflected in showing cross-reference affixation with the Subject of the
clause. A verb phrase will inflect to show person, number and gender agreement
with the Subject. Phrase constructions embedding in other phrase level con-
structions will inflect to show agreement only for the nuclear constituent(s)
of that construction in which it is embedded.

3.2. Phrase types

Phrases in Au are classified on the basis of word classes which manifest
nuclear constituents, the number of nuclear and peripheral (non-nuclear) con-
stituents and their possible expansion, as well as the distribution of these
various constructions in clause level constructions.

There are six major types of phrases, as enumerated in Chart K.

Phrase type	Nuclear constituent manifestation	Clause/Phrase level role manifested by phrase
Pronoun	Pronoun	Subject - Clause level
Noun	Noun	Subject, object - Clause level
Adjective	Adjective	General noun phrase
Adverb	Adverb	Manner - Clause level
Relator-axis	Locative/Possessive Instrument Duration-Temporal	General noun phrase Instrument - Clause level
Verb	Verb	Predicate - Clause level

Chart K: Phrase types

3.2.1. Pronoun phrase

There are two subclasses of pronoun phrases, both of which have pronouns manifesting the Head. Pronoun phrases manifest only the Subject in clause level constructions, and for that reason they are presented first in this section. Nouns have a wider distribution and are described later on in this section. The non-Head constituents in both pronoun phrases (intensifier and qualifier) may inflect for person, gender and number and therefore mark the type of agreement which exists between constituents on all levels. The pronoun phrases are described below.

(a) Qualified pronoun phrase

A qualified pronoun phrase consists of a Head and a Qualifier, both of which have obligatory fillers with the pronoun functioning as Subject within a clause. The Head is manifested only by a free subject pronoun, and the qualifier is manifested by a general noun phrase which may act in apposition to the pronoun. The Head of a general noun phrase is optional when it occurs in apposition to the Head of a qualified pronoun phrase. Examples are:

(121) hi kereke-k   *just me; I alone* (masc)
     I only-he (3rd sg)

(122) hɨre kerepe-p   *just her; she alone* (fem)
     she only-she

(123) hɨre p-iutɨp kerepe-p   *she the only one*
     she she-one only-she

(124) hɨrak haai   k-ɨrak   *he, (that is) his father*
     he   father he-his

(b)   Intensive pronoun phrase

The intensive pronoun phrase consists of a Head and an Intensifier, both of which are obligatory, with the pronoun functioning as the Subject in a clause. The Head is manifested only by a free pronoun (subject), and the Intensifier is manifested by hɨra- *self*, representing a class which inflects for person, gender and number. Chart H in section 1.3.4.-(b) illustrates the range of inflection for reflexive pronouns. Examples of the intensive pronoun phrase are illustrated below.

(125)   hɨrak hira-kes   *he himself*
        he   *self-he*

(126)   hi hira-hes   *I myself* (fem)
        I self-she

(127)   haiu hira-s   *we ourselves* (pl)
        we pl *self*-pl

3.2.2. Noun phrase

Noun phrases are the most extensive and complex of all constructions on the phrase level. There is a great deal of embedding of other phrase types into noun phrases, but other phrase type structures have relatively little embedding.

Noun phrases primarily manifest Subject and Object constituents in clause constructions, but they may also manifest Location and Time constituents. There are four noun phrases, which are now described.

(a)   Numeral phrase

The numeral phrase consists of a Counter 1, Counter 2 and Quantity. All are optionally manifested, but at least two must appear, and one of these must be a Counter constituent. Counter 1 is manifested by the numeral 'ten'. Counter 2 is manifested by the numeral 'five'. Quantity may be manifested by the numerals 'one', 'two', 'three' or 'four'. Any number in the Au counting system can be formed from these numeral combinations. The Au people count from 1-10 by using fingers on their right and left hands. A doubled fist denotes five (5) and both fists doubled denote ten (10). These are kinetic correlates of language because the people count with their fingers as they simultaneously speak with their mouths. The relationship is always additive, one element building upon another.

The numeral phrase manifests a Quantity function in the general noun phrase constructions. Counter 1 may occur up to six times. Examples are:

(128)   hispɨnak k-iutɨp   *six*
        five   *it-one*

(129)   hispɨnak tekyait   *nine*
        five   *four*

(130)   hiswiyen hispɨnak   *fifteen*
        ten   *five*

(131)   hiswiyen hispɨnak k-iutɨp   *sixteen*
        ten   *five*   *it-one*

(132) hiswiyen hiswiyen   *twenty*
      ten   ten

(b)   Co-ordinate noun phrase

The co-ordinate noun phrase consists of a Head 1 and Head 2 both filled by a pronoun, noun or general noun phrase, conjoined by ekite *with, and.* The Head 2 constituent may be repeated up to five (5) times. Both Head 1 and Head 2 constituents may be manifested by proper nouns as well as by pronouns. When Head 2 is manifested by a pronoun, it is a bound form which appears affixed to the conjunction, as illustrated by example (138). Examples of the co-ordinate noun phrase are:

(133)   Yinen k-ekite haai   k-ɨrak   *Yinen and his father*
       Yinen he-and father he-his

(134)   hi h-ekite masta   *I and the expatriate (white man)*
       I I-and   expatriate

(135)   nepere kerepe-p w-ekite haai   miye   *just a female dog and the*
       dog   only-she she-and father mother   owners   *father mother owners*

(136)   Nowiyen k-ekite Weisu   *Nowiyen and Weisu*
       Nowiyen he-and Weisu

(137)   hɨrak k-ekite haai   k-ɨrak t-e   Punak   *he and his father*
       he   he-and father he-his they-from Punak   *both from Punak*

(138)   haiu m-ekite-ri   *we all and them*
       we-pl we-and-they

Co-ordinate noun phrases manifest the Subject and Object on the clause level and the Head of general noun phrases.

(c)   Temporal phrase

A temporal phrase manifests the Time constituent in clause constructions. The function of the phrase is to mark a Definite time and a Head, both of which are obligatory manifested. The Definite time constituent is manifested by definite time nouns, such as 'yesterday', 'today', 'tomorrow', etc. while the Head constituent is manifested by specific span time nouns as 'morning', 'afternoon', and 'night'. Examples are:

(139)   teip   ekrit   *tomorrow morning*
       tomorrow morning

(140)   napup   hɨnkiuwe   *yesterday afternoon*
       yesterday afternoon

(141)   patepɨn ekrit   *this morning*
       today   morning

(142)   teip   wɨtaan   *tomorrow night*
       tomorrow night

(143)   meisu hɨnkiuwe   *later this afternoon*
       later afternoon

(d)   General noun phrase

The general noun phrase is probably the most frequent phrase type in Au. Its structure is complex enough that a bi-dimensional chart with all classes

of fillers which manifest each constituent will be helpful. The general noun phrase manifests the Subject and Object in clause level constructions and on the phrase level it embeds with the Relator-axis and Qualified pronoun phrases.

In the general noun phrase (see Chart L below for the ordering of constituents in the phrase), only the Head is obligatory, and may be considered the minimal position within a manifestation of the general noun phrase. There are six other functions with classes which co-occur with the Head, but these occur optionally with certain co-occurrence restrictions among them. Generally, no more than two other entities may co-occur with the Head constituent, but some instances have been found with three.

Examples with specific embedding will be indicated following the free translation in the right hand margin. These examples will be presented below following Chart L.

+ Specifier	+ Head	+ + Possessive	+ Description
pronoun proper noun	noun co-ord. phrase	poss. pronoun	adjective adj. phrase interrog.- adjective

Cont...

+ Quantity	+ Rel-Axis	+ Qualifier
numeral num. phr. interrog.- adverb	relator- axis phr.	kereke- only- dem. prn.

Chart L: Bi-dimensional chart of general noun phrase

(144) nikan k-irak k-iutɨp kereke-k   *his only son*
       son   he-his he-one only-he

(145) mɨt ha-n   n-e   Tumentonɨk (embedded Relator-axis phrase)
       men some-they they-from Tumentonik
       some men from Tumentonik

(146) Yinen haai   kɨrak   *Yinen's father*
       Yinen father he-his

(147) hɨrak k-ekite haai k-ɨrak t-e   Puank (Co-ord. phr. and Loc
       he   he-and father he-his they-from Puank   R-A phr)
       he and his father (both) from Puank village

(148) nu   marmenu-m   *how many pieces of wood?*
       wood how many-them

(149) menmen meka-k   *what food?*
       food   what-it

3.2.3. Adjective phrase

An adjective phrase consists of a Head and a Qualifier, both of which are obligatory to the construction. The Head is manifested only by adjectives, while the qualifier may be manifested by either adverbs of intensity, or by adjectives of size acting in the role of adverbs. The adjective phrase manifests the Description function in general noun phrases. Examples are:

(150) toki-k enu-k   *very old; very hard*
       ole-it very it

(151) yaai-k wetpen   *very good; very nice*
       good-it very

(152) kike   enu-k   *very little*
       little very-it

(153) yina-k   enu-k   *very short*
       short-it very-it

(154) noki-k   kike   *fairly long* (adjective in role of adverb)
       long-it little

(155) toki-k iuwe   *quite strong* (adjective in role of adverb)
       hard-it big

3.2.4. Adverb phrase

The adverb phrase consists of two obligatory units and one optional unit. Head 1, manifested by an adverb, the Intensifier, manifested by enu- *very*, and an optional Head 2, which is a reduplicated form of the Head 1. Adverb phrases manifest the manner in clause level constructions and emphasise the intensity of the action described by the predicate. Examples are:

(156) mainmain enu-m   mainmain   *very slowly*
       slowly   very-them slowly

(157) waswas enum   waswas   *very quickly*
       quickly very-them quickly

(158) hisiuwe enu-k   hisiuwe   *very loudly*
       loudly very-it loudly

3.2.5. Relator-axis phrase

There are four distinct relator-axis phrases. Three of them occur in clauses and the fourth occurs within general noun phrases. These phrases contrast on the basis of their manifesting classes, the number of constituents, and their distribution in various constructions.

(a) Possessive/origin phrase

The possessive/origin phrase is manifested by -e *from, belonging to* functioning as Relator. The relator inflects to agree with the filler of Head in the general noun phrase. The Axis is manifested by nouns, proper nouns and by general noun phrases. The Relator may also inflect for plurality and tense/aspect when the clause level construction in which the general noun phrase occurs requires that it do so to show concord with the Predicate. Examples are:

(159) k-e   haai   k-ɨrak (possession)   *belonging to his father*
      it-of father he-his

(160) k-e   Yɨto (possession)   *(the knife) belonging to Yɨto*
      it-of Yɨto

(161) k-e   Witi̇tai (origin)   *(the man) from Wititai*
      he-from Wititai

(162) menmen m-e   mɨt n-e   Puank (possession and origin)
      things they-of men they-from Puank
      things belonging to the men from Puank

(163) mɨt miyepɨr n-e-rer   wit   wit (plurality and origin)
      men women   they-from-pl village village
      men and women from all the villages

(b) Duration-temporal phrase

     The duration-temporal phrase is manifested by two obligatory constituents, and is similar in construction to the possessive/origin phrase. This phrase type functions as Time in clause level constructions. The Relator is manifested by -e *during* and inflects to agree with the filler of the Axis. The Axis is manifested by temporals as well as by nouns. Examples are:

(164) m-e   wɨtaan   *during the night*
      they-during night

(165) m-e   wepni   *during the day*
      they-during sun

(166) m-e   hawɨ hɨtan   *during the rainy season*
      they-during rainy season

(167) m-e   wepni yaaiki   *during the dry season*
      they-during dry season

(c) Instrument phrase

     The instrument phrase is manifested by two obligatory constituents, although the second constituent may appear as a bound form affixed to the first constituent. This phrase type functions as Instrument in clause level constructions. The relator is manifested by -eriuwe *by means of*, *with*. The Axis is manifested by a pronoun (bound), a noun or a general noun phrase. As can be seen above, -eriuwe must take a prefix which shows person, gender and number and also agrees with the tense/aspect of the Subject and Predicate of the clause level construction in which it appears. Occasionally, -eriuwe will show accompaniment instead of instrument and when this occurs, the predicate will be manifested by an intransitive verb. Instrument always occurs with a transitive verb manifesting the predicate constituent. Examples are:

(168) k-eriuwe hɨne k-ɨrak   (Instrument)
      he-with bow it-his
      (he shot) by means of his bow

(169) k-eriuwe hen-ik   ha-k   (Instrument)
      he-with bamboo arrow a-it
      (he killed him) with a bamboo arrow

(170) tɨpir k-ɨrɨr k-eriuwe-rek   (accompaniment)
       spirit he-fled *he-with-it*
       the spirit fled with it (stuck in his head)

(171) w-eriuwe-rek   (Instrument)
       she-by means of-it
       (she chipped off sago pith) with it

(d) Locative phrase

     The locative phrase consists of two obligatory units, and manifests the
Location in clause level constructions. The Relator is manifested by a class
of locationals, all of which inflect for person, gender and number; tense/
aspect also occurs. (See example 175). The Axis is manifested by locational
nouns and by general noun phrase; occasionally, the Axis may be manifested by
bound pronoun forms, which must appear affixed to the Relator. Only three of
the locationals observed in the data allow this. Examples of locative phrase
are:

(172) k-au niu   *up high*
       it-on sago

(173) k-au-wik   *on the ground*
       it-on-it

(174) k-eit wɨnak eik   *at the house*
       it-at house that

(175) k-ak-waai   yayiwe   *will be on the road*
       it-will-lie on road

(176) k-ɨrapɨt wɨnak   *next to the house*
       it-next   house

(177) k-ɨnɨk   wɨnak   *under the house*
       it-under house

(178) k-enter-ik   *on the bed*
       it-on-it

(179) k-ɨriu   nu   *against the tree*
       it-against tree

3.2.6. General verb phrase

     There appears to be only one type of verb phrase. Although there are two
other constructions which might appear to match the description of a verb
phrase, when they are considered more closely the particular features involved
concern the particular class of Predicate fillers. One such phrase is redu-
plicated verbs , which appear only to mark motion. The second is a sequence
of verbs which have already been described in the section on verbal word class
derivation (section 2.2.).

     Since the general verb phrase is the only construction on the phrase level
manifested by verbal word classes, it is more complicated than the normal
phrase construction, and we have outlined it below in Chart M.

+ Aspect	+ Head	+ Accomplishment
ap	any verb	nepei au
wen		wen au
nepei		au werek
pɨke		
amɨ		
are		

Chart M: General verb phrase

There are three possible functions in the phrase, and only the Head is oblig-
atory. As can be seen in Chart M above, the Head may be filled by any verb
from any class. The Aspect is manifested by ap 'not', wen 'yet', nepei 'com-
pletive', pɨke 'repetitive', amɨ 'intentive', and are 'desiderative'. The
Accomplishment may be separated from the Predicate when Object and non-diagnostic
constituents occur following the Predicate; it then must occur as the last item
in the clause. Examples of general verb phrase are:

(180) ti ap ano   Witne   *do not go to Witne*
       you not you-will-go Witne

(181) hɨrak nepei   k-en   Yenkok   *he already went to Yenkok*
       he   completive he-went Yenkok

(182) n-esip-aak   nepei au   *they already carved it*
       they-carve-it completive

(183) hɨrak k-eiyɨm   k-en   wen au
       he   he-got-them he-went non-completive
       he has not yet gotten them and taken them away

(184) hi amɨ   akɨp   *I intend to hit him*
       I intentive I-will-hit him

(185) hɨrak k-are   k-ak-no   Lumi   *he wants to go to Lumi*
       he   he-desir. he-will-go Lumi

4. CLAUSES

4.1. Introduction

In the preceding section we described word classes, their formation and
how these classes fit into various phrase level constructions. In this section
we demonstrate how the different phrase types manifest various clause level
constituents as they function in the clauses.

An Au clause has been defined as a construction in the grammatical
hierarchy which occurs between the phrase level and the sentence level. The
construction consists of or includes one Predicate or predicate-like constit-
uent, and various peripheral constituents. The clause construction in turn
usually manifests sentence level constituents.

The clause requires only one Predicate constituent which may be manifested by a word level construction which is fully inflected to show a cross reference with the other clause constituents. As was shown in section 1, a Predicate constituent may be manifested by two verb words compounded, but these do not indicate two Predicate constituents in the clause. Although both verbs inflect, only one lexical item (derived form) results. The Predicate may also be manifested by any single verb word.

Although embedding of clauses into other clause level constructions is not extensive, it does occur. In cases of embedding, the predicate constituent of the embedded clause is not included among the constituents of the clause construction under consideration.

In addition to the Predicate constituent which is obligatory in clause constructions, other optional constituents include Subject, Object, Location, Time, Manner and Instrument/Accompaniment. These optional constituents are diagnostic because they show contrast in clause types and are distinguishing features of various clauses.

Clauses are classified into two major types: Independent clauses and Dependent clauses. These contrast in the constituents manifesting clause level constructions and in their distribution in sentence level constituents.

The Equative clause has an obligatory Comment constituent functionally equivalent to the Predicate constituent although it is manifested by non-verbal word classes. See 4.2.1.-(e) for a discussion on the Equational Predicate.

4.2. Independent clause

The Independent clause manifests all bases in non-link sentences (those sentences whose constituents are conjoined by simple juxtaposition) and all bases except Link in the link sentences (those sentences whose bases are conjoined by an overt conjunction). Independent clauses consist of five basic types: (1) Transitive, (2) Ditransitive, (3) Intransitive, (4) Stative, and (5) Equative. These clause types are arrayed in Chart N along the horizontal parameter marked for transitivity. They are further distinguished in relation to their occurrence along the vertical mode parameter which includes Declarative, Interrogative and Imperative clauses. There are no Stative or Equative Imperative clauses listed, which gives a total of thirteen (13) clause types as reflected in the chart. The clauses across the transitivity parameter will be described first, and following this, the clauses of the mode parameter.

4.2.1. Transitivity parameter

Across the transitivity parameter the five clause types contrast in the manifesting class of the predicate constituent and in the optional diagnostic constituents which manifest each clause type. These are now described on the following page.

<----------------------- Transitivity parameter ---------------------->

	Independent transitive (IT)	Independent ditransitive (ID)	Independent intransitive (II)	Indpenedent stative (IS)	Independent equative (IE)
Declarative (Dc)	± S + P ± O vITrDc	± S + P ± IO + O vIDTrDc	± S + P vIITrDc	+ S + P + O vISDc	+ Tp + Cm (v) IEDc
Interrogative information* (Ig)	+ Ig ± S + P ± O vITr	+ Ig ± S + P ± IO ± O vIDTr	+ Ig ± S + P vIITr	+ Ig + S + P + O vIS	+ Ig + Tp + Cm (v) IE
Imperative (Ip)	± S + P ± O vITrIp	± S + P ± IO ± O vIDTrIp	± S + P vIITrIp		

← mode parameter →

Chart N: Independent clauses

* The interrogative may occur either in initial or clause final position
  depending on its function in the clause (subject/object).　(See 4.2.2.-(b)
  Interrogative clause.)

(a) Transitive clause

The transitive clause functional points and permissible fillers are as follows:

± Subject	+ Predicate	± Object	± Instrument	± Location
noun	trans. vb	noun	inst. phr.	loc noun
pronoun	trans. vb-phr.	pronoun		
gen n-phr.		gen n-phr.		

The Predicate is the only obligatory item and is manifested by a transitive verb or verb phrase. Optional constituents include the items displayed in the above bi-dimensional array. A Subject, whose constituent may be animate or inanimate, occurs as an independent form when present, but Object, which occurs following the Predicate, may occur as an independent from (noun) or may appear affixed to the Predicate, as a pronoun. Examples are:

(186) h-enep-ik   (P, O)
       I-made-it
       I put it together

(187) hɨr n-ɨnap   n-eriuwe-rek   (S, P, I)
       they they-shouted they-with-it
       (as they brought it) they shouted with it

(188) hɨr n-ewis-ɨm   m-au   si   (S, P, O, L)
       they they-put-them they-on fire
       they placed them on the fire

(189) hɨr n-ime   wɨnon m-e   pɨnak m-e   pɨnak   (S, P, O, L)
       they they-make tips they-of side they-of side
       they carved tips on either end

The capital letters which appear in parentheses represent the constituents which manifest clause level constructions: S = Subject, P = Predicate, and so on.

(b) Ditransitive clause

A ditransitive clause is represented by the following:

± Subject	+ Predicate	± Benefactive	± Object	± Instrument
noun	di.tr.verb	noun	noun	inst. phr
pronoun	di.tr. v-phr.	pronoun	pronoun	
gen n-phr.		gen n-phr.	gen n-phr.	

The Predicate is obligatory and is manifested by a ditransitive verb or verb phrase. Optional, but diagnostic constituents, include the items displayed in the array above. A ditransitive clause has the potential of having either Benefactive or (direct) Object or both. These may be marked either as suffixes

attached to the Predicate, or independently and sepatately as nouns or noun phrases. The Subject must always be manifested by an animate noun. Examples are:

> (190) hɨrak k-atɨp   (S, P)
>   *he   he-said*
>   *he spoke*
>
> (191) hɨrak k-atɨp haai   k-ɨrak (S, P, B)
>   *he   he-said father he-his*
>   *he spoke to his father*
>
> (192) hɨrak k-ewet   (S, P)
>   *he   he-gave*
>   *he gave*
>
> (193) hɨrak k-ewet-ɨwek-em   (S, P-B-O)
>   *he   he-gave-to him-them*
>   *he gave these things to him*
>
> (194) k-ewet-or   teipe   (S-P-B, O)
>   *he-gave-to them sago jelly*
>   *..he gave them sago jelly*
>
> (195) hɨre w-ewen-ɨwek-or-naan   (S, P-B-O)
>   *she she-spies for him-on them-spies*
>   *she spies on them (others) for him*

(c)   Intransitive clause

An intransitive clause may be represented as follows:

+ Subject	+ Predicate	+ Location
noun	intr. verb	loc. noun
pronoun	intr. v-phr.	loc.phr.
gen n-phr.		

The Predicate alone is obligatory and is manifested by intransitive verbs. The other diagnostic constituents are optional and are listed above in the bi-dimensional array. Note that Benefactive and Object constituents do not occur. The following are examples of intransitive clauses:

> (196) wepni k-ɨr   (S, P)
>   *sun   it-sees*
>   *the sun is shining*
>
> (197) hɨrak k-enke   (S, P)
>   *it   it-fell*
>   *it fell over*
>
> (198) hɨre w-enke-wɨn   w-eit yaank Puko   (S, P, L)
>   *she she-fell-anm. she-at forest Puko*
>   *she fell down in Puko forest*

(199) manpen k-uwaai yayiwe   (S, P, L)
       snake it-lies road
       a snake is lying on the road

(200) hɨne k-ai k-ɨnatɨn k-ekre hei   (S, P, L)
       knife it-my it-fell it-into hole
       my knife fell into a hole

(201) k-epu   (P)
       he-cont-sits
       he continues sitting

(d) Stative clause

    The stative clauses are very rare and are represented as follows:

± Subject	+ Predicate	+ Object
noun	stat. verb	noun
pronoun		pronoun
gen n-phr.		gen n-phr.

    The Predicate and Object are obligatory, but the free pronoun Subject is optional. The Predicate is manifested by a stative verb, which is a compound word. The Object may be manifested by a free form such as a noun or a general noun phrase, or it may appear affixed to the verb. The few examples from the data are:

(202) si   t-aa-k   wɨnak   (P, O)
       fire they-ate-it house
       the house burned down (fire ate the house)

(203) hɨrak si   t-aa-k   his   (S, P, O)
       he   fire they-ate-it hand
       he burned his hand (fire ate the hand)

(204) si   t-a-(t)-ɨknen-i   (P, O)
       fire they-burn-(will)-burn-you
       the fire will burn you

    The Predicate is manifested in the previous examples by a verb that follows no normal inflection rules and never appears in any other form. Although, on the one hand, it appears to fit into the class of noun-verb compounds (2.2.1. noun-verb compounds), its particular formation allows us to place it in a unique class.

(e) Equative clause

    The equative clause is a binary construction consisting of the following:

+ Topic	+ Comment
pronoun	possessive pronoun
	adjective
	adverb
	interrogative pronoun
	interrogative adjective

The Equative clause as a binary construction differs from other clause constructions in this regard. Further, there are no verbal classes which manifest the Predicate constituent; rather, the obligatory Comment constituent serves as predicate of the construction. Examples of the equative clause are:

(205)   im   yapruwe   *there are many of these*
        these many

(206)   ik   yaai-k   *this one is good*
        this good-it

(207)   hɨrak enu-k kike   *it is too small*
        it   bad-it little

(208)   hɨrem   werek   1. *those are okay*, 2. *that is enough*
        they-neut *well*

(209)   hɨre enu   *she is naughty*
        she bad-she

(210)   meka-m   im   *what are these?*
        what-them these

(211)   ti   k-emɨn   *who are you?*
        you he-who

(212)   hi k-ai ek   *it is mine*
        I it-my it

4.2.2. Mode parameter

The vertical mode parameter of Chart N demonstrates the contrast in the internal structure of the verb manifesting the Predicate constituent, as well as the peripheral constituents. It also reflects the situational context and subsequent response elicited from the hearers. The Declarative, Interrogative and Imperative clauses all manifest sentence level constituents.

(a) Declarative clause

In the mode parameter (see Chart N), the Declarative is manifested by all five clause types which occur across the transitivity parameter. The Predicate is manifested by verbs which take regular inflectional affixation, but which are also affixed for the declarative mode. Examples of declarative clauses may be found above in section 4.2.1.

(b)   Interrogative clause

In the interrogative clause, the presence of an interrogative constituent is obligatory, occurring in a portmanteau relationship with the constituents with which is co-occurs or replaces (i.e. those manifesting Subject, Object, Location, Instrument/Accompaniment and Time). For example, in the clause keimɨn kan *who came?*, keimɨn marks both the interrogative as well as the subject constituent in portmanteau relationship with it (k-emɨn *he-who*). Interrogatives may occur clause initial or final depending on their use in the clause. 'Who', 'why' and 'when' occur initially. 'Who' (used as object), 'what', 'where' and 'how many' occur in clause final position. An interrogative clause evokes several responses: a simple information response, and a yes/no response; it may also be used as a hetorical question, that is, expecting no response; if this occurs, a tag question particle a occurs in clause final position. Examples of interrogative clauses are:

(213)   hɨre w-enep p-eimɨn   (interrogative object)
        she   she-hit she-who
        what woman did she hit?

(214)   k-eimɨn nepei   k-aa   (interrogative subject)
        he-who completive he-died
        what man has died?

(215)   hɨrakɨt   t-eit   nu   meka-m   (interrogative adjective)
        they-masc.dl they-got wood what-them
        what kind of wood did they get?

(216)   hɨr n-en   neiyɨn
        they they-went where
        where did they go?

(217)   k-uwaai meruri hɨrak k-ɨr-ep
        he-when   he   he-saw-her
        when did he see her?

(218)   ti h-epɨtari-em   a
        you you-do not know them r-p
        (someone stole the taro but) you would not know about these
        * things would you?*

(219)   hɨrak k-ewɨr   marmenu-m
        he   he-threw how many-them
        how many did he throw?

(c)   Imperative clause

Imperative clause constructions have verbs which manifest Predicate constituents inflected for the imperative mode. Often the subject is absent in such constructions, especially if they appear in speech quote sentences. No stative or equative clauses appear inflected for the imperative mode. Imperative clauses entail an appropriate subsequent action by the audience. Examples are:

(220)   yi eimtau   hɨm m-ai
        you you-must-hear word they-my
        you must listen to my words

    (221)   epau   in e
             you-stay here
             you remain here

    (222)   amnep   mɨte ip e
             we-must-kill woman this
             let us kill this woman

    (223)   awaai   ein
             you-must-go there
             (later on, you go to the river) and you must sleep there

4.3. Dependent clause

    The dependent clause constructions have the same transitivity parameter as independent clause constructions. They also have the same contrast in the Predicate manifestation and in the diagnostic constituents. The transitivity parameter will therefore be omitted as redundant in our consideration of dependent clause types, and we will focus instead on the vertical parameter. Along this parameter the dependent clauses are distinguished according to Contingency, Simultaneity, Purpose, Reason and Duration. Each clause contrasts in terms of diagnostic constituents and in sentence level distribution. See Chart O, which indicates the full range of dependent clause types which have been observed — some 21 types in all.

4.3.1. Reason dependent clause

    A Reason dependent clause is manifested by the connective entar *because, on account of* which occurs as the initial constituent of the clause and inflects to show cross-reference with the Subject of the independent clause which precedes the dependent clause. Reason dependent clause manifests the Base 2 of a Reason sentence. Examples are:

    (224)   k̲-entar   yuwenep hɨrak k-aa-k
             he-because of flying fox he   he-ate-it
             (he got sick with dysentary) because of the flying fox he ate

    (225)   w̲-entar   hɨre yɨnk enu-m
             she-because she skin bad-them
             (she ran away) because she was ashamed

    (226)   w̲-entar   hawɨr   w-enain
             we-because we (dual) we-feared
             (we did not come and dance with them) because we were afraid

4.3.2. Duration dependent clause

    The Duration dependent clause is manifested by the particle ere *until* which occurs as the initial constituent in the clause. The particle may reduplicate the final syllable (-re) up to three (3) times to intensify the duration of the action. Duration dependent clause manifests the Base 2 of a Span Sentence. Some examples are:

<----------------- Transitivity parameter ----------------->

	Dependent transitive	Dependent ditransitive	Dependent intransitive	Dependent stative	Dependent equative
Reason (R)	+R +S +P +O DTrR	+R +S +P +IO +O DDTrP	+R +S +P DITrR	+R +S +P +O DSR	+R +Tp +Cm DER
Duration (D)	+D +S +P +O DTrD	+D +S +P +IO +O DDTrD	+D +S +P DITrD	+D +S +P +O DSD	+D +Tp +Cm DED
Contingent (C)	+C +S +P +O DTrC	+C +S +P +IO +O DDTrC	+C +S +P DITrC	+C +S +P +O DSC	
Simultaneous (SM)	+S +P +O DTrSm	+S +P +IO +O DDTrSm	+S +P DITrSm	+S +P +O DSSm	
Purpose (Ps)	+Ps +S +P +O DTrP	+Ps +S +P +IO +O DDTrP	+Ps +S +P DITrP		

<------- Vertical parameter ------->

Chart 0: Dependent clauses

(227) hɨrak manpen k-e-p-riuwet   meinmein <u>ere</u> k-en
      *he   snake   he-shoved-*cont-*shoved slowly   until he-went*

      k-e-pɨ-kre   tu   k-ɨrak
      *he-in-*cont-*in intestine he-his*
      the snake shoved slowly until he went into (the man's) intestines

(228) hɨrak k-en   ere-<u>re</u>   k-ɨp-iun   witeik
      *he   he-went until-pl he-*cont-*arrived village*
      he went (and kept going) until he reached the village

(229) hɨrak k-e-p-ket   tɨkaap k-e-p-nep   perpere
      *he   he-shot-*cont-*shot arrows he-shot-*cont-*shot flying fox*

      ere   k-e-p-nemtɨn
      *until he-finish-*cont-*finished*
      *he kept releasing the arrows and shooting flying foxes until (the
       arrows were) finished*

4.3.3. Contingent dependent clause

A Contingent dependent clause is manifested by the particle maain *after*
and by ewaai meruri *when; whenever* which occur as the initial constituents of
the clause; ewaai meruri inflects to show Subject cross-reference. Contingent
dependent clause manifests the Base 1 of a Contingent Sentence, and the Base 1
of a Narrative Sentence. Some examples are:

(230) maain ti ano   ewaai   mani eik hi pɨke
      after you you-will-go you-will-sleep river that I again

      awis-ut   pauwiye
      I-give-you headdress
      after you go and sleep at the river, I will return your headdress

(231) k-ak-waai meruri hɨrak k-ak-nen   hi pɨke h-ɨrɨr
      he-fut-whenever he   he-will-come I again I-flee
      whenever the arrives, I will run away again

(232) maain wesiun o miyak menmen   k-enektɨn wenmek hɨrak
      later rat   or animal something it-trips trigger it

      wenmek kenep   k-akɨp
      trigger it-release it-kills-it
      *after a rat or some animal bumps the trigger, it will release
       and (the trap) will kill it*

4.3.4. Simultaneous dependent clause

A Simultaneous dependent clause has a Predicate constituent manifested by
a continuous aspect inflectional affix attached to the verb; this operates in
opposition to a predicate which follows in the next clause which has an
obligatory simple past verb form. This clause manifests the Base 1 of a
Narrative Sentence. Some examples from the data are:

(233) hɨrak k-ɨp-waai   hi h-an   h-en
       he   he-cont-sleeps I I-came I-went
       while he was sleeping, I came and left

(234) hɨrak k-e-p-kɨp   miyak hɨrak k-akɨp
       he   he-shoots-cont-shoots animal he   he-shot him
       while he was shooting an animal, another man shot him

4.3.5. Purpose dependent clause

The Purpose dependent clause is manifested by the particle te *then; but; lest; so; so that* which occurs as the initial constituent of the clause. The Purpose dependent clause manifests the Base 2 of a Conditional sentence. Examples are:

(235) hi ap aitep   te ekiuwe   anen
       I not I-will-strike so you-imper-come down you-imper-come
       I am not going to kill you, so come down

(236) hɨr n-eiyɨm n-an   te   hɨr n-ankɨp
       they they-got they-came so that they they-will-kill him

       n-anɨk
       they-will-eat him
       they collected these things and came back in order that they
       might kill him and eat him (with the things they had collected)

(237) te   hɨrak akɨmtau   hisiuwe ekimamɨk
       lest he   he-imper-hear loudly he-imper-doing-it
       (but he did not chew it loudly) lest the man hear him doing it

4.4. Peripheral constituents

In addition to the contrastive diagnostic functions and their constituents, there are peripheral ones which optionally occur in Dependent and Independent clause constructions. These are Time, Manner, Instrument/Accompaniment and Location. These functions and their manifesting classes are indicated below in Chart P.

Time	Manner	Instrument/Accompaniment	Location
noun	adverb	Instrument Phrase	noun
Temp. phr.	Adv. phr.		Loc. phr.

Chart P: Peripheral constituents

The ordering of the diagnostic and peripheral constituents for each of the clause types across the transitivity parameter of Chart M is given in Chart Q which follows.

The ordering given in Chart Q is the most frequent ordering of the con-
stituents. However, there are times when peripheral constituents may shift
their order, such as when prominence is given to a particular constituent in
the construction. The Time constituent may be shifted from its initial position
in the clause to a position following the subject in order that the subject
might be made prominent. The Object may appear in initial position for the
same reason. When the Object is shifted, a bound object affixed to the verb
manifesting the Predicate must also be present. In an Interrogative clause,
the Subject may appear twice: once initially and the second time in its normal
position preceding the Predicate constituent. No other shift of constituents
has appeared in the data.

No peripheral constituents have been observed in Equative clause. Some
examples are:

(238) hɨrak nepup   k-an   witeik   (Subject fronted)
       HE   yesterday he-came village
       he came to the village yesterday

(239) mɨte hɨrak mɨtɨk k-etp-uwe   k-are   (Object fronted)
       woman he   man   he-said-to her he-this
       this WOMAN, the man said to her...

(240) ti h-enmak te   ti h-an   (Subject fronted in
       you you-may then you you-came   interrogative)
       then why have YOU come?

Transtiive clause	± T	± S	+ P	± O	± M	± I	± L
Ditransitive clause	± T	± S	+ P	± IO ± O	± M	± I	± L
Intransitive clause	± T	± S	+ P	± A	± M		± L
Stative clause	± T	± S	+ P	± O		± I	± L
Equative clause		+ Tp	+ Cm				

Chart Q: Order of clause constituents

Along the horizontal parameter, the Declarative clause follows the same
ordering given for the transitivity parameter as shown earlier. The Inter-
rogative clause has an obligatory constituent which may occur in place of any
one constituent when the focus is on that constituent (i.e. Subject, Object,
Location, etc.); this does not include Predicate or Topic. For example, the
Interrogative may replace the noun constituent functioning as Instrument and
then appear where the Instrument would normally appear in the clause.

In a normal text, only one of two peripheral constituents, in addition to
diagnostic ones, occurs in a clause.

4.5. Negation

The negative formula for Independent and Dependent clauses is as follows:
when a clause occurs medially in the sentence, the Aspect, manifested by *ap*
not, occurs with the Predicate and negates the clause. Whan a clause occurs

in sentence final position, an optional negative particle au *not* occurs in clause final position. If both the particle au and the particle ap occur in the same clause, au functions as a sentence level constituent meaning 'but'; see example (243). Examples are:

(241) hɨre w-atɨp   a   tɨnaa   m-entɨ   au
       she she-said hey mushrooms they-sprout not
       she said, "Hey, those mushrooms have not sprouted"

(242) au k-ɨrep   pauwɨ   k-auwiye au
       but he-saw-her genitals it-on her not
       but he saw that she had no genitals

(243) hɨre w-en   w-ɨrek   terwe   ap k-entɨ au
       she she-went she-saw-it tulip tree not it-grew but
       she went and looked at it, but the tulip tree had not grown

4.6. Embedding

In Au, embedding is very common and usually involves the clause and phrase levels. There are two types of embedding: clause embedded in clause (commonly called recursion — Longacre 1972) and clause embedded within a phrase level construction (backlooping).

4.6.1. Recursion

Recursion is generally limited to sensory verbs which include cognition and perception, and these usually have a verbal complement following which explains what was recognised or perceived. The embedded clause may only occur with a minimum of constituents (with free pronoun subject omitted) or it may include two peripheral constituents. Examples of recursion are:

(244) hi hanhan ahɨt   menmen   m-ɨrak
       I desire I-will-get something they-his
       I desire to obtain his possessions

(245) hi h-enaɨn h-enkewɨn   mɨnɨu
       I I-fear I-fall down-an mountain
       I am afraid that I will fall down the mountain

(246) hɨrak k-ɨr   sak k-ɨrak k-ɨrɨr
       he   he-saw pig it-his it-fled
       he saw that his pig was running away

4.6.2. Backlooping

Backlooping occurs quite frequently in narrative text material. In backlooping, clauses embed themselves in phrase level constituents, usually in apposition to a noun manifesting the clause level constituents of Subject, Object, Instrument or Location. Examples are:

(247) hɨrak k-en   k-ɨr   tuwaan   perpere   m-aa-k   (object)
       he   he-went he-saw breadfruit flying fox they-ate-it
       he went and looked at the breadfruit tree that the flying foxes
        had been eating from   (object)

(248) w-enke   w-e(p)ri   tuwaan   kerek nem(p)ai
       she-fell she-(cont) pulled *breadfruit where before* (cont)

       ein perpere   m-enan-ek   k-e(-)wi-k   ek e   (Object)
       there flying fox they-carry-him he-(cont) sits-it that
       she hung upside down on the breadfruit tree from where the flying
       * foxes before had carried him as he sat there*   (Object)

(249) k-eit wit   kerek hore k-enke kuwaai ti   (Location)
       he-at place where bird it-fell it-on ground
       ...at the place where the bird fell to the ground (Location

(250) k-eriuwe hine nipaa h-ewet-iwek-em   (Instrument)
       he-with bow before I-gave-to him-them
       ...with the bow which I had previously given to him (Instrument)

4.7. Ellipsis

Another common feature in Au is ellipsis, where much of a redundant clause
appears elided for the sake of brevity or convenience. This is frequent in
everyday speech, but appears less in text material. The two most common types
that occur in text are either an ellipsis of appostion or one of alternative.
A more rare type, total ellipsis of a full sentence, may occur following a
sentence which is to be negated. This can be seen in the final example below.
Examples are:

(251) nu nu k-e wi   (apposition)
       wood wood it-of pathway
       they make a trap of wood...wood for a pathway

(252) hi h-erekir his his yaaim m-ai   (apposition)
       I I-cut-it hand hand right they-my
       I cut my hand...my right hand

(253) hire w-ine   nikan o niki?   (alternative)
       she she-bore son   or daughter
       did she bear a son or (did she bear) a daughter?

(254) hire w-en   w-eit   wik o wikak? (alternative)
       she she-went she-got two or three
       did she go and get two or (did she get) three?

(255) hir nirak-em   haiu m-am-no   m-etiwem; au, au   (negation)
       they they-do-them we   we-will-go we-get-them no no
       if they do these things then we go and arrest them; (if they)
       * don't, (then we) don't*

5. SUMMARY

5.1. Introductory remarks

In the previous five sections we have outlined the basic features of Au
morphology and syntax. The approach has been taxonomic (based on a tagmemic
model) with items which function on lower levels manifesting constituents of
higher levels.

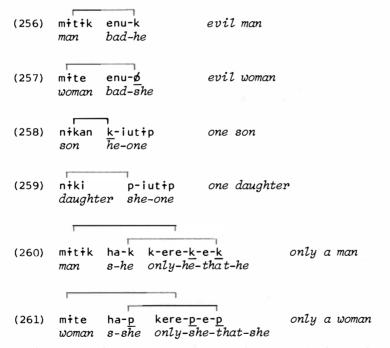In this section we summarise the most important features of Au grammar.

5.2. Important features of Au grammar

There are three areas of Au grammar which have features significantly different from those normally found in Papuan languages. These are: the system of agreement (which includes various classes), the verb classification (the transitive verbs in particular) and the multi-gender pronominal system, and its occurrence with both verbal and non-verbal word classes. Each of these will now be considered with examples.
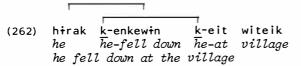

5.2.1. The agreement system

There are two types of agreement which occur on various hierarchical levels in Au. These are the agreement between a noun and its modifiers, and the cross-reference between the Subject and other constituents of the clause. The constituents must agree with the Subject in person, number and gender.

Nouns and their modifiers are the main components of the agreement system. Because nouns rarely inflect, the modifier marks the person, gender and number of the phrase construction. Examples are:

(256) mɨtɨk   enu-k   *evil man*
       man   bad-he

(257) mɨte   enu-ǿ   *evil woman*
       woman   bad-she

(258) nɨkan   k-iutɨp   *one son*
       son   he-one

(259) nɨki   p-iutɨp   *one daughter*
       daughter she-one

(260) mɨtɨk   ha-k   k-ere-k-e-k   *only a man*
       man   s-he   only-he-that-he

(261) mɨte   ha-p   kere-p-e-p   *only a woman*
       woman   s-she only-she-that-she

Subject, Predicate and other constituents of clause level constructions also show agreement (or concord). Since Au has no inflectional endings to show case relationships, it depends heavily upon word order and subject reference to show subject-object relationships. In intransitive clauses, the Predicate inflects to show concord with the Subject; when Location is present, it inflects as well to show concord with the Subject. An example is:

```
         ┌────────────┐
(262)  hɨrak  k-enkewɨn      k-eit  witeik
       he     ̄he-fell down  ̄he-at  village
       he fell down at the village
```

In a transitive clause, when Instrument occurs, it inflects in a similar manner as does Location, reinforcing the identity of the Subject. An example is:

```
         ┌──────────────┐
(263)  hɨrak  k-enep  sak  k-eriuwe  henmik
       he     ̄he-shot pig  ̄he-with   bamboo arrow
       he shot a pig with a bamboo arrow
```
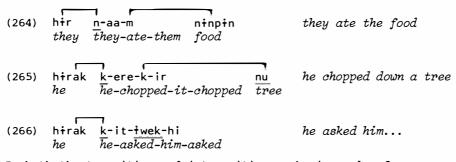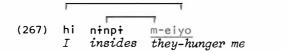
As has been illustrated with the above examples, the agreement system includes various classes of words both verbal and non-verbal and assists in the tracking of participant reference.
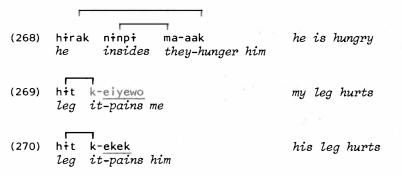

5.2.2. Verb classification

The distinguishing characteristic which sets transitive verbs apart from other verbs is the occurrence of infixed subject or object markers in the verb stem. This feature is apparently unique to the Torricelli Phylum. There are two types of such verbs: in the first type, the object is a part of the verb stem; in the second, the object or benefactive suffix has been optionally incorporated into the verb, occurring prior to the final verb stem syllable. Examples are:

```
       ┌────┐   ┌──────┐
(264)  hɨr   n-aa-m         nɨnpɨn        they ate the food
       they  ̄they-ate-them  food
```

```
       ┌────┐   ┌─────────┐
(265)  hɨrak  k-ere-k-ir               nu    he chopped down a tree
       he     ̄he-chopped-it-chopped   ̄tree
```

```
       ┌────┐
(266)  hɨrak  k-it-ɨwek-hi                   he asked him...
       he     ̄he-asked-him-asked
```

In both the transitive and intransitive verbs irregular forms occur. With the occurrence of first, second or third person, or singular, dual or plural number, the stem of the verb changes and the person, gender and number of the noun under focus is marked. Irregular verbs are of course not peculiar to languages of the Torricelli Phylum, but verb stems which inflect in this manner are. Examples are:

```
       ┌──────────────────┐
       │      ┌────┐       │
(267)  hi  nɨnpɨ   m-eiyo              I am hungry
       I   insides  ̄they-hunger me
```

(268) hɨrak   nɨnpɨ   ma-aak   *he is hungry*
      he   *insides* *they-hunger him*

(269) hɨt   k-eiyewo   *my leg hurts*
      leg *it-pains me*

(270) hɨt   k-ekek   *his leg hurts*
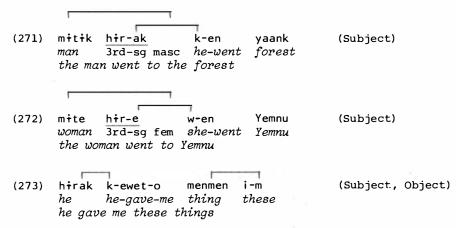   *leg* *it-pains him*

(See Chart F for a full paradigm of an irregular verb.)

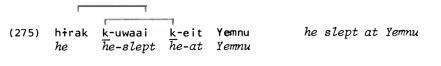## 5.2.3. Pronominal system

The pronouns are very important in Au and phrase and clause structure
reference depends heavily on them. Free pronouns usually occur in place of
nouns (they may co-occur with them when the subject is to be made prominent as
in examples (271-272)), manifesting both Subject and Object. They may occur
affixed to non-verbals as well, including Location, Instrument, Co-ordinate
and Accompaniment. Outside the Torricelli Phylum, these features would be
highly unusual, for subject-marking affixes occur only with the verbs.

The pronominal system is also unique in that it incorporates not only a
gender system of masculine and feminine, but includes a separate category for
neuter as well. The possessive pronouns again are unique because they are
inflected for a possessed item as well as a possessor. The pronominal system
is the prime example of the extensive network of inter-related classes which
function in the Au agreement system. Examples of free pronouns are:

(271) mɨtɨk   hɨr-ak   k-en   yaank   (Subject)
      man   3rd-sg masc   *he-went* *forest*
      the man went to the forest

(272) mɨte   hɨr-e   w-en   Yemnu   (Subject)
      woman 3rd-sg fem   *she-went* *Yemnu*
      the woman went to Yemnu

(273) hɨrak   k-ewet-o   menmen   i-m   (Subject, Object)
      he   *he-gave-me* *thing*   *these*
      he gave me these things

Some further examples of bound subject and object pronouns in cross-reference
with free subject pronouns are:

(274) k-ere-k-ir   *he cut it*
      he-cut-it-cut

(275) hɨrak k-uwaai k-eit Yemnu   *he slept at Yemmu*
       he   he-slept he-at Yemmu

(276) hɨre w-ewis-ɨk k-ɨnɨk wɨnak   *she put it under the house*
       she   she-put-it it-under house

These examples illustrate how the bound subject pronouns agree with the free
subject pronouns, and the Location noun phrase agrees in (276) with the bound
pronominal object, using a subject pronouns form to do so. Examples of the
possessive pronoun forms are:

(277) hɨne   k-ɨrak   *his knife*
       knife it-his

(278) nepere p-ɨre   *her female dog*
       dog   she-hers

Note from these examples how the possessed item occurs in primary position and
the possessor follows.

5.3. Final comments

The features which have been described in this section are considered the
most unique features in the Au grammar. Because these do not follow the
patterns usually found in Papuan languages, they must be considered in any
theory about the origin of Au and the whole Torricelli Phylum. As a result
of these aberrant features, the languages along the foothills of the Torricelli
mountains have been classified as a separate phylum, for they do not fit in
well with typological features manifested by the Trans-New Guinea Phylum or
the Sepik-Ramu Phylum.

6. TORRICELLI PHYLUM AFFINITIES

6.1. General remarks

In this concluding section, we shall compare selected typological features
of Au grammar with languages from two other major linguistic areas. In doing
so, we hope to justify the claims of Laycock who described the Torricelli
Phylum as 'a genetic group in itself' (1975:768).

A family tree of Au and its position within the Torricelli Phylum is now
given, following Laycock's classification of Sepik languages (1973:72ff).
Laycock and Wurm (1964:77ff) have basically followed the Swadesh lexico-
statistical technique (Swadesh 1952 and 1955c) in grouping New Guinea languages.[2]
However, they have modified the lexical relationships significant for differen-
tiating languages, families and stocks according to the following percentages:

    15% - 25%   same stock
    40% - 55%   different sub-families within the same family
    60% - 81%   languages of the same sub-family.

6.2. General Papuan characteristics

According to Wurm, Laycock and Voorhoeve (1975:171ff), the phonology of Papuan languages generally does not show a phonemic contrast between r and l. Stops and fricatives have a tendency to be in allophonic variation.[3] Generally, there is a low number of vowel phonemes, often as few as three but occasionally as many as seven.

In morphology, the person markers generally reflect only singular and plural number, although in certain cases along the border of the Trans-New Guinea Phylum and Sepik-Ramu Phylum, the languages show distinction for dual number as well. The classification of nouns is often determined by their occurrence with a small number of classificatory verbs. Papuan languages also display a very complex verb morphology, with considerable suffixing, which is due in part to the syntactic structure of the clause, which places the verb in final position. There are also special medial verb forms which are inflectionally abbreviated, with the final verb form (usually at sentence level) marking the inflectional categories. As has already been mentioned in section 1, word order is consistently subject-object-verb, except in cases where there are discourse considerations which may alter the order of the first two constituents. This means that everything, including adverbs, must precede the verb; this supports the observation of Greenberb (1963:58-76) who notes that when the verb appears in clause final position, it is associated with various phenomena such as postpositions instead of prepositions, permutation of nouns in phrases (modifiers are moved to precede nouns) and almost all affixation is following the verb term. Finally, these languages show sets of pronouns which either make no gender distinction or are simply 2-gender systems (usually masculine and feminine).

```
     Phylum          Stock          Family
   Torricelli

                   West Wapei ──── West Wapei ──── 1  One
                                                 ┌ 2  Seta
                                                 └ 3  Seti

                 Wapei-Palei ─┬─ Wapei ──────── 4  Olo
                                              ┌  5  Elkei
                                              │  6  Yau
                                              │  7  Yis
                                              │  8  Au
                                              │  9  Yil
                                              │ 10  Ningil
                                              │ 11  Alu
                                              │ 12  Galu
                                              │ 13  Gnau
                                              │ 14  Valman
                                              └ 15  Yapunda

                              Palei ───────── 16  Aru
                                            ┌ 17  Aruop
                                            │ 18  Aiku
                                            │ 19  Nambi
                                            │ 20  Kayik
                                            │ 21  Agi
                                            └ 22  Bragat

                            └─Urat ───────────── 23  Urat
```

A family tree of Au

6.3. General Torricelli Phylum (TP) characteristics

Phonologically, TP languages utilise three positions of articulation, with voiced and voiceless consonants showing allophonic variation. There are usually five vowel phonemes appearing (minimally), but there may be as many as eight, depending on the interpretation of the central vocoids and sequences that occur. There appears to be a high proportion of fricative consonants, at least in some families of the phylum (Olo, as cited by Laycock is an example of this). Morphologically, TP languages are characterised by a two (singular/plural) or three (singular, dual and plural) number system in pronouns, and have a high degree of concordance especially between the nouns and the noun-adjuncts. The pronouns occur in singular, dual and plural, showing gender distinctions in the third person (Au is an example of a three gender distinction system). Subject concordance is marked by a set of prefixes in verbs, with the same set of prefixes functioning as relators in relator-axis phrase constructions. Laycock (1975:768) has noted that these prefixes occur with non-verbs and has given example from Au using the interrogative 'why'. Although he tentatively suggests that the form may be treated as a verb we see it as merely showing the typical subject concordance occuring in other constructions. There are prepositions in TP languages, and the nouns always precede their modifiers in phrase level constructions. Finally, the typical order of words is subject-verb-object and this is radically different from the order manifested by the general Papuan languages in New Guinea.

6.4. Comparison of features

Now that we have considered briefly the typological features of each phylum, we will examine the way that the Torricelli languages differ from features typically expected of the Papuan languages. These appear below and are based upon the features outlined by Wurm, Laycock and Voorhoeve (1975:179-186). Following a general comparison, we then look more closely at the pronouns for any patterns which may be of significance.

	Trans-New Guinea Phylum	Sepik-Ramu Phylum	Torricelli Phylum
PHONOLOGY			
Place of Articulation:	three to five	three to five	three to five
Series of stops:	two	usually one	one
Fricatives:	generally one	one or more	several per language
Widely varying consonant allophones:	present	absent	present
Stops with fricative allophones:	common	rarely	common
Basic vowel phonemes:			
Basic system:	five vowels	three to five	five to eight

	Trans-New Guinea Phylum	Sepik-Ramu Phylum	Torricelli Phylum
PHONOLOGY			
Vowel phonemes with wide range of allophones:	no	yes	yes
Vowel sequences:	present	absent	present
Phonologically relevant tones:	often present	rare	absent
Morphonemic changes:	common	few	few
MORPHOLOGY			
Complex morphological system:	very complex	complex	less complex
Nature of morphology:	elaborate affixation and inflection	uncomplicated affixes	uncomplicated affixation
Person markers:			
Dual forms: (singular-plural)	common	common	common
Trial forms: (singular, dual, plural)	rare	present	common
Inclusive-exclusive in first person non-singular:	only medially; rare	rare	absent
Subject marking on verbs:	common	common	common
Object marking on verbs:	common	common	common
Position of the bound subject and object in relation to each other in verb:	separated or together	together	separated
Appearance of bound subject or object with non-verb words:	absent	absent	common
VERBS			
Existential verbs:	yes	no	no
Verb stem-changes according to the person of object or beneficiary:	in some cases	rare	common

	Trans-New Guinea Phylum	Sepik-Ramu Phylum	Torricelli Phylum
VERBS			
Indication of interrogatives:	affix on the verb	rare particle	common particle
Distinction of realis-irrealis forms:	common in some areas	rare	absent
Sentence medial forms:	very common	common	absent
SYNTAX			
Basic word order:	subject-object-verb	subject-object-verb	subject-verb-object
Subordinate clause:	generally precedes main clause	precedes main clause	precedessor follows

As has been indicated by the above comparison, the three phyla which appear acorss the horizontal parameter show a number of similar features. Of the thirty (30) features compared, the Torricelli Phylum has the least in common with the other two: seventeen (17) of its features are directly opposed to the Trans-New Guinea Phylum, and thirteen (13) are opposed to features of the Sepik-Ramu. The major factor to note is the difference in word order, which shows the Torricelli Phylum to be closer to the Austronesian languages in this regard; non-Austronesian languages maintain a subject-object-verb word order in all language groups. This one factor may suggest that the placement of the Torricelli Phylum in the non-Austronesian language group is tenuous. Another factor is the lack of medial verb forms which are so characteristic of the highland languages in particular, as well as others which make up the Papuan languages in New Guinea.

6.5. Pronoun features compared

In Papuan languages, the free pronouns and bound pronouns that occur can be classified in terms of person and number. In some languages, such as those placed in the Torricelli or the Sepik-Ramu gender must also be considered. In Chart R, several Papuan languages have been compared from a list of features compiled.[4] These are in turn compared with the Torricelli Phylum languages of Au and Olo (a neighbouring language to the west).

Generally speaking, many of the Papuan languages display two number systems (singular and plural) and show little to no gender distinction; when gender is distinguished, it is usually limited to masculine and feminine. Some languages make a distinction for inclusion or exclusion of the speaker in first person.

In contrast to the general Papuan languages, the Torricelli Phylum includes languages with systems of singular, dual and plural, which make distinctions for masculine and feminine, and often, neuter as well. There is no distinction made in first person singular or plural for inclusion or exclusion of the speaker or audience.

	Eastern Central Trans-New Guinea Phylum			South-Eastern Trans-New Guinea Phylum			North-Eastern	Sepik Ramu	Torricelli Phylum	
Language	Gahuku	Fore	Awa	Suena	Barai	Daga	Selepet	Iatmul	Au	Olo
Gender distinction	no	no	no	no	no	no	no	yes	yes	yes
Exclusive-inclusive	no	no	no	yes	no	no	no	no	no	no
Person: Singular	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Dual	no	no	no	yes	no	no	yes	yes	yes	yes
Plural	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes

Chart R: Comparative chart of personal pronouns

In Au (see Chart G on page 233) gender distinctions occur in the third person of the personal subject pronoun. The basic focus in number is only singular versus plural (although a masculine dual distinction is made) because the feminine and neuter forms are neutralised; the same forms occur in dual that occur in plural. Since only the masculine shows a distinction for duality, we might be tempted to suggest that it is similar to the Papuan pronoun system. However, this is not the case because Papuan languages are characterised by a monofocal versus polyfocal person-number distinction.[5] The masculine dual form that occurs in Au overrides such a symmetry for pronouns.

6.6. Conclusion

Based upon the information given in this section about typical Papuan languages (the Trans-New Guinea and Sepik-Ramu Phylum) which have been compared with the Torricelli Phylum, it is not difficult to conclude that the TP languages are aberrant in many features. Therefore, there is no difficulty in separating Au from the ranks of the Trans-New Guinea Phylum or the Sepik-Ramu Phylum. For the present, then, we can only conclude that the Torricelli Phylum is a separate linguistic group which has affinities and differences not only with non-Austronesian languages, but with Austronesian languages as well.

APPENDIX

A. Text in Au: 'The killing of a lizard'

1. nɨpaaein   mɨt n-au   hankiu   n-owepnak.
    before-there men they-sat men's sleeping house   they-conversed

2. n-owepnak   n-aa-m   mas   mɨtɨk ha-k k-ɨr
    they-conversed   they-ate-them   betelnut   man   a-he he-saw

    menmen   k-ɨsawɨn   k-ɨnɨk   yeno.
    something   it-hides   it-underneath bed

3. hirak   k-atɨp   k-are, "Hi h-ɨr   menmen   k-ɨsawɨn   k-ɨnɨk
    he   he-said   he-this I   I-see   something it-hides   it-underneath

    yeno ye".
    bed   there

4. hɨrak   k-eit   paap   kereke-k, mɨtɨk ha-k   k-enkɨke
    he   he-took   stick   only-it   man   another-he   he-lifted up

    yeno, hɨrak k-ɨr   mineiket warp, hɨrak k-akɨp.
    bed   he   he-saw   lizard   warp   he   he-stuck it

5. k-akɨp   k-ɨp-aa   k-enke   k-et-ɨwek   k-esenkek-ik
    he-struck-it   it-cont-dies he-lifts   he-gets-it   he-wraps-it

    k-ekre   tɨwei.
    it-inside leaf

6. maain   wɨtaan   mɨt n-ɨtyak   menmen   o   auen teip
    later   night   men they-dream   something   or   not   tomorrow

ekrit	hɨr	n-an-ɨm	n-an-tike	teipe
morning	*they*	*they-will eat-them*	*they-will-with*	*sago jelly*

o	n-an-wat	nɨkerek	em	hɨr	n-an-im
or	*they-will-give*	*children*	*them*	*they*	*they-will-eat-them*

B. Free translation of 'The killing of a lizard'

1. *A few days ago, the men were sitting at the men's sleeping house talking together.*

2. *They were talking together chewing betelnut and one of the men saw something hiding beneath a bed.*

3. *He said, "I see something hiding under a bed there".*

4. *He got a stick, and another man lifted up the bed, and he (the first man) saw a warp lizard and he hit it.*

5. *He hit it and it was dying and he lifted it and took it and wrapped it inside some leaves.*

6. *Later on that same night, the men dream things and (if there are no significant dreams against eating the lizard), in the morning they will eat (parts of) the lizard along with their sago jelly, or they will give (their parts of) the lizard to their children and they will eat it.*

LIST OF SYMBOLS AND ABBREVIATIONS

Symbols

+	=	obligatory constituents or constructions
+̲	=	optional constituents or construction
___	=	underlining for vernacular examples
( )	=	explanatory remarks concerning the subject in focus

Abbreviations

A	=	accompaniment
adj	=	adjective
adv	=	adverb
an	=	animate
B	=	benefactive
C	=	contingent
Cm	=	comment
cont	=	continuous aspect marker
coord nphr	=	co-ordinate noun phrase
D	=	duration
Dc	=	declarative
DD	=	dependent ditransitive
DE	=	dependent equative
DI	=	dependent intransitive
di.tr.verb	=	ditransitive verb
dl	=	dual

DS	=	dependent stative
DT	=	dependent transitive
E	=	equative
ED	=	equative duration
ER	=	equative reason
fem	=	feminine
fut	=	future
gen nphr./gnp	=	general noun phrase
I	=	instrument
ID	=	independent ditransitive
IE	=	independent equative
Ig	=	interrogative
II	=	independent intransitive
imper/Ip	=	imperative
inst nphr	=	instrument noun phrase
intr	=	intransitive
IO	=	indirect object (benefactive)
IS	=	independent stative
IT	=	independent transitive
ITrC	=	intransitive contingent
ITrD	=	intransitive duration
ITrP	=	intransitive purpose
ITrR	=	intransitive reason
ITrSm	=	intransitive simultaneous
ITR.v	=	intransitive verb
L	=	location
loc phr.	=	location phrase
masc	=	masculine
n	=	noun
neut	=	neuter
O	=	object
Ps	=	purpose
P	=	predicate
phr	=	phrase
pl	=	plural
pred/P	=	predicate
prn	=	pronoun
R	=	reason
R-A	=	relator-axis
recip/re	=	reciprocal action suffix
S	=	subject
SD	=	stative duration
sing/sg	=	singular
Sm	=	simultaneous
SR	=	stative reason
SSm	=	stative simultaneous
stat	=	stative
st.v	=	stative verb
TP	=	Torricelli Phylum
Tp	=	topic (comment)
tr	=	transitive
trans.v	=	transitive verb
TrC	=	transitive contingent
TrP	=	transitive purpose

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TrR     =    transitive reason
TrSm    =    transitive simultaneous
v       =    verb
v.phr   =    verb phrase
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NOTES

1. This project was originally submitted to 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 in August 1978.

2. The criteria which are used by Swadesh make the following distinctions:

    (a) Languages sharing 28% to 81% of their lexical items (vocabulary) belong to the same family.

    (b) Languages sharing 12% to 28% of their lexical items are the same stock.

    (c) Languages sharing 4% to 12% of their lexical items are the same micro-phylum.

    Wurm states that languages were similar in their structure as they were in their lexical items (for many languages) (1964:78) and as a result, topological features were also considered in classifying the New Guinea languages.

3. Barai, which is a member of the South-Eastern Trans-New Guinea Phylum is an exception to the generalisation that stops and fricatives tend to be in allophonic variation. Both stops and fricatives occur as phonemes.

4. These features were made available by Karl Franklin from papers submitted by students for course requirements in non-Indo-European language studies, 1977, UTA.

5. Robert Young of SIL in Papua New Guinea first used monofocal and polyfocal to describe the phenomenon of two oppositions of focus on the number of ˑ the subject in bound pronoun forms. Young says,

    > Monofocal refers along the vertical axis to singular
    > number for first, second and third persons; and along
    > the horizontal axis of first person in the singular,
    > dual and plural number. This horizontal axis is
    > termed the ego axis because it directly refers to
    > ego participation in the action. This means that
    > first person dual and plural involve ego and one or
    > more other participants. Thus the monofocal form of
    > the stem is used...The term polyfocal describes the
    > phenomenon exemplified by the he- form of the stem,
    > in which the focus is on number rather than person...

    This points to the fact that where second or third person intersect dual or plural in the matrix (which is outlined below), the focus is always plural.

	Singular	Dual	Plural
First	A	B	C
Second	D	F	F
Third	E	G	G

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