NOUNS AND CLASSIFICATORY VERBS IN ENGA (NEW GUINEA):

A SEMANTIC STUDY

by

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It is the fate of those, who toil at the lower employments of life, to be rather driven by the fear of evil, than attracted by the prospect of good; to be exposed to censure, without hope of praise; to be disgraced by miscarriage, or punished for neglect, where success would have been without applause, and diligence without reward. Among these unhappy mortals is the writer of dictionaries...Every other author may aspire to praise; the lexicographer can only hope to escape reproach, and even this negative recompense has been yet granted to very few.

Samuel Johnson

A Dictionary of the English Language

They've a temper, some of them --- particularly verbs: they're the proudest --- adjectives you can do anything with, but not verbs --- however, I can manage the whole lot of them. Impenetrability! That's what I say!

Humpty Dumpty

Through the Looking Glass
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Ranier Lang, who originally suggested a monolingual dictionary (that 'bucket of worms' as fellow scholar Dave Dellinger termed it) has provided unlimited comments, criticism and time throughout the entire course.
PREFACE

This thesis is based on fieldwork carried out among the Enga from August 1967 to August 1968, and from May 1969 to September 1969, a total of seventeen months, as a Research Scholar of The Australian National University. The first few months of this period were spent at or near Wabag in the Western Highlands of New Guinea, the remainder at Kopetesa, a small hamlet approximately 30 miles west of Wabag in the western dialect area of Enga.

The language chosen for research was based upon two considerations: firstly, that in connection with my husband's fieldwork I was already living among the Enga and had attained a fair degree of speaking proficiency in the language, and secondly, that a considerable amount of linguistic and ethnographic work had already been done on the Enga.

This is a semantic study. It arose out of my previous interest in ethnoscience and because of this began with the determination of the features of the animate sub-set of Enga nouns. Since studies "of any sort in ethnozoology are rare" (Sturtevant 1964:120), I felt that this would provide a contribution to a neglected domain. The elicitation of semantic features of the animate nouns provided the first evidence of the Enga existential verbs: any noun elicited would be followed by a verb which indicated its habitual state of existence. Interest in the existential verbs and the elicitation of their features led to the discovery that they co-occurred only with [+concrete] nouns, i.e., that they were classificatory verbs. This led to further work on the verbal system with the result that [-concrete] nouns were found to co-occur with another set of classificatory verbs.

Thus, the thesis topic became focused as a semantic study of a portion of Enga, the animate nouns and the classificatory verbs. One of the main features is that the thesis attempts not only to explain the usual occurrences by means of semantic redundancy rules, but also to account for the exceptions to these, i.e., the assumption that rules are broken in accordance with (culturally
determined) rules for breaking rules (cf. Landar 1965 and Dixon 1968:120). The associated problems were: Can semantic features be given? Can semantic redundancy rules be formulated? What are the exceptions to these rules, and can they also be accounted for? Are the rules part of a semantic hierarchy or does cross-classification of the items exist? Can comparative data be given for other New Guinea languages with similar phenomena?

The introductory chapter states the problem and gives a description of the data base; Chapter One gives a sketch of the Enga and their culture and of previous linguistic work on Enga. Chapter Two describes the existential verbs, their syntax and semantics. Chapter Three is a brief excursion into the animate nouns, one sub-set of the [+concrete] nouns which co-occur with the existential verbs. Chapter Four describes the classificatory verbs which co-occur with the [-concrete] nouns, some problems connected with them, and their semantics. Chapter Five deals with comparative materials from other New Guinea languages on the two kinds of classificatory verbs. The thesis concludes with a brief discussion of the results of the study in Chapter Six.

The appendices contain supplementary materials on the semantic classes of Enga verbs (A), methods of data compilation (B), data on the Enga existential verbs (C), data on the classificatory verbs for the [-concrete] nouns of Enga (D), and some comparative data from possibly related languages (E).
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PRESENTATION AND ABBREVIATIONS

All examples are given in the usual Enga orthography; the tonal structure of items without tone marks is, at present, not known. In the interlinear translation, morpheme boundaries are indicated by a hyphen; the equation sign indicates a unitary lexical item in Enga; square brackets enclose features.

Enga examples in running text are underlined, their English glosses within single quotation marks. Text within double quotation marks is quoted from the literature.

The examples are numbered within each chapter, and the notes may be found at the end of each chapter.

AG  Agentive
AS  Associative
AUG  Augment
BEN  Benefactive
CAUS  Causative
COMP  Compleitive
CONF  Conformative
CONJ  Conjunction
DET  Determiner
DU  Dual
EXCL  Exclusive
FP  Far Past
FUT  Future
GEN  Genitive
HAB  Habitual
HIST  Historical events
IMP  Imperative
INF  Infinitive
INST  Instrumental
IP  Immediate Past
LAKA  Desiderative marker
LOC  Locative
N  Noun
NP  Noun Phrase
NP  Near Past
-O  0 complementizer
PAST  Past
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Introduction

0.1 Introduction

Much is now known about the general structural character of New Guinea languages, although relatively few of these have been studied and described in any detail. Whatever studies have been made have focussed on the phonology, morphology/syntax of particular languages. And of these, the bulk has concentrated on the morphological structure and/or syntactic function of verbs alone, since these are usually very complex linguistic entities which may be said to 'dominate' the languages in which they occur (Capell 1969). This thesis is a further contribution to verb studies in New Guinea languages. It builds on previous linguistic work and knowledge and attempts to extend this to a new level by taking a detailed look at the semantics of a set of verbs in Enga, a non-Austronesian language of the central highlands of New Guinea.

In particular, the thesis is a descriptive and exploratory semantic study of a group of verbs in Enga which co-occur only with certain classes of nouns, and so are described as 'classificatory verbs'. Hitherto these verbs have not been discussed as such in the literature on the structure of New Guinea verbs, and no semantic analysis or description of them has been attempted. They have, however, been mentioned in connection with syntactic descriptions of New Guinea languages in a more general way, so that this provides some base for discussing the extent and distribution of this phenomenon throughout New Guinea.

The term 'classificatory verb' is not new. It has been used for some time in studies of American Indian languages where phenomena similar to those of Enga have been described in these terms. That the phenomena are important and worthy of detailed investigation has been pointed out by Haas, Berlin, and others. Thus, Haas has said that classificatory verbs clearly deserve far more attention than they have received in the past as indicators of covert taxonomic systems of considerable complexity (1967:361).

Brent Berlin has stated that classificatory verbs, noun
class markers (as in the Bantu languages), and numeral classifiers (as in Chinese, Mayan and Tarascan) are "three syntactic devices utilized by many languages of the world linguistically marking highly salient features of the physical world ...ultimately it will be necessary to consider each of these three syntactic devices as focusing on similar semantic features..." (in a letter to S.A. Wurm cited in Friedrich 1970:380).

Classificatory verbs may be either overt, as in the Athapascan languages (Hoijer 1945; Haas 1948, 1967; Landar 1964, 1965, et al.), or covert, as in Tarascan (Friedrich 1970) and Enga. As a point of departure for this description, we will take Hoijer's classic article on the verb stems of Apache, which outlines three kinds of verbs:

i. non-classificatory verbs,
ii. classificatory verbs, and
iii. "pseudo" classificatory verbs.

Hoijer (1945) has defined these as follows:

i) Non-classificatory verbs:

...verb stems denoting a specific type of action or behavior. Forms like ...'he speaks so'...'he is walking, moving',...'you buy it' employ verb stems ...of this kind (22).

ii) Classificatory verbs:

...verb stems which refer to a class of objects participating in an event, either as actor or goal ...(22). ...there is no simple verb 'to give' but a number of parallel verb themes consisting of a certain sequence of prefixes plus a classificatory verb stem. The sequence of prefixes is the same for each theme but the stem varies with the class of object referred to (13).

Some examples of these include:

'she gave [a twenty-five cent piece] to him', 'he gave [a bundle of arrows] to him', 'you take a round object out of (an enclosed space)', 'you take a fabric-like object out of (an enclosed space)' (14).

These verb stems have a

...neuter intransitive denoting an object of a particular type in position or at rest,... 'a mountain lies [over yonder]'...(22).
iii 'Pseudo' classificatory verbs:

...stems which stand between the two categories just outlined. Some of these are to be distinguished from the classificatory stems only in their neuter forms; active verbs denoting the movement or handling of their object class are the same as those of some other classificatory type. An example of this phenomenon is found in Navaho ...'it is bent bow-like', for when we speak of handling a 'bow-like object' we must use active verbs of the 'long object' class (22f.).

Note especially that the form that distinguishes the classificatory from the 'pseudo' classificatory verbs is the 'neuter' form of the type 'a mountain lies'. Enga does not have 'pseudo' classificatory verbs, but the Enga form corresponding to the 'neuter' Navaho form, the existential verb, also comprises a special sub-set of the classificatory verbs in Enga. Of the three types given by Hoijer (non-classificatory, classificatory, and 'pseudo' classificatory verbs), Enga has the first two, but not the last.

Both the Athapascan languages and Enga have non-classificatory verbs; in Enga these are exemplified here by yawa- 'steam (in an earth oven)' in:

1 Akáli dúpa-me mená dúpa yawe-ly-amí-no. man the-AG pig the steam-PRES-3PL-AUG
The men are steaming the pigs (in an earth oven).

These are briefly presented in 1.2.1 (following) and appear grouped into semantic classes in Appendix A; they are hereafter ignored, since the study deals only with the classificatory verbs of Enga.

The classificatory verbs in Enga are of two types, and are distinguished by the type of noun which co-occurs with them. The first type co-occurs with concrete nouns in Enga, and corresponds to Hoijer's 'neuter' stem which denotes "...an object of a particular type in a position or at rest" (1945:22). In Enga these verbs classify the concrete nouns into seven sub-classes, of which three are exemplified in (2-4):

2 Ênda dúpa pete-ngé. woman the BE-HAB
Women exist.

3 Ándá dúpa kate-ngé. house the BE-HAB
Houses exist.
In these sentences, the verbs pita-, kata-, and sa-indicate that objects of a particular type (e.g., 'woman', 'house' and 'jeep') are in a position at rest. These verbs (and the others which constitute the set) will be referred to as existential verbs (hereafter EV) and will form one of the main topics of description and analysis as Chapter 2.0 of this thesis.

The second type of classificatory verbs in Enga co-occur with the non-concrete nouns; they are in complementary distribution with the first type, the EV. This second type of classificatory verb occurs in what will be referred to as a 'predication'. Two typical Enga predications, tée pi- 'pay restitution (for a homicide)', and itáki pya- 'count' are exemplified in (5) and (6):

5 Akálí dúpa-me tée pi-ly-ami-nó.  
man the-AG restitution do-PRES-3PL-AUG  
The men are paying restitution (for a homicide).

6 Akálí dokó-má mená dúpa itáki pi-ly-á-mo. 
man the-AG pig the count hit-PRES-3SG-AUG 
The man is counting the pigs.

These predications will be described and analyzed in Chapter 4.

In discussing the semantic structure of the EV and predications, lexical stems will be considered to consist of bundles of semantic features, mainly for practical reasons, since the problems noted in the section to follow have not yet been solved.

0.2 Theoretical Orientation and Problems

After years of being discredited and ignored, the study of semantics was revitalized in 1963 with the pioneering effort of Katz and Fodor which attempted not "...to present a semantic theory of a natural language, but rather to characterize the abstract form of such a theory" (1964: 479). The importance of this work is emphasized by its being immediately incorporated into an integrated theory of linguistic descriptions (Katz and Postal 1964) and its incorporation into generative transformational theory.
The semantic theory presented by Katz and Fodor was heavily criticised on several points, of which we will deal only with those of interest in the present semantic study of Enga, e.g., the idea of semantic markers (features or components). In the following sections we will briefly sketch some of the more salient points to be accounted for in a semantic study and which we intend to concentrate most heavily upon in this thesis. The points include:

0.2.1 The semantic features
0.2.2 Redundancy rules in semantics
0.2.3 Various exceptions to the redundancy rules
0.2.4 Dominance relations between nouns and verbs
0.2.5 The priority of syntax or semantics.

0.2.1 The Semantic Features

Weinreich states that the idea of using features was first proposed by G.H. Matthews about 1957 and was independently worked out to some extent by Robert P. Stockwell and his students (1966:401). Lyons says that the componential approach to semantics "...has a long history in linguistics, logic and philosophy. It is inherent in the traditional method of definition by dividing a genus into species and species into subspecies; and this method of definition is reflected in most of the dictionaries that have ever been compiled for particular languages, and in the organization of such works as Roget's Thesaurus" (1968:472). In the componential (or feature) method, words are described semantically by factoring out the most 'basic' components. Ethnoscience has successfully applied this technique mostly within the domain of various closed contrast sets, such as kinship terms.

One claim advanced for semantic components is their potential universality, i.e., that all human languages may be either partially or completely analyzed in terms of a finite set of semantic features in much the same way as can be done for phonology with distinctive features. Chomsky cites several examples which contain (formal) universals:

Consider, for example, the assumption that proper names in any language, must designate objects meeting
a condition of spatiotemporal contiguity, and that the same is true of other terms designating objects; or the condition that the color words of any language must subdivide the color spectrum into continuous segments; or the condition that artifacts are defined in terms of certain human goals, needs, and functions instead of solely in terms of physical qualities (1965:29, notes omitted).

Of course the value of a componential analysis in the semantic description of a particular language (in this case, Enga) remains unaffected by the existence (or non-existence) of possible universal components, yet such a description may be evidence to eventually confirm (or refute) the hypothesis of the universality of features.

One of the advantages of semantic features is that these allow words which have one or more features in common to be related via these features, i.e., words may be considered to be synonymous if they contain identical semantic components and descriptions. This same relation may hold between sentences, such that...

...relations like paraphrase, entailment, etc. are suitable generalizations of lexical relations like synonymy, hyponymy, etc. This is a natural consequence of the fact that the semantic representations of sentences are in principle of the same character as lexical meanings (Bierwisch 1970:180).

Thus the semantic components may demonstrate the occurrences and show the relationships between synonyms, antonyms, and other related words. As well, the overlapping of semantic components or descriptions provides for that sub-set of items which will be discussed below and throughout this thesis as 'intersection' (cf. 0.2.3.2).

Several of the problems most frequently mentioned in connection with semantic components are 1) that there is no discovery procedure to determine which are the 'correct' markers; 2) how exactly are the semantic components related to the syntactic features; 3) is the number of components needed so large as to be unfeasable; 4) are latent markers present; 5) do the features have 'cognitive reality'?

The discovery of semantic markers is usually demonstrated via a factoring process on such closed contrast sets as "man, woman, boy, girl, child" or "stallion, mare, gelding, filly, colt, foal" (cf. Bierwish 1970:168 and
Lyons 1968:470). This is incidently the same method adopted in ethnoscience, which has elaborated upon the discovery techniques and methods to be used in the determination of the closed set, the features, etc. For an excellent example of this, see Berlin 1968 and references therein. Bolinger uses the same technique in demonstrating that the dualism of semantic markers and 'distinguishers' in the semantic theory of Katz and Fodor is an artificiality (1965:558ff). It is Bolinger who points out that semantic components must reflect our knowledge of the world; if not, then "Where do markers like (Animal), (Physical Object),...come from if not from our knowledge of the world?" (1965:568).

Katz and Fodor claimed that semantic and syntactic markers were distinct, an assumption that has been attacked by Weinreich, who states that

The presence of syntactic and semantic markers with identical names (Male, Female, Abstract, etc.) offers strong prima facie ground for the suspicion that the distinction between semantic and syntactic markers -- a distinction theoretically crucial for KP...--is ill-founded (1966:402).9

The large number of semantic components needed to define even just one word is one of the main problems to be faced. This is mentioned by Dixon 1971:440, Weinreich 1966:473, and Bolinger 1965:560. Briefly, the assumption is that the large (but presumably finite number) of even minimal markers needed would be but little better than a list of n words assumed to be primitives (since it is entirely possible that the number of markers needed would be only n - 1). Practically, the idea of semantic redundancy rules (similar to those of phonology and syntax10), while still fraught with difficulties (cf. 0.2.2), does offer at least some hope in the semantic description of any hierarchic class of items (i.e. folk taxonomy), and semantic components have as Weinreich states "...proved their usefulness long ago" (1966:473).

Another related problem is that of latent markers, as discussed by Bolinger 1965:562ff. This is that to account for the speaker's ability to recognize an anomaly (as well as ambiguity) would require making explicit a very
large number of markers, or as Weinreich states it "...the need to mark each morpheme with a zero for an extremely large number of semantic features looms as a most unattractive necessity" (1966:473). Bolinger's proposed solution would be a dictionary (with one or two dozen markers per entry) for the ambiguities, and a thesaurus (with each marker appearing only once, and lexical items being linked by paths between markers) for the anomalies (1965:564). (Compare this idea of semantic networks with those to be discussed in 0.2.2).

One problem of semantic components, discussed mainly by anthropologists interested in ethnoscience, is that of the 'cognitive reality' or 'validity' of the semantic components themselves. The problem is that to differentiate any items in terms of only one feature, as animates in terms of their sex (i.e., as man-woman, bull-cow, etc.), is to emphasize only one of the many relevant features which may distinguish the items:

If one asks a young child (most of whose utterances are perfectly acceptable and manifest the same semantic relationships, as far as one can judge, as the utterances of his elders) what is the difference between men and women, he might answer by listing a whole set of typical characteristics --- the kind of clothes they wear, how their hair is cut, .....Why should one suppose that sex is the sole criterion even in adult speech? (Lyons 1968:478).

This question of the 'cognitive reality' of semantic components is unsolvable (at present, at least), and anthropologists are divided, with some claiming that the question is irrelevant, others that the systems postulated are cognitively real, and yet others that such a cognitive reality may exist but that it must be demonstrated by operations external to the methods of analysis.

0.2.2 Semantic Redundancy Rules

The possibility of semantic redundancy rules is not mentioned by Katz and Fodor in their semantic theory. Chomsky applied the notion of redundancy rules as used in phonology by Halle (1959a and b) to syntax to form syntactic redundancy rules. He states that these rules "are designed to deal with the fact that certain phonological
feature specifications are predictable, given others" (1965:168). A distinction is made between conventions (these are "...universal, and therefore need no specific statement in the grammar" (1965:168)) and redundancy rules, which are "...particular to a given language, and therefore must be given in the grammar" (1965:168). The redundancy rules will make a distinction between "possible, but non-occurring lexical entry" and "impossible lexical entry", precisely as the phonological redundancy rules do...But in general not all of the possibilities will be actually realized in the lexicon...the possible but nonoccurring lexical entries have the status of "accidental semantic gaps" in the sense that they correspond to lexical items that the language does not provide for specifically but could in principle incorporate with no alteration of the general semantic system within which it functions (1965:170).

Gething (1968) presents an application of redundancy rules to semantics (i.e., to a closed set of terms for Buddhist religious functionaries), which presents one solution to the facts presented above of the potentially large number of semantic components necessary for an analysis. He does this by first assuming that only pertinent features of a word are listed, with a general rule for the entire lexicon which states that features not listed for an item are non-applicable to it. Furthermore, predictable (and thus redundant) features are isolated and reduced by a set of rules, so that the lexicon contains only the 'emic' (non-predictable) lexical entries. This quite considerably reduces the semantic markers needed -- in Gething's example of religious terms, only one feature, relative status, is actually needed in the entry. That this is possible (i.e., to reduce the features to only one, plus a set of redundancy rules) is largely the result of the hierarchic nature of the data chosen by Gething.

In the case of non-hierarchic items semantic redundancy rules face a very real challenge. A discussion of this is presented in Weinreich (1966:408f) and briefly here. Weinreich argues that Katz and Fodor give an oversimplified view of the problem by exemplifying trees as pure taxonomies, such that (7a) can be represented by (7b):13
And, as Weinreich points out, many dictionary entries tend to form matrices of features, as in (8a), and "there is no motivated reason to rewrite them as ..[8b]; the only economy would be achieved by representations such as ..[8c,d,e]" (1966:409):

This problem (cross-classification) is also discussed by Chomsky (1965:79-86), who credits G.H. Matthews with first discovering it and with one solution via indexing category symbols. Other solutions have been presented by Stockwell and Schachter, and Bach (cf. Chomsky 1965:213). Chomsky states that the "problem is very much open, and deserves much further study" (1965:213). Thus cross-classification would clearly present a major difficulty in the formulation of semantic redundancy rules for any non-hierarchic items.

Weinreich also deals with the problem of reconvergence of markers, which he states is such that "..the criteria of a fixed order of markers and a fixed form of branching may be mutually irreconcilable" (1966:408). The problem is exemplified by the entry for 'fox':

The entry for (9) with a fixed order of markers would be represented as (10), and with a fixed form of branching (i.e. the non-reconvergence of branches) as (11):
Weinreich criticizes Katz and Fodor for their belief that Boolean operations are "...an adequate model for combinatorial semantics" (1966:411), and that one "would have thought that with the development of the calculus of many-place predicates, the logic of Boolean (one-place) predicates would be permanently dropped as a model for natural language" (1966:411).

As Weinreich also states, one of the major motivations of semantic research has been a "desire to analyze a global meaning into components, and to establish a hierarchy among the components..." (1966:405). Yet as we have seen above, semantic redundancy rules can account only for hierarchically-ordered systems (or sub-systems) of semantics, and cannot account for instances of cross-classification and re-convergence of features. One possible solution to the latter problem has been offered in the idea of semantic 'networks', but the idea remains to be developed and tested.

0.2.3 Exceptions

Chomsky has said that exceptions "...are rarely lacking, in a system of the complexity of a natural language" (1965:218). A complete description of any language, and a theory of competence for that language, must include an account of exceptions, in particular, those exceptions which occur systematically in relation to the main system. The exceptions are that very small number (five percent or less) of cases in a natural language which contradict the main system of rules used to account for the majority of items in that particular system. This topic of exceptions is of importance to theoretical linguistics, since they are present in natural languages (in contrast to artificial languages whose rules allow for no exceptions) and since they must therefore be accounted for by a theory of competence. The attempt to account for exceptions is obviously
to try to formulate rules to account for the regularities of the exceptions in terms of the main system: i.e., to formulate a sub-system of rules for 'breaking' the main system of rules.  

In the main body of the thesis we will be dealing with three kinds of exceptions present in the semantic system of Enga nouns and verbs.

1. the assignment of loan items
2. semantic intersection of features
3. change of classes or states

For all three of these kinds of exceptions (and possibly for all exceptions in any language), the major point to be noted is that the exceptions do not occur in free or random distribution, but are always contained within certain limits. This will be discussed in more detail in the following sections dealing with the specific kinds of exceptions we will encounter and discuss for Enga.

0.2.3.1 Loan Items

Although the number of loan items in any language is a small proportion of the total vocabulary, these form a subset of interest in semantic study since they may be used to test the main set of rules as to degree of predictability. The features whereby loan items are assigned to classes thus provide a mechanism for testing the validity of the semantic features postulated for non-loan items. The assignment of loan items may depend on such features as the prestige of the source language (English or Pidgin into Enga); the group associated with the introduced item (missionaries, the government, business, etc.) and other socio-linguistic factors. Generally we would postulate the assignment of loan items by the culturally-determined relevant features as being assimilated into Enga classes of the greatest similarity (i.e., having the same features).

The features which determine the assignment may also vary, i.e. phonemically, morphologically, or semantically. In cases where gender, for example, is marked phonetically, the loan item may be quite arbitrarily assigned to a class based upon its phonology: as in Spanish, the -a ending influencing the assignment of the Inca loan word llama into
the feminine class. 17 When the system is based on morphology, this also takes precedence: as in German, the -lein and -chen demanding neuter classification, and overriding the semantic feature of [+Female] in the cases of das Mädchen and das Fräulein. 18 In semantically based systems, the criteria are semantic: in Tarascan, with emphasis on features of shape, cars are usually classed as one-dimensional, but the Volkswagen is classed as three-dimensional "because of its roundish, bug-like quality" (Friedrich 1970:386).

The failure of a system of rules to account for the appropriate assignment of loan items would indicate a basic fault within the system's features or rules, and conversely, the correctly predicted assignment (i.e. if this agrees with the classification as made by native speakers) would allow us to assume at least some degree of validity for the postulated system of features and rules. Thus, loan items are, strictly speaking, not exceptions to the main body of rules, but instead allow the testing of this system. Loan items are included in this section since, in their small percentage of occurrence in the total vocabulary, they have one of the main characteristics of exceptions, i.e., they constitute a small but regular portion of the main system.

0.2.3.2 Intersection

As mentioned above, one of the advantages of semantic components is that these allow words which have one (or more) features in common to be related via these common features. 19 Definition by synonyms is often used in lexicography, where, as Bolinger states

the sense is characterized by an overlap of the semantic ranges of two other terms presumed to be already known, and two are the minimum necessary to have an overlap. Of course it can be argued that this is just a shorthand way of saying 'X has those markers of Y and Z that are not mutually exclusive'...(1965: 565).

Synonyms and near-synonyms present a case of interest for semantic analysis. In fact, Weinreich has suggested that the most important problem in semantic description (and lexicography) is to delimit the signification of near-
synonyms: "On the whole, a semantic description should not aim at "absolute" definitions, but at definitions which delimit the meaning of a term from that of terms with similar meanings (synonyms)" (1962:30). Intersection thus involves non-mutually exclusive semantic markers, or as Friedrich states "...an identity or close similarity of meaning with respect to one or more semantic features in two or more discrete, semantically or distributionally defined sets" (1970:396).

In any noun class or gender system, this intersection (or sharing) of one or more semantic markers might well result in conflict in the class assignment. Thus, as cited above, in Tarascan cars are generally assigned into the one dimensional class, but the Volkswagen's 'bug-like' features intersect with the three dimensional class and it may also be classed within the three dimensional class. Dixon cites a joking reference to a hermaphrodite, "the use of the non-normal class II marker pointing out the female characteristics of this 'man' "(1968:111). The item itself may be ambiguous, as ribbons, with features of both length and flatness, which in Tarascan may be assigned to either (or both) shape classes (Friedrich 1970:385). Friedrich also cites the humorous 'How many women does Pancho have' with the reply 'three _ira-hku', "thereby implicitly classing his plump mistresses with pots because of their three-dimensional bottoms" (1970:385). Sapir has observed Navaho gender rule breaking during punning (1932). Thus, a few of the possibilities that offer themselves in explanation are that the referent itself may be ambiguous; the context or linguistic situation may be ambiguous; cases of humor and punning; cases of teasing or naughtiness; individual idiosyncracies; and errors of performance.

The cases of intersection thus present data on the semantic features of the system which may be either the same or very similar, and also provide information on the linguistic context, and the ways in which the features may be manipulated by the native speaker. In most class systems it is also such that a most neutral or residue class is present. This class is likely to be illuminated by the analysis of the intersecting items, since it may well be
the most frequently occurring in these cases.  

0.2.3.3 Change of Class

In any system of semantics, it is also possible for a small number of items to change their semantic class, depending upon the semantic features of the system. In Tarascan, where the classification "...often depends on the shape as perceived in the context of a particular speech situation" (Friedrich 1970:385), the change of class of a long, deflated (and thus one dimensional) balloon into a round (thus three dimensional) inflated balloon is reflected in the numeral classifiers used for the two different states. Also, human infants may be classed as shaped objects (class I), but when capable of speech (and thus rational) are classed as class II (Friedrich 1970:385).

In the case of the English 'natural' gender system, the pronominal reference to a particular referent may change if the referent noun undergoes a change of state; the most usual one in English probably being that of a male animate being altered to a gelding (i.e., a castrated male). For English we could postulate a 'gelding' rule, whereby the referential change from colt to gelding or bull to steer could be predicted:

If X is a male animate (pronominal reference 'he') and is gelded, future reference to X should be as 'it'; (but also, possibly still as 'he').

The items which may experience change of state (though usually few in number) are of interest in a semantic description, since they highlight the features involved in the change, as above, when the feature is clearly [+Sex] for geldings, and in the Tarascan [+Speech, Rational] for human infants, and [+Long, One Dimensional] to [+Round, Three Dimensional] for balloons.

0.2.4 Dominance Relations between Nouns and Verbs

One of the basic assumptions made in generative grammar is that the nouns and verbs are of equal status, i.e., that neither 'governs' the other. Chomsky 1965 discusses whether selectional rules should be incorporated into the grammar either in terms of the nouns' dominance (i.e. nouns are assigned features, and the verbs are
selected with reference to nouns) or in terms of the verbs' dominance (the verbs are assigned features and the nouns selected in terms of the verbs). Within the framework then presented, Chomsky demonstrates that the selection of nouns in terms of the verbs (i.e., verb dominance) introduces "considerable complication of the grammar" (1965:115), and that the best solution (in terms of formal simplicity) is to assign features to nouns (i.e., noun dominance).

This solution was attacked in Matthews' review as 'rather trivial'. Matthews continues:

Although we may have fallen into the habit, as linguists, of using 'inherent'-type terms for Nouns and 'contextual'-type terms for Verbs (e.g. 'Animate' Nouns but Verbs 'which can take an Animate Subject'), there is no certainty that this reflects a valuable intuition about language. It may simply reflect the fact that it is easier to find notional labels for Noun-classes than it is for Verb-classes (1967:131).

Chomsky had hoped that "...a similar argument could be given for any language" (1965:115), yet more recent investigations in this area would seem to indicate that, even if noun dominance is of greater simplicity in English, this is by no means necessarily so in other languages. For example, Miller (1970) has presented evidence for the choice of verb dominance in Russian (rather than the Chomskian-noun dominance)

If the choice of verbs were made conditional on the choice of noun features, two dependency systems would operate in the grammar: adverbs would be dependent on verbs and verbs would be dependent on nouns. However, if the choice of noun were made conditional on the choice of verb features, the grammar would contain one single dependency system with both nouns and adverbs dependent on verbs (1970:501).

Note also that verbs in the Aspects model may in fact assign features to co-occurring nouns: in the example of 'gored by a kudu', the verb 'gore', which implies 'pierce with a horn or sharp object' assigns the feature of [+horn or sharp object] to the noun 'kudu'. This problem will merit additional discussion in the conclusion to Chapter Two, when we will attempt to determine the dominance relations which hold for Enga Classificatory verbs.
0.2.5 The Priority of Syntax or Semantics

On this topic Chomsky originally states...

...one should not expect to be able to delimit a large and complex domain before it has been thoroughly explored. A decision as to the boundary separating syntax and semantics (if there is one) is not a prerequisite for theoretical and descriptive study of syntactic and semantic rules. On the contrary, the problem of delimitation will clearly remain open until these fields are much better understood than they are today (1965:159).

and further...

...it should not be taken for granted, necessarily, that syntactic and semantic considerations can be sharply distinguished (1965:77).

One of the major controversies today is between the Interpretive and Generative Semanticists, one assuming priority of syntax, the other of semantics. One area where these two schools differ is that of selectional restrictions. Chomsky (1965) treats these as a matter for syntax (not semantics), yet as Lyons states, the more traditional view is often that selectional restrictions are semantic, since such deviant sentences as 'Colorless green ideas sleep furiously' can be described as "'grammatical, but meaningless" (1970:136) as opposed to 'Brainless little things type furiously'. And, as Lyons concludes,...

...concentration upon the complex interrelations that exist between syntax and semantics, and the attempts that are being made to formalize these by the 'generative semanticists', cannot but contribute to our understanding of the structure of language (1970:138).

This topic is of interest in this thesis, since one of the major problems to be confronted is how to account for the features of the classificatory verbs, i.e., via segments (and thus as part of syntax) or via features (and thus as part of semantics). In either case, we will be able to take recourse to essentially the same solution, which has varying names, i.e., segment shifting (for the segments) following Jacobs and Rosenbaum (1968:66f), or feature spreading (for the features) following Givon 1969, 1970, Mould 1971 and Voeltz 1971. This problem will also merit additional discussion in the conclusion to Chapter Four,
discuss in detail the state of Enga classificatory verbs.

0.3 Data Compilation

This study is based on data compiled in the form of a monolingual Enga dictionary, which resembles an Enga version of Webster's Third, plus thesaurus, plus (to some extent) encyclopedia. The dictionary contains 5,445 entries, each of which may contain up to 33 different kinds of (mostly) linguistic information: syntactic categories, semantic domain, semantic features, an English gloss, whether the entry is a loan item or not, a thesaurus, cross-referencing to synonyms and near-synonyms, illustrative sentences from texts, citations and references to the entry in the published literature on Enga, various sources of all information (i.e., references to informants, notebooks, tapes, texts, and transcribed materials), and the folk definitions used to define the entry. The sorting and arranging of this information was carried out using the Australian National University IBM 360 computer, using data processing techniques described in Lang, Mather and Rose (forthcoming).

The monolingual folk definitions comprise the core of the dictionary, and details of the elicitation techniques used to obtain these are presented in Appendix B, where the techniques are compared and contrasted to a similar study of Papago folk definitions by Casagrande and Hale (1967). A portion of the material contained in the dictionary (basically an Enga word list with English index) is being published separately (A. Lang, forthcoming). The remainder, mainly the monolingual folk definitions and other material will be published at a later date.

Details on informants are presented in Appendix B.
Notes: Introduction


3 Cf. section 1.1 following for more details on Enga.

4 The comparative chapter (5.0) shows that these verb forms have been noted in New Guinean languages, but have not before been analyzed as classificatory verbs. Pawley (1966:196) states that Karam noun bases co-occur in verb phrases as either subjects or objects; Rule (nd) notes that Huli existential verbs form noun classes (cf. Chapter Five).

5 The term 'pseudo' classificatory verb is from Landar (1964).

6 The following list of phonemes is for the reader's convenience

/p, t, k, b, d, g, s, j, m, n, ny, l, ly, w, y; i, e, a, o, u/;
/t/ quite often has a voiced alveolar trill allophone intervocally; /k/ as a rule is fricativized between low and back vowels; /b, d, g/ are all pre-nasalized; /s/ word-initially is [ts], intervocally it fluctuates between [dz] and [z]; /j/ is phonetically [ndz] or [ndʒ]; /l/ is a voiced retroflexed flap; all syllables are open and final vowels are devoiced.

Tone is contrastive

/pílo/ ['pílyò] 'I strike'
/pílo/ ['pílyò] 'I do (work)'


9 Weinreich substantiates his claims, but due to limitations of space, these will not be presented here (cf. Weinreich 1966:402-5). Cf. Chomsky 1965:88, 110, 119f.

10 Cf. Halle 1959a and b, Chomsky and Halle 1968.
Lyons's point is well-taken, but discussion with Ranier Lang and Lyle Steadman on ethnoscience clearly implies that the difference is sex, i.e., in experiments showing a man dressed in women's clothes, a man with long hair, etc. Similarly, in questioning a child as to the difference between men and women, my subject replied "Men have a penis" (Craig Steadman, personal communication), which would seem to indicate that sex is the prime marker, with hair length, clothing, etc. as secondary considerations. Also, the Enga patriline consists of men who are 'of one penis' (pongó mendái).


Weinreich's examples have been re-numbered for this presentation.

Matthews 1967:149f. speaks of "collocational networks"; Hays extended this idea to semantic networks (personal notes from lectures, summer 1966).

We do not presuppose that features of performance, such as feeble-mindedness, aphasia, intoxication, insanity, etc. would need to be dealt with in such an account.

This problem could be regarded as an infinite regression (i.e., exceptions to the exceptions to the exceptions), until some (arbitrary) cut-off point is reached.

John and Irma Harris have provided the Spanish example. They point out, though, that this is true only for Mexican and Castilian Spanish, while in Peru llama is referred to as el (i.e., is regarded as masculine there).

Professor George Grace noted that the switch in pronominal reference (from es to sie) during conversation would be a topic for additional study.

Dixon 1971 states: "Words of similar meaning are now directly related through their semantic descriptions having one or more features in common" (1971:440).

Weinreich also gives the account of an experiment in which graduate students attempted (with very poor results) to distinguish between a set of eight synonyms (1962:27).

The comparison between intersection and cross-classification (0.2.2 above) is worthy of additional attention.

Human infants present an interesting case for cross-cultural study. Culturally, what marks the change of state that results in the different references? In English, the possibility might be 'capable of speech.' In Enga, infants are marked 'incapable of rational thought.'

Even in the case of pets, which generally retain the original pronominal reference after 'alteration', 'she' is not acceptable for a male neutered pet.
Prior to Chomsky 1965, Hays had presented his notion of dependency theory (1964), in which the verb dominated everything else.

Mathias 1968:13f. discusses various possibilities in which the verb may assign features to co-occurring nouns.

This is a vastly oversimplified view. Cf. Chomsky 1968 and 1969.

This example is from Ranier Lang.

The monolingual dictionary was intended to be encyclopedic.

A. Lang (forthcoming) also contains a complete listing of the sources for all the main items of the monolingual dictionary. The original Enga word list incorporated about 2,000 items from word lists and vocabularies made available to the author by courtesy of various missionaries working in the Enga area. One of these, that of Rev. O. Hintze, included the Enga item, the English gloss, and the word class of the Enga item, for approximately one thousand items. This Enga word list (of 2,000 items) formed the base for the elicitation of the monolingual folk definitions and all the other material contained in the present monolingual dictionary of 5,445 entries.
Chapter One

1.1 The Enga

The Enga, who number some 150,000, live in mountainous country in the Western Highlands District of New Guinea. They occupy an area (See Map 1) which stretches from the western slopes of Mt. Hagen westwards to Porgera. This area is drained by the Minyamp, Ambum, Lai, Sau, and Upper Maramuni Rivers, which flow into the Sepik; the Lagaip River (to beyond the junction of the Porgera River), which flows into the Strickland, and the Tari River. The Kyaka Enga, who live to the north of Mt. Hagen township, occupy the area drained by the Baiyer River.

The Enga are primarily sedentary gardeners but also keep pigs and fowls. The staple crop is sweet potatoes grown in the efficient system of long fallowing; these are augmented by other root and leaf vegetables. A limited amount of coffee (among the Central Enga) and pyrethrum (among the Laiagam Enga) are grown as cash crops; cattle have also been introduced by the Australian Administration.

Pigs, pearl shells, axes and plumes are the conventionally accepted items of wealth which circulate freely, and exchanges of these valuables mark all significant social occasions. Pigs form the major item in the tēe exchange. Until the coming of the Pax Australiana, Enga clans constantly fought each other over land, and women and to avenge previous killings.

The people belong to named localized exogamous patricians; they live in homesteads scattered throughout the clan territory, which has a sharply defined boundary. Traditionally men and women occupied separate houses, since women were thought to be unclean and dangerous to men, who had to use magic to protect themselves from female pollution. There are no hereditary chiefs or headmen: instead wealthy men of influence and power, (who have some of the characteristics of the self-made Big Men commonly found in Melanesia) control the initiation and direction of the political and administrative activities of each clan. The Enga are notable among the Highlanders for their
pragmatic concern with the manipulation of wealth in various forms (the traditional death payments, tée exchange, modern trade stores, cattle raising, and coffee and cash crops) and the extension of a wealthy man's influence through the social system.  

1.2 Grammatical Sketch

Publications on the Enga language in professional journals are a short dictionary (Crotty 1951), and an account of some syntactical features of Enga as contrasted to the Greek syntax of the Gospel of Mark (Burce 1965). The most detailed study of any one aspect of Enga, however, has been made by Lang (1970). This is an unpublished account of Enga Questions and Answers. The present study will not attempt to duplicate the description of Enga syntax, but attempts to elucidate other aspects not previously described, i.e., the semantics of the classificatory verbs. This would be difficult to do without some general account of the structure of Enga, and so this is provided in the following section.

Most of the work on the language has been done by the missions in the Enga area: the New Guinea Lutheran Mission-Missouri Synod and the Catholic missions working mainly on the Mae dialect, and the Australian Baptist Missionary Society working on the Kyaka dialect. The missions have produced a sizable body of material on the language, which is available to anyone interested in research.

1.2.1 The Noun

Since the focus of this thesis is on the Enga verbs, this section will deal only briefly with the Enga nouns. Enga nouns co-occur with the determiners dóko 'the' and mëndé 'a, some, else'.

1  Akáli dóko epe-ly-á-mo.
man the come-PRES-3SG-AUG
The man is coming.

2  Akáli mëndé epe-ly-á-mo.
man a come-PRES-3SG-AUG
A man is coming.

Nouns may be inflected for cases, such as agentive (3),
instrumental (3), possessive (3), locative (4, 5, 6), and temporal (7):

3 Akáli dokó-mé émba-nya mená doko uaa-mé p-í-á
man the-AG you-POSS pig the ax-INST hit-FP-3SG
The man killed your pig with an ax.

4 Akáli doko omó-nyá pe-ly-á-mo.
man the over=there-LOC go-PRES-3SG-AUG
The man is going over there (on the same level).

5 Akáli doko ee-sá tanje-sa pe-ly-á-mo.
man the garden-LOC near-LOC go-PRES-3SG-AUG
The man is going near the garden.

6 Akáli doko andá-ka pe-ly-á-mo.
man the house-LOC go-PRES-3SG-AUG
The man is going home.

7 Akáli doko kotáka-sa pe-ly-á-mo.
man the noon-TEMP go-PRES-3SG-AUG
The man is going at noon.

Noun classes have not been studied in detail in Enga, but the following distinctions are necessary for the present study:

N₁ Names
N₂ Kinship terms
N₃ Body parts
N₄ Concrete nouns
N₅ Pronouns
N₆ Events
N₇ Inner state
N₈ Color
N₉ Minor classes
N₁ Names

Nouns of this group are marked [-common], [+concrete]. These may be inflected for the agentive, and possessive cases (possibly the instrumental ?), but are not used temporally. Nouns of this group may co-occur with the determiners. Some nouns of this group are:

Aluá, Yokóne, Pasóne, Pesatúsa [+human]; Kátá, Laí, Laikálipu [+river], Wápaka, Mulítaka, Kopetesá [+place].

N₂ Kinship terms

Nouns of this class are [+inalienable]⁴ and may be
inflected for the agentive, and possessive cases, and may co-occur with the determiners. They are not used in the locative, temporal or instrumental cases. Nouns of this class often occur with N₅ + POSS. Some nouns of this class are: takānge 'father', endāngi 'mother', akalîngi 'husband', etanènge 'wife', kaimînîngi 'brother (of male ego)'.

N₃ Body Parts

Nouns of this class are [+inalienable] and can co-occur with the determiners, and be inflected for the locative, instrumental, but not the temporal or possessive cases. Some nouns of this class are: mîkî 'leg', kîngi 'arm', tâiyôko 'blood', pungi 'liver', yanûngi 'skin, body'.

N₄ Concrete nouns

This class comprises the largest number of Enga nouns, being all others which are [+concrete, +common]. These can co-occur with the determiners, and the agentive, instrumental, locative and possessive cases, but not the temporal case. The [+animate] nouns (which will be discussed in 3.0) are members of this class. Some nouns of this class are: saâ 'game mammal', menâ 'pig', ândâ 'house', uaâ 'ax', élî 'garden', tânû 'weeds, grasses'.

N₅ Pronouns

This group is a small closed set:

nambî 'I'  nálîmba 'we two'  nâima 'we' (pl)
émîba 'you'  nyalâmbo 'you two'  nyakâma 'you' (pl)
baâ 'he, she, it'  dolâpo 'they two'  dúpa 'they' (pl)

plus the dialectal variants of these. Nouns of this class may not co-occur with determiners, and may be inflected for the agentive and possessive cases, but not the temporal or locative.

N₆ Events

Nouns of this group are [-concrete], and possibly [+occurrence]. In spite of being [+occurrence], these are nouns and not verbs or verb parts, since the bases cannot be inflected for person-number or tense:
8 *Kalai-ly-a-mō.
work-PRES-3SG-AUG
He is working.

but instead must be expressed with a co-occurring verb:

9 Kalái pi-ly-a-mō.
work do-PRES-3SG-AUG
He is working.

Nouns of this group will be discussed in more detail in 4.1.2. Some nouns of this class are: *bētā* 'compensation payment', *tēe* 'pig exchange/death payment', *pīpūli* 'magic', *mānā* 'instruction'.

N<sub>7</sub> Inner State

Nouns of this group are [+inner state] and may co-occur with the determiners and with the instrumental case; they are not used in the agentive, locative, possessive or temporal cases. Unlike N<sub>6</sub> (Event nouns), N<sub>7</sub>, and the following class N<sub>8</sub>, may, in at least one dialect of Enga, be inflected for person-number and tense:

10 Baά pāka kae-ly-a-mō (western Enga)
he fear be-PRES-3SG
He is afraid.

11 Paka-ly-á-mō. (eastern Enga)
fear-PRES-3SG-AUG
He is afraid.

Nouns of classes N<sub>7</sub> and N<sub>8</sub> are also discussed in detail in 4.1.4 and 4.2.3.
Some nouns of this class are: *īmbu* 'anger', *nánū* 'thirst', *tándā* 'pain', *auū* 'like, love'.

N<sub>8</sub> Color

Nouns of this group are [-concrete], and may co-occur with the determiners. They may not be inflected for cases, but may occur in the stative form. Some nouns of this class are *kìyōo* (lāpae) 'white', *pumbútí* (pīpae) 'black, brown', *wenē pīpāpe* 'blue, purple', *sάkapae* 'green'.

Minor Classes

Other classes, which will not be discussed further, include the following:

Quality: ko6 'bad', épé 'good', múu 'short'
Quantity: lóngó 'many', iki 'only', pitaká 'all'
Location: téngesa 'near', lónđé 'far', kisá 'up'
Direction: áná 'nearby-level', ályá 'near-up', áná 'nearby-down'
Time: wâmbá 'before', indúpa 'today', taitá 'tomorrow', alémbo 'two days ago'
Number: lápó 'two', tápó 'three', akalitá mendái 'ten'
Manner: mói láo 'slowly', vápá 'quickly', púpú láo 'strongly', elyakáo 'stealthily'
Exclamations: kanáu 'exclaim in surprise', pongokáé 'swear (to man)'
Interrogatives: ánjà 'where', apí 'who', áki 'what'

The preceding classes constitute the nouns of Enga; in the following chapters we will concern ourselves only with nouns of classes four [concrete], six [events], seven [inner state] and eight [color].

1.2.2 The Verb

Enga is a verb dominated language and belongs to what Capell (1969) calls the B iii languages, viz., those that are event-dominated. These languages are "...probably the most widespread typologically homogeneous group in New Guinea" (Capell 1969:81). Event-dominated languages of the B iii type are specifically marked by the features

i complication of the verbal system in terms of tenses and moods,
ii possession of sentence-medial and sentence-final forms,
iii absence of incorporated pronoun objects.

We will deal with these in reverse order.

1.2.2.1 Incorporated Pronoun Objects

Enga does not have incorporated pronoun objects (except for one instance):
1.2.2.2 Sentence-medial and Sentence-final Forms

For each sentence there is one main verb and it always occurs in final position in the surface structure of that sentence. In a normal declarative sentence, the order is subject-object-verb:

13 Ŭnda dokó-mé baa-nyá mená dóko p-i-á.
woman the-AG she-POSS pig the hit-FP-3SG
The woman hit her pig.

There are no conjunctions in Enga to express sentences like (14) and (15)

14 He went and worked (at the same time)
15 I went and he worked

Instead, Enga uses a special set of verbal suffixes, which are attached to all but the final verb in the sentence. These suffixes vary, depending on whether the subjects of the two sentences are co-referential or not. Co-ordinate and subordinate sentences with co-referential subjects are called "same actor" sentences in Enga grammatical studies, and those with non-co-referential subjects are called "different actor" sentences. The two constituent sentences of (14) above, if used separately would be (16) and (17):

16 Baá p-é-á.
he go-FP-3SG
He went.

17 Baá-mé kalái p-i-á.
he-AG work do-FP-3SG
He worked.
Conjoined they are not

18  *Baa p-e-a-pi baa-me kalai p-i-a.  

but instead

19  Baa-mé pá-o kalái p-i-á.
he-AG go-0 work do-FP-3SG
He went and worked (at the same time).

The tense and person-number suffixes are carried only by
the sentence final verb, (19a) and (19b) are ungrammatical

19a  *Baa-me p-e-a  kalai pyo-o
he-AG go-FP-3SG work do-0

19b  *Baa-me p-e-a-o  kalai p-i-a.
he-AG go-FP-3SG-0 work do-FP-3SG

The two constituent sentences in (15) above would be (17)
and (20):

20  Nambá p-é-ó.
I  go-FP-1SG
I  went

However, since the subjects of (17) and (20) are not co-
referential, they cannot be conjoined, for example, by the -0
marker as in (19); (21) is ungrammatical

21  *Namba pa-o baa-me kalai p-i-a.
I  go-0 he-AG work do-FP-3SG

(17) and (20) can only be conjoined by preserving both
the tense and person-number suffixes of both verbs. This
is achieved by adding a sentence medial marker -pa to the
main verb of the first of the two sentences to be conjoined:

22  Nambá p-e-ó-pa  baa-mé kalái p-i-á.  
I  go-FP-1SG-PA he-AG work do-FP-3SG
I  went and he worked.

-pa in sentence final position as in (23) would be
ungrammatical:

23  *Namba p-e-o  baa-me kalai p-i-a-pa.
I  go-FP-0 he-AG work do-SP-3SG-PA

There are a number of suffixes (some of which will be
illustrated below) which can mark sentence-medial verbs,
depending on the various kinds of co- and sub-ordination.
These will be discussed in more detail in the next section.
1.2.2.3 Tenses and Moods

In the preceding section we have briefly shown the general characteristics of the so-called sentence-medial and sentence-final verb forms. Thus, all instances of co- and sub-ordination are expressed by sentence-medial forms. There are, furthermore, no modal auxiliaries, such as English 'can, must, ought', etc. All of these are expressed in Enga by sentence-medial forms.

Compleative (24), benefactive (28), desiderative (26 and 27), purposive (28 and 29) and interrogative (30) are some of the modalities of Enga:

24 Namba-mé kalái pyó-o etá-te-ly-ó.
I-AG work do-0 finish-COMP-PRES-1SG
I am completely finished with the work.

I-AG he-POSS work do-BEN-EXCL-PRES-1SG
I am doing his work for him.

26 Baa-mé neé ná-p-ú láká lá-o mási-ly-ám-o
he-AG food eat-NP-1SG LAKA utter-0 think-PRES-3SG-AUG
He wants to eat very badly.

27 Baa-mé náima p-ú-m-í láká láo mási-ly-á-mo.
he-AG us go-NP-2PL LAKA la-0 think-PRES-3SG-AUG
He wants us to go.

28 BaÁ kalái pi-n-á lá-o namba-mé yáti méndé
he-AG work do-IMP-3SG utter-0 I-AG shovel a
sambé-ly-o.
buy-PRES-1SG
I am buying a shovel so that he will work.

29 Baa-mé kalái méndé pyá-a-nya yáti sambe-ly-á-mo.
he-AG work a do-INF-GEN shovel buy-PRES-3SG-AUG
He is buying a shovel in order to work.

30 Láima káka-sa yuú dokó-nyá kate-ngé-pé?
10 cassowary bush-LOC land the-LOC BE-HAB-PE
Are there cassowaries in the rain forest?

Enga also has various modalities dealing with events which have not been observed by the speaker: sensed (31), deductive (32) and historical (33)

31 Kaití toká lá-1-l-u-mu.
sky shot utter-PRES-3SG-SENSE
(I sense) it is thundering.
Dóko mená lámo.
that pig (I deduce) that is a pig.

Baa-mé káka-sa yuú dokó-nyá p-á-á-pyáa.
he-AG bush-LOC land the-LOC go-FF-3SG-HIST
He went into the rain forest.

Enga is an exclusively suffixing language

Ènda dokó-mé baá kandá-lya-sa-ta-kamai-y-á-pé?
woman the-AG he see-UP-CAUS-COMP-BEN-PAST-3SG-PE
Did the woman cause him₃ to look up already for his₄ benefit?

except for the negative prefix

Akáli dóko ná-p-e-a.
man the NEG-go-FF-3SG
The man didn't go.

There are five tenses in Enga; they are illustrated (with the person-number categories) in Table 1.1, using the verb la- 'utter, say' as a root.
<table>
<thead>
<tr>
<th></th>
<th>Far Past</th>
<th>Near Past</th>
<th>Past</th>
<th>Present</th>
<th>Future</th>
</tr>
</thead>
<tbody>
<tr>
<td>1sg</td>
<td>1-e-ó</td>
<td>1á-p-ó</td>
<td>1á-1-o</td>
<td>1é-ly-o</td>
<td>1á-t-ó</td>
</tr>
<tr>
<td>2sg</td>
<td>1-e-é</td>
<td>1á-p-í</td>
<td>1a-1-é-no</td>
<td>1e-1-é-no</td>
<td>1á-t-é</td>
</tr>
<tr>
<td>3sg</td>
<td>1-e-á</td>
<td>1á-py-á</td>
<td>1a-1-á-mo</td>
<td>1e-1-á-mo</td>
<td>1á-t-á</td>
</tr>
<tr>
<td>1du</td>
<td>1-e-ambá</td>
<td>1a-p-úmbá</td>
<td>1a-1-ambá-no</td>
<td>1e-ly-ambá-no</td>
<td>1a-t-ambá</td>
</tr>
<tr>
<td>2du</td>
<td>1-e-ámbi</td>
<td>1a-p-ímbi</td>
<td>1a-1-ambí-no</td>
<td>1e-ly-ambí-no</td>
<td>1a-t-ambí</td>
</tr>
<tr>
<td>3du</td>
<td>1-e-ámbí</td>
<td>1a-p-ímbí</td>
<td>1a-1-ambí-no</td>
<td>1e-ly-ambí-no</td>
<td>1a-t-ámbí</td>
</tr>
<tr>
<td>1pl</td>
<td>1-e-ámá</td>
<td>1a-p-úmá</td>
<td>1a-1-ámá-no</td>
<td>1e-ly-ámá-no</td>
<td>1a-t-ámá</td>
</tr>
<tr>
<td>2pl</td>
<td>1-e-ámí</td>
<td>1a-p-ímí</td>
<td>1a-1-ámí-no</td>
<td>1e-ly-ámí-no</td>
<td>1a-t-ámí</td>
</tr>
<tr>
<td>3pl</td>
<td>1-e-ámí</td>
<td>1a-p-ímí</td>
<td>1a-1-ámí-no</td>
<td>1e-ly-ámí-no</td>
<td>1a-t-ámí</td>
</tr>
</tbody>
</table>

The basic form is verb stem + tense + person-number (+ augment)
Notes: Chapter One

1 Tée píngá refers to the pig exchange among the Central Enga (i.e. east of Sirunki, see Map 1), and refers to a death payment among the Western (Laiagam and further west) Enga.

2 Section 1.1 is a paraphrase from Meggitt (forthcoming).

3 The materials include: language learning aids Larson (1967), Hintze (1963a and b), and Kelly (nd); phonological statements Bus (nd a and b), Burce (1963), and Hintze (1963a and nd b); word lists and dictionaries Budke (1964), Bus (nd b), Finney et al. (1964), and Draper (1954 and nd a); and grammatical studies Draper (1954 and nd a), Hintze (1962), Smythe (nd), Burce (1963), and Bus (nd a). One continuing problem has been that of the tonal system: Laycock (nd), Hintze (1960 and nd b), and Nida (1968) have all worked on the problem which is further complicated by dialectical variation.

4 Franklin (forthcoming) has suggested that Proto-Engan used a -K/NG vowel suffix to denote inalienable parts (i.e. kinship terms and body parts). This appears in the examples listed for the kinship terms and body parts.

5 Capell also classifies Enga as B i (b) on page 155, but this is obviously a typographical mistake, as on Map 16, Enga is classified as B iii (with the languages of the Western Highlands). Capell's Nera dialect of Enga (1969:142) is not a dialect but a closely related (but mutually unintelligible) language, Nete, on the northern fringes of the Enga-speaking area.

6 For some of the wider genetic connections, see McElhannon and Voorhoeve 1971.

7 Incorporated pronoun objects appear in one Enga verb, 'give':

   a Namba-mé émba mená méndé di-ly-o.
      I-AG you pig a      give-PRES-1SG
      I am giving you a pig.

   b Émba-me nambá mená méndé di-1-1-no
      you-AG me           give-PRES-2SG-AUG
      You are giving me a pig.

   c Baa-mé nambá/émba mená méndé di-ly-á-mo.
      he-AG me /you       give-PRES-3SG-AUG
      He is giving me/you a pig.

   d Namba-mé baá mená méndé mai-ly-o.
      I-AG he pig a       give-PRES-1SG
      I am giving him a pig.

   e Émba-me baá mená méndé mai-1-1-no.
      you-AG he           give-PRES-2SG-AUG
      You are giving him a pig.
Baa₃-mé baá₄ mená méndé mai-ly-á-mo.
he₃-AG he₄ give-PRES-3SG-AUG
He₃ is giving him₄ a pig.

* Baa-me namba/embá mena mende mai-ly-a-mo.
he-AG me /you give-PRES-3SG-AUG

*Namba-me emba mena mende mai-ly-o.
I-AG you give-PRES-1SG

*Emba-me namba mena mende mai-l-i-no.
you me give-PRES-2SG-AUG

-πι conjoins noun phrases.

-πα can be used in a number of senses, such as consecutive action, contemporaneous action, and consequential action.

-πε is the question marker.

For a list of Enga suffixes, see A. Lang (forthcoming).

The negative may also be formed via a full verb base
Namba-mé mása-la náe-nge.
I-AG know-INF NEG-HAB
I don't know (it).

In equational clauses, the negative adverb daa is used
Baá akáli méndé daa.
he man a not
He is not a man.
Chapter Two

2.0 The Existential Verbs

This chapter will deal with the first of the two types of Enga classificatory verbs which will be presented in this thesis. The EV occurs with [+concrete] nouns and has a meaning which corresponds to that of the English copula, 'be'. As noted above (0.1), the EV of Enga corresponds to the Navaho 'neuter' form which denotes "...an object of a particular type in position or at rest..'a mountain lies'" (Hoijer 1945:22); Landar notes that informants often translate these verbs as 'it's lying there' or 'it's setting [sic] there'. Hence one might translate tse si? as 'a rock (as a round object) has taken a position', or 'a rock is sitting there', or simply 'there's a rock' (Landar 1965:328).

The chapter will deal firstly with the form of the EV (its syntactic properties), and secondly with the semantics of the EV. We will conclude with a brief discussion of a few theoretical problems arising from attempts to account for the EV in a generative transformational framework.

2.1 Syntactic Properties

The EV (with a few exceptions) co-occurs with a noun in a one-one relation; that is, every noun co-occurs with a specific EV, and each of the EVs co-occurs only with a certain set of nouns. There are seven EV: kata-, pita-, sa-, pala-, ipa-, lya- and manda-. They are exemplified with typical referents in (1-7).

Thus the noun 'pig' may occur existentially only with the EV kata-; this co-occurrence marks the noun class (or gender) membership of the noun:

1  Mená dúpa kate-ngé.
pig the BE-HAB
Pigs exist; There are pigs.

2  Ênda dúpa pete-ngé.
woman the BE-HAB
Women exist.

3  Kanopáto dúpa sí-nga
reptile the BE-HAB
Reptiles exist.
Mapú dúpa pale-ngé. sweet=potato the BE-HAB
Sweet potatoes exist.

Endákí dúpa epe-ngé. river the BE-HAB
Rivers exist.

Ambúlyá dúpa lyi-ngí bee the BE-HAB
Bees exist.

(Akáli dúpa) pongó mande-ngé. man the penis BE-HAB
Men have penises.

To combine any of the EVs with a noun different from the one
it co-occurs with would make the utterance ungrammatical, as

\[
\begin{align*}
\text{Mená dúpa} & \quad *\text{pale-ngé} \\
\text{pig the} & \quad *\text{epe-ngé} \\
\end{align*}
\]

The EV for a noun class is not usually used in the
stative form with nouns of that class, since it (i.e., the
EV) is the habitual existential mode of the noun:\(^2\)

*Saa piti-pae doko ...
possum BE-STA the

*Laima kata-pae doko ...
cassowary BE-STA the

The inflected EV is, however, obligatory when the
referent is located at some place but out-of-sight of the
speaker:

Koné akáli dóko andá-ka ká-ly-a-pe?
red man the house-LOC BE-PRES-3SG-PE
Is the European man at home? OR Is the European man
standing in the house?

(10) is ambiguous but the first meaning of it is not expressed
by (11), only a meaning analogous to the second meaning of
(10):

Koné akáli dóko andá-ka pí-ly-a-pe?
red man the house-LOC sit-PRES-3SG-PE
Is the European man sitting at home?
(but not: Is the European man at home?)
(12) exhibits the same kind of ambiguity as (10):

12 Koné énda dóko andá-ka pí-ly-a-pe?
red woman the house-LOC BE-PRES-3SG-PE
Is the European woman at home?
OR Is the European woman sitting in the house?

And similarly (13) is unambiguous in the same sense that (11) is:

13 Koné énda dóko andá-ka ká-ly-a-pe?
red woman the house-LOC stand-PRES-3SG-PE
Is the European woman standing in the house?
(but not: Is the European woman at home?)

In (11) the speaker has strong reasons for presupposing that the man is in fact sitting (not standing, sleeping, or laying, etc.); however in (10) the speaker does not want to know whether the man is sitting, sleeping, etc. --- and so he must use the EV which normally co-occurs with akáli 'man'.

The EV must appear in the surface forms of modalities such as desiderative (14), and purposive (15).

14 Wáné dóko akáli ká-ly-a-nya más-í-á.
boy the man BE-INF-GEN think-FP-3SG
The boy wanted to be a man.

Note that this would be ungrammatical if used with the wrong EV as in

14a Wáné dóko akáli más-í-á

15 Baa-mé énda pí-ly-a-nya lá-o máso-o ṣàogà mande-ly-á-mo.
she-AG woman BE-INF-GEN utter-O think-O baby bear-PRES-3SG-AUG
In order to be a woman, she is having a baby.

15a *Baa-me enda ka-ly-a-nya la-o maso-o ṣàogà mande-ly-a-mo.

2.2 Semantics

In this section we will discuss
2.2.1 the meaning of the EV
2.2.2 the features of the EV
2.2.3 the semantic redundancy rules
2.2.4 loan items
2.2.5 intersection
2.2.6 change of class

The general relevance of the problems has been discussed above in 0.2.1 - 0.2.3. Here we will address ourselves to the specific problems that Enga poses in relation to these topics.

2.2.1 Meaning of the EV

The EV has the meaning of the English 'be' and 'have'; it is used for constructions of existence (16 and 17), for location (18 and 19), for possession (20 and 21) and in constructions such as relative clauses (22) and in modalities (cf. 14 and 15 above).

16 Liti dúpa lyi-ngí.  
mushrooms the BE-HAB  
Mushrooms exist; There are mushrooms.

16a *Liti dupa kate-ngé.

17 Endáki epe-ngé.  
water BE-HAB  
Water exists; There is water.

17a *Endaki kate-ngé.

18 Saá dúpa káka-sa pete-ngé.  
possum the bush-LOC BE-HAB  
Possums are in the bush.

18a *Saa dupa kaka-sa kate-ngé.

18b *Saa dupa kaka-sa

19 Ítí ayómba kisá kate-ngé.  
hair head top BE-HAB  
Hair is on heads.

19a *Iti ayomba kisa pete-ngé.

19b *Iti ayomba kisa

20 Nambá aputíngi pete-ngé.  
I grandmother BE-HAB  
I have a grandmother.

20a *Namba aputingi kate-ngé.

20b *Namba aputingi
21 Akáli pitaká móna pale-ngé.
   men all heart BE-HAB
   Men have hearts.
21a *Akali pitaka mona lyi-ngi.
21b *Akali pitaka mona
22 Akáli nambi-sa ka-ly-á-mo dóko ...
   man coast-LOC BE-PRES-3SG-AUG the
   The man who is on the coast ...
22a *Akali nambi-sa pi-ly-a-mo doko ...
22b *Akali nambi-sa doko ...

In all of the above examples (16-22) the EV is obligatory in the surface structure; this is in direct contrast to other constructions (of similar meaning) in which the EV must NOT appear in the surface (or is very awkward if it does appear). These constructions are those involving a particular item (i.e., as opposed to a generic noun as in (18) above), and the identity (23), class membership (24) or class inclusion of the item (25); and also those constructions which attribute qualities (26).

23 Dáke mená.
   that pig
   That is a pig.
23a ?*Dake mena kate-nge.
24 Ánga baá ítá méndé.
   pandanus it tree a
   The pandanus is a tree.
24a ?*Anga baa ita mende kate-nge.
25 Pongéná dúpa néne.
   fly the insect
   Flies are insects.
25a ?*Pongena dupa nene pete-nge.
26 Baá énda nongó pí-pae méndé.
   she woman clumsy do-STA a
   She is a clumsy woman.
26a ?*Baa enda nongo pi-pae mende pete-nge.

Thus, we must note that in cases involving the predicative use of 'be', the EV is not obligatory in the surface structure. This will be discussed in relation to the positions for the presence or absence of the EV as BE in the deep structure (2.3).
And, it should also be noted that those cases in which the EV is obligatory in the surface structure correspond to the existential, locative and possessive constructions as described by Lyons (1967, 1968). Lyons's hypothesis is that both the existential and possessive derive from locatives ("...in many, and perhaps in all, languages existential and possessive constructions derive (both synchronically and diachronically) from locatives" (1967:390)). Lyons notes two additional points, firstly that

existential sentences typically have an indefinite, rather than a definite, subject: this fact raises the possibility that they should be treated, in a syntactic analysis of their deep structure, as indefinite locatives (with 'locative', in this context, being understood to include 'temporal'... (1968:390).

Lyons secondly points out that this connection is supported by the employment of what was originally a locative... adverb in the existential sentences of a number of European languages: cf. English 'there (in 'there is/are...),...German 'da' (in 'ist da', 'is there' or 'exists': cf. 'das Dasein', 'existence', i.e. 'the being-there') (1968:390).

Additional support for Lyons's first point has recently been presented by Hetzron with evidence for Hungarian that the copula is generated for all definite nouns (and not generated for indefinite nouns and noun phrases). 4

Regarding Lyons's second point (the locative 5 adverb 'there'), Laiapo Enga offers two verbs of interest: ae- and dae-. The formation of ae- is most likely from the locative adverb aé- 'here' used as the verb base plus the tense, and person-number suffixes:

27 Méndé ae-ly-á-mo.
    a: here-PRES-3SG-AUG
    There is some (here).

    and

28 Méndé dae-ly-á-mo.
    a: not-here-PRES-3SG-AUG
    There is not any (here).

The dae- is most likely from the negative adverb daá 'not' plus the locative adverb aé 'here', plus the verbal suffix(es). 6 It must be noted that these two verbs, aéngé and daéngé are not EV, since they do not indicate existence:
The philosophical importance of this distinction lies in the fact that most modern philosophers would say that existence cannot be predicated of objects in the same sense as their various attributes, or properties, but is presupposed in the identification of objects or in any reference to them (Lyons 1968:388).

2.2.2 Features

The EV chosen depends on the habitual (i.e. existential) posture or shape of the referent as perceived by the Enga. Informants never hesitate in assigning a noun to a particular EV class, and native speakers do not seem to have to learn the class of each noun individually; instead, they seem to operate with a certain set of principles. This ability indicates that the assignment of the EV to nouns is non-arbitrary and made in accordance with some set of rules which each speaker of the language has acquired. Moreover, loan items are readily assigned to the same EV classes (i.e., *pusíi 'cat* is assigned to the class of nouns which co-occur with petengé) by different speakers with consistency. If questioned, unsophisticated informants will give the following criteria by which they assign EVs to noun classes:

1. **Katengé** will be elicited for referents judged to be tall, large, strong, powerful (potentially harmful), standing or supporting; some typical referents are: *akáli* 'men', *ándá 'house', ítá 'tree', *níki 'sun', mókó 'leg*.

2. **Petengé** will be elicited for referents judged to be small, squat, horizontal, weak; some typical referents are: *ándá 'woman', saá 'possum, game mammal', néne 'Arthropoda, insects', peté 'pond*.

3. **Lyngí** will be elicited for referents which are hanging, or exerving outside another object; some typical referents are: *ambúlyá 'wasp, bee', kamalúmbi 'moss', ítti 'mushroom', dií 'fruit, seeds, flower*.

4. **Palengé** will be elicited for referents which are internal or subterranean; some typical referents are: *ímú 'worm', móna 'heart, pungí 'liver', mapá 'sweet potato*.
5 Epengé will be elicited for referents which are intermittent, capable of growth, or liquid/gas; some typical referents are: endáki 'water, river', aiyúu 'rain', ítí 'hair, fur, feathers', taiyóko 'blood', kénde 'vine used for rope'.

6 Singi will be used for referents which are orifices, locations, or motionless, crawling or aquatic; some typical referents are: wapáká 'eels', káita 'door, path', yuó 'ground, land', yáti 'shovel, spade', néngekaita 'mouth'.

7 Mandengé will be used for referents that are reproductive, such as: pongó 'penis', kambáke, 'vagina', ípi 'testicles'.

Thus it seems that native speakers assign EVs to nouns according to certain distinguishing features of the noun. Rules for the assignment of the EVs can be represented by plus and minus features in the tree diagram (2.1) and these are represented more formally in 2.2.3. Informally, the features of the EV assignment are listed below:

1 Katengé [+heavenly, +construction, parts, +large/powerful, +harmful...]

2 Petengé [+still water, +sores...]

3 Lyingi [+seed, fruit, +excrescent, +swarm...]

4 Palengé [+subterranean, +internal...]

5 Epengé [+intermittent, +liquid/gas, +growing, +vine...]

6 Singi [+orifice, +location, +aquatic, +crawling...]

7 Mandengé [+reproductive...]

The most frequently used feature is that of place of existence (or habitat): [+subterranean] will elicit only palengé, [+heavenly] will elicit only katengé, and [+aquatic] will elicit only singi. Thus, we do find at least one general feature which is realized by mutually exclusive EV.
Diagram 2.1

THE EXISTENTIAL VERBS

1. concrete

2. natural +
   - water
   - petengé (lakes)

3. intermittent, liquid, gas
   + epengé (rain)

4. heavenly
   + katengé (sun)

5. sfngi (stones)

6. parts of a whole
   - petengé (saliva)

7. growing, liquid
   + sfní (seeds)

8. internal
   + epengé (saliva)

9. reproductive
   + sfngi (seeds)

10. seeds
   + lyingf (seeds)

11. lyingf (seeds)
   + reproductive

12. orifice
   + sfní (mouth)

13. artifacts
   - sfní (door)

14. construction
   + katengé (leg)

15. parts
   + sfngi (nails)

16. plants
   - lyingf (moss)

17. pod
   + vine

18. subterranean
   + round

19. spherical
   + petengé (tree)

20. petengé (sweet potato)
   + (cabbage)

21. animals
   - palengé (worms)

22. subterranean
   + swarm

23. aquatic
   + lyingf (bees)

24. large
   + petengé (women)

25. powerful
   + katengé (men)
2.2.3 Redundancy Rules

The rules presented in Diagram 2.1 are here presented as an ordered set. The ordering is such that between two rules the one with broader scope is to have prior application (in order to prevent individual enumeration of features if it were instead applied later).

1. [+concrete] → [+natural phenomena]
2. [+natural phenomena] → [+still water]
3. [+still water] → petengé.
4. [-still water] → [+intermittent/liquid/gas]
6. [-intermittent/liquid/gas] → [+heavenly]
7. [+heavenly] → katengé.
8. [-heavenly] → sīngi.
9. [-natural phenomena] → [+parts of a whole]
10. [+parts of a whole] → [+sores]
11. [+sores] → petengé.
12. [-sores] → [+liquid/growing]
13. [+liquid/growing] → epengé
14. [-liquid/growing] → [+internal]
15. [+internal] → palengé.
16. [-internal] → [+seeds/fruit]
17. [+seeds/fruit] → lyingi.
18. [-seeds/fruit] → [+reproductive]
20. [-reproductive] → [+orifice]
22. [-orifice] → katengé.
23. [-parts of a whole] → [+artifact]
24. [+artifact] → [+orifice/location]
25. [+orifice/location] → sīngi.
In the ordering of the EV rules (diagram 2.1), following general usage, more specific items were ordered first, with more general items following. This accounts for the ordering of the nodes 3, 7, 22, and 17 (most others too), and the ordering of the most frequently used EV to the far branches of the diagram: nodes 5, 12, 15, 20 and 25. Some specific explanations for the ordering follow.
In the domain of artifacts (node 13 and ff.), singi appears twice. The first node, 14, must apply before 15, or otherwise the various house and construction parts would be given incorrectly. Likewise, the constructions of 15 must be applied before we can terminate with the 'everything else' taking singi.

In the domain of parts, node 11 must be applied before 12, or the kambáke 'vagina', which is in fact considered to be [+orifice] and said by informants to be the wánekaita 'child's doorway', would be incorrectly assigned singi. Informants were definite in the rejection of the assignment of kambáke to the singi class: it must have mandengé. Also in the domain of parts, node 10 must precede node 11, or dií 'fruit, seeds' would be assigned mandengé. This is a particularly interesting case, since dií, although usually assigned liyngí, can also be used with mandengé. This particular case, dií, is further discussed in 2.2.5.

In the domain of animates, node 25 makes an arbitrary decision between katengé and petengé: both are equally frequent, and a reversal of the features (i.e. to change the node to [-large, -powerful, -harmful] or to [+small...]) could be made.

2.2.4 Loan Items

The correct assignment of loan items to particular classes in any class system can be accounted for such that the assignment is based on the similarity of the loan item to other (already classed) items of the system.10 The features focussed upon in the assignment are clearly those chosen by the culture, i.e., those regarded by the culture as traditionally important. Wild raspberries grow throughout Enga-land and are regarded as children's food; the introduction of blackberry bushes and their equation with wild raspberries results in the classification of the blackberries as children's food.

Table 2.2 presents some of the loan items.
TABLE 2.2 Loan Items

Animates:  
bulumakáo 'cow' katengé  
pusí 'cat' petengé

Plants:  
samúu 'potato' palengé  
katósa 'carrots' palengé  
kapúsa 'cabbage' sínig/petengé  
letésa 'lettuce' sínig/petengé  
painapóló 'pineapple' sínig/katengé  
kalípu 'peanuts' katengé  
kanápu 'corn' katengé  
bíni 'bean' lyingí

Artifacts:  
ínja 'hinge' katengé  
lóko 'lock' katengé  
dóa 'door' sínig  
kolósá 'clothes' sínig  
bakésa 'bucket' sínig  
gumíi 'rubber' sínig  
lésa 'razor' sínig

(all other introduced artifacts also take sínig)

Referring to Diagram 2.1, most of the loan items' assignment is determined correctly by the rules given there. The cow, [+large...] is assigned katengé, the cat [+small...] is assigned petengé. The plants also, with the subterranean ones being assigned palengé, the tall upright ones being assigned katengé, and the round/spherical ones assigned sínig. In the case of the bean, the focus is on the dii (i.e., pod, the edible portion) and lyingí is assigned. The cases of lettuce and pineapple are discussed in 2.2.5 as intersecting items. Except for the hinge and lock, all the artifacts are assigned sínig. It seems likely that the hinge and lock are regarded as parts of the house, and this feature causes them to be assigned katengé (rather than sínig). Most of the introduced loan items occur in the semantic domain of artifacts.
Thus, as we postulated above, the assignment of loan items to the correct EV classes is based upon Enga-adjudged similarity of features of the loan item in relation to items already present in the Enga EV class system.

2.2.5 Intersection

Intersection is a feature of classification systems in general (cf. 0.2.3.2); in the entire corpus of approximately 3,000 Enga nouns, fewer than one per cent are involved in cases of EV intersection. Two points must be noted:

i. The options involved in intersection are not in free variation: in German, butter may use die in north Germany, and der in the south, but das is excluded.

ii. As Landar says about Navaho gender, "rules are broken according to rules for breaking rules" (1965:329).

In the cases presented here involving EV intersection, we will see that the apparent intersection of EVs is usually explained in terms of focus on different EV features. Table 2.3 presents the possibility of twenty-six intersections in the EV (since there are seven EV); of these possibilities, only seven (the capitalized and underlined ones) actually occur.

| TABLE 2.3 Intersection in the EV |
|---|---|---|---|---|---|
| katengé | petengé | singi | palengé | lyingí | mandengé | epengé |
| katengé | k | k/pt | S/K | k/pl | k/ly | K/MD | k/e |
| petengé | pt | PT/S | pt/pl | pt/ly | pt/md | pt/e |
| singi | s | S/PL | s/ly | s/md | S/E |
| palengé | pl | pl/ly | pl/md | pl/e |
| lyingí | ly | LY/MD | LY/E |
| mandengé | md | md/e |
| epengé | | | | | | e |

The actual data which occur in EV intersections are presented in Table 2.4 below.
TABLE 2.4 Intersection - Data

k/s alyónico 'bean', painápóló 'pineapple'
k/md pongó 'penis', kambáke 'vagina'
pt/s kapúsa 'cabbage', nómbé 'snail', yáka baná 'water birds'
s/pl ímú 'worm', amé 'fat'
s/e endákí 'water,river'
ly/md dií 'seed,fruit,flower'
ly/e kamalúmbi 'moss' (12 items)

Of the seven occurring two-way intersections (with thus a possible fourteen occurrences for any one EV), the most frequently used EV in the intersection is singí, indicating that singí is most likely the most neuter or semantically unmarked of the seven EV. The other occurrences are with two each, katengé, mandengé, lyingí and epengé; with only one occurrence, palengé and petengé. Also notable is that those with only one intersection (palengé and petengé) intersect with the semantically most neutral, singí. Thus it would also be expected that palengé and petengé would be the most marked (i.e., in comparison with singí).

Following is a brief discussion of the actual data items involved in the intersections of EV, with some thoughts as to what features permit the intersections. Kamalúmbi 'moss' would be a difficult item in any case, since it is also the only example of a three-way intersection: a few informants stated that kamalúmbi could also be used with katengé (i.e., as well as epengé and lyingí). Comparing the features of diagram 2.1, it is possible that this intersection can be explained in terms of focus on different features of the moss: in the sense that it is an excrescence on the trees, it is assigned lyingí; in the sense that it has tendrils and is entwined (like a vine), it is assigned epengé.

The intersection of lyingí and mandengé with respect to dií allows the assignment of an additional feature to these two EV. In the case of all parts of a whole, mandengé can be used for animates and plants (as in this case, dií), but lyingí cannot be used for animates. Thus giving a feature to lyingí of [-animate].

In the case of endákí 'water,river', a clue to the intersection of the two EV (singí and epengé) occurs at nodes 3 and 4 of 2.1. There it is evident that flowing water, liquids,
etc. are assigned to epengé, with still water (lakes, ponds puddles, etc.) assigned to singi. In the case of this intersection, it would therefore be postulated that different states of the water are referred to by the two different EV.

Imú 'worm', and amé 'fat' as intersecting with the EV singi and palengé were explained by an informant: when the referent is internal (and not visible), the EV assigned is palengé; when the referent is external (as the worm uncovered in composting, or the exposed fat at a pig feast), the EV assigned is singi. Singi is of course also the EV for crawling animates, which the externally exposed worm would be.

The intersection of petengé and singi is of especial interest, since it is the only case of petengé as the EV for a plant: kapúsa 'cabbage'. The other two cases are quickly explained: the water fowls are [+aquatic] and thus singi, but when seen flying, roosting, etc., may possibly be judged with all other birds, as petengé. The snail is a border-line animate, in that perceived as crawling it would be assigned singi, but perceived as a small insect, etc., would give the assignment petengé. The cabbage is of interest, since a conflict must be perceived by the Enga: if the cabbage is low, round, mainly squat, it should be assigned (as generally it is) to the petengé class -- yet petengé is not used for any other plants. The conflict is resolved instead by assigning it to the singi class (i.e., the semantically most neuter of the classes) which is also the class of native green leafy cultigens.

The reason for the intersection of mandengé and katengé, which occurs with two items, pongó 'penis' and kambáke 'vagina', is difficult to determine. Mandengé occurs only as an EV with reproductive parts (seeds, sprouts, fruit stems, etc.), while katengé is used for most external body and plant parts (appendages, leaves, etc.). The intersection might possibly be explained if we consider that the items are viewed first reproductively, and then as ordinary external body parts (i.e., and thus assigned katengé).
The final case of intersection between katengé and singi is for two plants, beans and pineapple. For these we can see that the initial assignment is with leafy cultigens as singi, and the intersection later with the grown plant (if viewed as tall, upright, etc.) assigned katengé.

Thus it may be seen that in all cases, intersection of EV is attributable to focus on different EV features, especially when these reflect a different existential state (as still versus flowing water, subterranean and terranean worms, etc.). However, focusing on a variety of different features takes place in only one per cent of all nouns, underlining the overwhelming regularity of the remaining 99 per cent.

2.2.4 Change of Classes

Any system of noun classification must be prepared to delimit the conditions under which the nouns may change classes (cf. 0.2.3.3). In Enga, where the basic features are posture and over-all shape, it would be expected that a referent which changes posture or shape would therefore change its class and require a different (surface) EV. Furthermore, since the (surface) EV marks the habitual state of existence for the referent, a different EV could be expected to signal a basic change of existence, or possibly an altered state of existence for that referent. This can be seen from the following example:

The EV assigned to ítá 'tree' is katengé, based on the trees' features of being tall, upright, large, etc. (29). When the tree is felled, the referent ítá is realized with the EV palengé (30), and when the felled tree is further chopped into logs and piled in a wood pile, the referent is realized with the EV singi (31).

29 ítá dápa kate-ngé.
   tree the BE-HAB
   Trees exist.

30 ítá (poká-pae) pale-ngé.
   tree cut-STA BE-HAB
   Felled wood/trees exist.

31 ítá (toká-pae) sí-ngi.
   tree chop-STA BE-HAB
   Chopped wood exists.
In each case the stative form (in parentheses) signals that a different referent á is involved, and thus that a different EV is required. Following are non-permitted examples:

30a *Itá poka-pae kate-nge.
   tree cut-STA BE-HAB
   Felled wood/trees exist.

31a *Itá toka-pae kate-nge.
   tree chop-STA BE-HAB
   Chopped wood exists.

If the stative form is optionally deleted, it is recoverable from the EV present in the surface structure:

32 á pale-ngé.
   tree BE-HAB
   Felled wood/trees exist.

In (30) the referent can only be felled trees or wood (á pokápae), not chopped wood or a living tree:

32a *Itá poka-pae kate-nge/si-ngi/etc.
   tree cut-STA BE-HAB /BE-HAB

However, if the EV is deleted, and no stative form is present, the EV which would be recoverable would only be that for the generic á

33 á kate-ngé.
   tree BE-HAB
   Trees exist.

and not that for a felled tree or chopped wood. (34) is a further example for humans and change of existential state, with a male referent

34 Baá anjá kate-ngé-pé?
   he where BE-HAB-PE
   Where is he?

In the sequence (35-36), (36) must show the change of state announced in (35)

35 Mulitáka yúú dokó-nyá akáli mëndé kum-é-á.
   Mulitaka land the-LOC man a die-FP-3SG
   A man has died at Mulitaka.

36 Baá anjá sì-ngi-pi?
   he where BE-HAB-PE
   Where is he? (i.e., the body)
The change of existential state (from living to dead) is clearly reflected in the EV assignment and the change of class of the noun's referent. That it is the existential state (and not a matter of size, etc.) is exemplified by (37) and (38)

37 ítá muú dúpa kate-ngé.
   tree short the BE-HAB
   Short trees exist.

38 Saá andáke dúpa pete-ngé.
   possum large the BE-HAB
   Large possums exist.

Thus individual variabilities, such as tallness, largeness, stupidity, etc., do not affect the EV assignment of these individuals, who are assigned to the generic EV (as culturally regarded by the Enga: i.e., saá 'game mammals' are basically small, but large individual saá may exist still using the EV of the generic (small) saá). On the other hand, change of existential states, such as living, dying, being felled, rotting, etc., do affect the EV assignment of individuals, causing the referent affected or experiencing the change to change its EV class.

In a system like Enga, where the features are based on existence, it would, of course, be expected that a change of existence would be signalled by a change of class; in much the same way as English pronominal reference, based on a natural gender system, can use a 'gelding' rule to predict the assignment of 'it' rather than 'he' to a steer.

2.3 Conclusion

The Enga EV has been described above (2.0 to 2.2); we will now attempt to account for it within the generative transformational framework. Firstly we will briefly discuss the transformational introduction of BE (the EV); and secondly, we will discuss the possibilities for dealing with two problems inherent in the EV, predicate NP, and EV (or gender) conflict resolution.

The fact that the EV is uniquely recoverable from its co-occurring noun (cf. 2.1, 2.2, and examples 29 to 33), and is often omitted in the surface structure (2.2.1 above) leads us to assume that the EV is determined by the features of the noun. The features (2.2.2) and the rules assigning the EV to nouns (2.2.3) have been discussed above.
Following Bach (1967) we have assumed that the EV is introduced transformationally, since this accounts with more elegant simplicity for the facts (than postulating the existence of BE in the deep structure, and its subsequent deletion as necessary).

A non-native speaker who does not know the features which assign EV to the noun classes cannot successfully recover the deleted EV from the surface structure. A fairly common mistake among Enga learners is the incorrect assignment of a deleted EV in a sentence (which of course results in an ungrammatical sentence, and a correction by the Enga speakers). Assuming (as we have), that the features of the noun determine which particular one of the seven EV is to co-occur with a given noun allows us to account for cases of intersection (i.e., overlapping of features), change of class (i.e., by substitution of features), and assignment of loan items to the appropriate EV class. The question then remains, by what mechanism(s) do the noun features allow for the introduction of the EV?

We propose that the EV is optionally introduced by the noun's features, using a convention of 'feature spreading'. Feature spreading has been proposed by Givón (1969, 1970), Mould (1971) and Voeltz (1971) to account for gender conflict resolution in Bantu, Luganda, and Xhosa. Feature spreading in Enga would operate as follows. When the EV is necessary in the surface structure, it would be transformationally introduced at a dummy V node. The features of the noun determine which of the seven EV will appear in the surface (in diagrams to follow, these features will be abbreviated to the first letter of the co-occurring EV), and the feature spreading rule duplicates the features on the dominating NP node. A rule of grammatical agreement then copies the features of the dominating NP node onto the predicate node. Thus we would have

39 Saá dúpa pete-ngé.
    possums the BE-HAB
    Possums exist.

The feature spreading surface realization of petene is accomplished in (39a and b):
In (39a) we have a convention 'feature spreading' which copies the EV features to the dominating NP (39b). In (39c) an agreement rule copies the EV feature of the dominating NP into the predication, where the lexicon permits insertion of the appropriate EV, in the case of (39), petengé.

Feature spreading for an example such as (39) seems rather a round-about way for inserting the appropriate surface EV; however, the postulation of feature spreading also allows us to account for sentences with predicate nouns (which in Enga dominate over the subject noun in determining the surface EV), and to account for conjoined noun phrases, especially those involved in feature conflict (or what has also been called gender conflict) and its resolution. Both of these cases are discussed below, firstly the predicate nouns.

In the case of Enga predicate nouns, these impose their surface EV onto the entire sentence (rather than the subject noun dominating the surface EV of the sentence):

40 Saá dúpa pānga sī-ŋi
possums the pouch BE-HAB
Possums have pouches.

We may also have other predicate noun sentences, such as:

41 Saá dúpa mōkō kate-ngē.
possums the leg BE-HAB
Possums have legs.
42 Saá dúpa móna pale-ngé.
possums the heart BE-HAB
Possums have hearts.

43 Saá dúpa pongó mande-ngé.
possums the penis BE-HAB
Possums have penises.

In each of the above examples, we see that the predicate noun dominates the EV; we cannot have:

41a *Saá dúpa mőkő pete-nge.

For (40) we would have the following feature spreading trees:

40a

40b

40c
In Enga, as in English, we may have sentences like (41-43)

41 Mend diipa kate-ngé.
pig the BE-HAB
Pigs exist.

42 Saá dúpa pete-ngé.
possums the BE-HAB
Possums exist.

43 Kanopáto dúpa sí-nginx.
snakes the BE-HAB
Snakes exist.

In English such sentences may be conjoined to yield (44):

44 Pigs, possums and snakes exist.

However, since in Enga the EV of (44) would be manifested in three different surface forms (i.e., katenge, petengé, and singi), the result of conjoining these three in Enga produces a problem known as 'gender conflict'. We cannot have (44a)

44a *Mena-pi saa-pi kanopato-pi dúpa kate-ngé-pi pete-ngé-pi si-gi-pi.
    pig-CONJ possum-CONJ all the BE-HAB BE-HAB

since in the deep structure there is only one verb BE, which need not be repeated three times in the surface structure. (It isn't in English, either). The problem consists, therefore, in choosing one of the three surface forms of BE. The solution is generally known as gender conflict resolution, i.e., the means whereby certain genders may dominate. In the Enga version of (44), only (44b) is possible

44b Mena-pi kanopáto-pi saa-pi pitaká dúpa kate-ngé.
pig-CONJ reptile-CONJ possum-CONJ all the BE-HAB
Pigs, reptiles and possums exist.

(44c and d) are ungrammatical

44c ?*Mena-pi kanopato-pi saa-pi pitaka dupa pete-ngé.

44d *Mena-pi kanopato-pi saa-pi pitaka dupa si-nginx.

The convention of feature spreading will allow us to postulate the following (simplified) tree for (44b); the rule of agreement needed to produce katengé on the V node is also illustrated in (44e).
The feature conflict (in this case between different EV features) at the highest dominating NP node is resolved in terms of the dominance order of the EV features (i.e., such that the features of one of the EV are most dominant, with the rest scaling down to the seventh or least dominant).  

We must also note that the EV feature spreading is blocked by convention in the case of NPs that are marked LOC, so that (45) is ungrammatical but could be expressed as (46):

45 *Mena-pi saa-pi dupa kaka-sa si-ngi.
   pig-CONJ possum-CONJ the bush-LOC BE-HAB

46 Mena-pí saa-pí dúpa kaká-sa kate-ngé.
   pig-CONJ possum-CONJ the bush-LOC BE-HAB
   Pigs and possums are in the bush.

(46a) is a simplified tree of (46):

In Enga it is possible to resolve the EV conflict (44), but the complete solution of this problem (especially as to which features might be dominant) must be preceded by further checking with informants.
In conclusion, we have accounted for the assignment of the correct co-occurring EV to its nouns, based on the introduction of a dummy V node, to which the noun spreads the feature bundle, and a rule which transfers the noun feature complex into the surface EV position,\(^{21}\) where it would be realized phonologically as the appropriate EV. In the EV this process is optional; as we will see later (4.3), the feature spreading is obligatory in the predications.\(^{22}\)
The terms 'gender' and 'noun class' both refer to the same phenomena, i.e. "classes of nouns which are reflected in the behaviour of associated words" (Hockett 1958:231). Since in Indo-European the 'natural' connotation of 'sex' as being the only criterion determining a gender system, some have preferred to use 'noun classes' (Dixon 1968:105), (Capell 1969), et al. The Americans have taken the other view, and include any and all relevant features in their 'gender' systems: "sex, animateness, size, shape, degree of abstraction, and the like..." (Hockett 1958:231).

The stative form is composed of the verb base plus the completive suffix, plus the stative marker; thus the 'full' form for (8) would be pití-pae. The stative form is of interest mainly because certain noun classes occur only with a co-occurring stative form of a predication: cf. 1.2.1, the 'color words'. There are two exceptions, i.e., nouns which may co-occur with their EV in the stative form:

a. Akáli katá-pae...
   man    BE-STA

b. Énda pití-pae...
   woman BE-STA

Both of these have the meaning of a person who remains in the clan territory: a man who does not live with his mother's or wife's relatives, and a woman who does not marry. I have only these two from my data and am not entirely sure if

c. *Saá   pití-pae...
   possum BE-STA

would be acceptable. In the case of a tree kangaroo kept as a pet (i.e. and confined to a particular tree), it might well be possible.

(11) and (13) are, of course, non-classificatory verbs. See 0.1.


Also in connection with Lyons's idea that existentials and possessives may derive from indefinite locatives, consider the EV of location, sa-, from which derives most likely the locative case of Enga: ee-sá 'garden-LOC', ténge-sa 'near-LOC', etc. Note also the possible formation of the possessive (-nya) from the non-classificatory verb nya- 'get, take'.

Since these two (aénge and daénge) occur in the Laiapo dialect of Enga, it was not possible to do substantial work on them while living among the Kopetesa Enga. Nonetheless, it seems that these are used only with inanimate subjects; additional work is needed.
See Appendix C for additional data on the Enga EV. The entire corpus (approximately 3,000 nouns) is not presented, but instead mainly the generic items.

Men are assigned katengé because they are "active, usually standing, fighting or chopping trees" (informant Frank Iki's statement).

Women are assigned petengé because they "like to sit, and are usually sitting minding the children and infants, cooking, or planting in the garden" (informant Frank Iki).

The means whereby similarity and difference between loan items and native items are adjudged constitutes the major problem here; i.e., which of all possible features are chosen? Cf. Lyons's statement on semantic features, 0.2.1 above.

Since all of the data presented are loan items, the "+" markers are omitted in the Table.

I am doubtful of informants' statements that katengé can be used with moss; I suspect that the informants who so assigned it were referring not to the existential state of moss, but its function as a wig adornment.

Posture and shape are the most general features filtered from the informal informants' statements, but do not appear overtly in Chart 2.1.

One problem which might be involved here for the lexicographer is that of homonymy versus polysemy. I have opted for homonymy. Dr. C. L. Voorhoeve comments that all the ītā in examples (30-31) are, in some sense, 'wood' in a particular state of existence, which is uniquely determinable from the EV in the surface structure, and that there is thus no need to posit homonymy.

R. Lang has pointed out that the crucial case is

\[ \text{d } \text{?}^{*} \text{ītā toká-pae dúpa ḣsa pale-ngē.} \]
\[ \text{tree chop-STA the down BE-HAB} \]
\[ \text{Chopped wood exists.} \]

I have not been able to check this example with a native speaker of Enga.

Since the EV is not present in the surface structure in the majority of cases, the transformational introduction is more economical; the other possibility would be to postulate the presence of BE in the deep structure for every [+concrete] noun with obligatory deletion in most environments.

Luzbetak has stated:

A non-native speaker often finds it difficult to decide whether he should in a given case say mem, tem or pam. All three verbs mean more or less the same, sc., 'he, she, it is'. However, the three words may not be used indiscriminately (Luzbetak 1954:159).
We will not go into the conditions under which the transformational introduction of the copula would occur here.

In the examples to follow, the root is introduced with the habitual in order to simplify the diagrams, so that the rules to be illustrated will not be obscured by complications unnecessary to their illustration.

The complete investigation of this problem (i.e., as to which features dominate and under which conditions) remains for later analysis.

The account of feature spreading here is based on Voeltz 1971. However, Voeltz fails to account for what is here needed, viz., reverse feature spreading to move the features down the VP node to the dummy node.

I very much appreciated the comments and discussion from Professor George Grace's reading of a much earlier draft of this chapter; they have substantially contributed to the present version.
Chapter Three

3.0 The Animate Nouns

The major focus of the present study is upon the Enga classificatory verbs and the features of the co-occurring nouns which determine the surface representation of the verbs. In the preceding chapter on the EV we have described some of the features of the referents which determine the EV assignment. Since the EV co-occur with concrete nouns, the present chapter will describe the semantic features of one sub-set of Enga nouns, the animates. The description of the semantic features of the animate nouns also allows us to compare and contrast the features of this sub-set of concrete nouns and those given for the EV (in 2.2.2).

In this chapter we will discuss
- 3.1 Semantic Features
- 3.2 Semantic Redundancy Rules
- 3.3 Loan Items
- 3.4 Change of Class
- 3.5 Comparison of the Semantic Features of Enga Animate Nouns with those of the EV

The nouns chosen may not be a complete listing of all Enga animate terms, but are certainly representative of the primary taxa of this semantic domain. Especial note should be made that all of the items listed (both in Table 2.1 and Diagram 2.2) are considered by the Enga to be animate, i.e., ghosts, demons, fire and water, the sun, moon, stars, and the sky people are all [+animate] to the Enga. The items to be investigated are presented in Table 3.1 below.

<table>
<thead>
<tr>
<th>#</th>
<th>Noun</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>nikí</td>
<td>'sun'</td>
</tr>
<tr>
<td>2</td>
<td>kaná</td>
<td>'moon'</td>
</tr>
<tr>
<td>3</td>
<td>búí</td>
<td>'stars'</td>
</tr>
<tr>
<td>4</td>
<td>yályakali</td>
<td>'sky people'</td>
</tr>
<tr>
<td>5</td>
<td>itáte</td>
<td>'fire'</td>
</tr>
<tr>
<td>6</td>
<td>endákí</td>
<td>'water, river/stream'</td>
</tr>
<tr>
<td>7</td>
<td>ímú</td>
<td>'worm, maggot'</td>
</tr>
<tr>
<td>8</td>
<td>néne</td>
<td>'insects, Arthropoda'</td>
</tr>
<tr>
<td>9</td>
<td>wapáká</td>
<td>'eels'</td>
</tr>
</tbody>
</table>
10 mônge 'frogs, toads'
11 kanopáto 'reptiles'
12 yáka 'birds'
13 saá 'game mammals'
14 yódi '(domestic) rodents'
15 mená 'pig'
16 yána 'dog'
17 tindfo 'bats'
18 láima 'cassowary'
19 putútuli 'demons'
20 yú endángi 'pond woman'
21 timángo 'ghosts'
22 endakáli 'humans, people'

3.1 Semantic Features

Semantic features of the animates are of two types, overt and covert. The overt features are presented in Diagram 3.2 and form the basis of the semantic redundancy rules to be discussed in 3.2 following. The overt features will be briefly discussed in 3.1.1 and the covert features will be discussed in 3.1.2.

3.1.1 Overt Features

In Enga we find two major kinds of overt features:

(i) morphological features and
(ii) habitat features.

The morphological features are 'leafy', 'eyed', 'bony', 'winged' and 'eared'. Features of habitat are 'heavenly', 'stone dwelling', 'subterranean', 'forest dwelling', 'aquatic' and 'pond dwelling'. There are also various other features which include 'capable of dying', 'volition', 'intelligence', 'human-like', 'domesticated', 'barnivore', and 'originating people'.

3.1.2 Covert Features

The discovery of the covert features, parenthood and brotherhood, occurred spontaneously when informants would volunteer that some particular terminal taxa item was considered to be the 'father' of the entire group, or that two primary taxa were 'brothers'. The items with covert features are presented in Chart 3.3.
Diagram 3.2: THE ENGA ANIMATES

1. animate --- artifacts
   +
2. heavenly --- leafy --- volition --- fire, water
   +
3. originating plants
   +
4. people --- sun, moon
   +
5. sky people

6. eyes --- worms
   +
7. bones --- Arthropoda
   +
8. hair --- aquatic --- tail --- frog
   +
9. fish
   +
10. reptiles
11. intelligence --- wings --- forest dwelling --- domesticated --- rats
    +
12. birds
    +
13. game mammals
    +
14. carnivore --- pig
    +
15. dog
16. human --- ears --- cassowary
    +
17. bat
    +
18. stone-dwelling --- pond-dwelling --- subterranean --- humans
    +
19. demons
    +
20. spirit woman
    +
21. ghosts
<table>
<thead>
<tr>
<th>Item (English gloss)</th>
<th>'Brothers'</th>
<th>'Parents'</th>
</tr>
</thead>
<tbody>
<tr>
<td>yúi (domestic rodents)</td>
<td>póko (non-domestic rodents), saá (game mammals)</td>
<td>tekéa (echidna), komáipu (tree kangaroo)</td>
</tr>
<tr>
<td>saá (game mammals)</td>
<td>yúi (rodents), tindíó (bats)</td>
<td>déké (very large bat)</td>
</tr>
<tr>
<td>tindíó (bats)</td>
<td>saá (game mammals)</td>
<td>bulumakáo (cow)</td>
</tr>
<tr>
<td>yána (dog)</td>
<td>pendé (wild dog)</td>
<td>nikí (sun), kaná (moon)</td>
</tr>
<tr>
<td>mená (pig)</td>
<td>kápuá (wild pigs)</td>
<td>nikí (sun), kaná (moon)</td>
</tr>
<tr>
<td>endakáli (humans)</td>
<td>kéwá (wild cannibals)</td>
<td>endakáli (humans)</td>
</tr>
<tr>
<td>yályakali (sky people)</td>
<td>putútuli (demons)</td>
<td></td>
</tr>
<tr>
<td>timángo (ghosts)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>yuú endángi (pond woman)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ímu (worm, maggot)</td>
<td></td>
<td>kolí, ilioli (large worms)</td>
</tr>
<tr>
<td>wapáká (eels)</td>
<td></td>
<td>amané (large fish)</td>
</tr>
<tr>
<td>móngé (frogs)</td>
<td></td>
<td>akiwane (large frog)</td>
</tr>
<tr>
<td>kanopató (reptiles)</td>
<td></td>
<td>motopoi (tree frog)</td>
</tr>
<tr>
<td>yáka (birds)</td>
<td></td>
<td>láima (cassowary), kámbi (hawk)</td>
</tr>
<tr>
<td>néne (Arthropoda)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>láima (cassowary)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>putútuli (demons)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The covert feature of fatherhood is based upon qualities of size (and possibly also power and authority), but habitat also affects the choice of the 'father' of the taxon. In each case, the father named is the largest of all members of the set. In two cases, two fathers are given, each of which occupies a particular habitat: the fathers of the saá 'game mammals' are the terrestrial tekéa 'echidna' and the arboreal komáipu 'tree kangaroo'; for the yáka 'birds' we have the terrestrial láima 'cassowary' and the kámbi 'hawk, eagle'.

Of all the primary taxa only endakáli 'humans' and vályakáli 'sky people' share parents: the nikí 'sun' as father and the kaná 'moon' as mother. A further fact worth noting is that the sky people are also the only human-like animates that are not cannibals (endakáli nánenge); timángo 'ghosts', yúu endángi 'pond woman' and the putátuli 'demons', all kill and eat humans when possible.

The second covert category, 'brotherhood', is defined on the basis of at least two criteria, i) domesticity, and ii) morphological similarity. Domestic animates are given the wild counterpart as 'brothers', as wild dogs and bush pigs are given for tame/domesticated dogs and pigs. The yúu endángi 'pond woman' is a sister of énda kiningi 'real (i.e. human) women'. Humans' brothers are the kéwá 'foreigners' who live at the fringes of the Enga area and are thought to be cannibals (dápame náima nengé 'they eat us').

Morphologically similar items are also considered to be brothers: yúi 'rats', tindío 'bats', and saá 'game mammals' are all brothers and share the features of similar fur, legs and ears. Bats differ from the game mammals in having intelligence, having wings, and a small tail (or no tail), while both the saá 'game mammals' and yúi 'rodents' are tailed. Rodents are a restricted food item, eaten only by women and possibly young boys, but never by men; game mammals are unrestricted. Rodents are described as being saá yángó 'of the same patriline as game mammals' and awápá petengé 'living together' (i.e. as friends). The amiá 'native marsupial cat' is exceptional among the game mammals, since it is carnivorous and for this reason is said to be yána-injépa 'dog-like' or even a brother of the dog.
3.2 Redundancy Rules

The rules presented in diagram 3.2 are here presented as an ordered set. The ordering is such that, between two rules, the one with broader scope is to have prior application (i.e., in order to prevent individual enumeration of features if it were instead applied later). The rules and items will be presented with English glosses only.

1. [+capable of dying] —► [+heavenly]
2. [+heavenly] —► [+originating people]
3. [+originating people] —► 'sky people'
4. [-originating people] —► 'sun', 'moon', 'stars'
5. [+heavenly] —► [+leafy]
6. [+leafy] —► 'plants'
7. [-leafy] —► [+volition]
8. [-volition] —► 'fire', 'water'
9. [+volition] —► [+eyed]
10. [-eyed] —► 'worms'
11. [+eyed] —► [+bony]
12. [-bony] —► 'insects'
13. [+bony] —► [+hair/fur]
14. [+hair/fur] —► [+aquatic]
15. [+aquatic] —► 'eels'
16. [-aquatic] —► [+tail]
17. [-tail] —► 'frogs'
18. [+tail] —► 'reptiles'
19. [+hair/fur] —► [+intelligence]
20. [-intelligence] —► [+wings]
21. [+wings] —► 'birds'
22. [-wings] —► [+forest dwelling]
23. [+forest dwelling] —► 'game mammals'
24. [-forest dwelling] —► [+domesticated]
25. [-domesticated] —► 'rodents'
26. [+domesticated] —► [+carnivore]
27. [+carnivore] —► 'dogs'
28. [-carnivore] —► 'pigs'
29. [+intelligence] —► [+human-like]
30. [-human-like] —► [+eared]
31. [+eared] —► 'bats'
32. [-eared] —► 'cassowaries'
It should be noted that the basic assumption here is that we are dealing with a closed set (the animates), and both the features and rules are determined in terms of contrast within that (closed) set. Furthermore it is assumed that any terminal item includes all directly preceding nodes, so that 'birds' include the nodes (and features):

\[+\text{wings}, -\text{intelligence}, +\text{hair/fur}, +\text{bones}, +\text{eyed}, +\text{volition}, -\text{leafy}, -\text{heavenly}, +\text{capable of dying}, +\text{concrete}, \ldots\]

However, the inclusion of preceding nodes does not exclude the application of other features as well to 'birds', i.e., it makes no comment as to habitat, so that at a lower level (not discussed here), various birds may be \(+\text{arboreal}\), or \(+\text{terrestrial}\), or \(+\text{aquatic}\), or \(+\text{cave dwelling}\), or whatever.

The main advantage of the redundancy rules is that they filter out predictable semantic features: the lexical entry for 'bird' need include only the semantic features \(+\text{capable of dying}\) (or \(+\text{volition}\)) and \(+\text{wings}\). The redundancy rules allow for the insertion of the predictable features whenever these are desired. Furthermore, additional simplification is possible when it is considered that the term 'bird' is the generic term for approximately 200 bird types, so that entries for these can refer directly to the generic term.

Several points of interest in the redundancy rules remain to be discussed. One of these is that the items following node 16 \((+\text{human-like})\) form the unordered portion of the rules: the four items may be randomly ordered ('demon', 'pond woman', 'ghosts', and 'humans'); with the exclusion of the rule for any of the first three, endakáli would be marked \(+\text{yuú aê katengé} \text{ 'terrestrial'}\). The reason that the random ordering is possible is that these four items are at the same level of the taxonomy and the distinguishing feature, habitat, can be applied randomly.
3.3 Loan Items

The loan items presented below are from Neo-Melanesian Pidgin or English and denote phenomena of Western European origin with which the Enga were not familiar in the pre-contact period. The items and their main feature(s) are given below, followed by the Enga assignment to classes.

1. +satāne 'Satan' [+subterranean..] → 'ghosts'
2. +pusii 'cat' [+forest dwelling..] → 'game mammal'
3. +bulumakāo 'cow' [-carnivore..] → 'pig'
4. +palili 'chicken' [+winged..] → 'bird'
5. +pisa 'fish' [+aquatic..] → 'eels'

In all cases the reason for assignment is, on comparison with the semantic rules, apparent. +Satāne is an interesting case, since here the Enga assign Satan to the same class as ghosts (rather than demons). Enga demons are in-human/un-human, while ghosts are merely dead humans; thus, the many human-like features attributed to Satan, plus the subterranean habitat, would cause the Enga to establish an equivalence between Satan and Enga ghosts.

Enga do not keep cats as pets, instead they roam freely in the bush and forests, which accounts for the assignment of +pusii to the 'game mammal' class. Notable is the fact that all game mammals are edible and are non-restricted for consumption by men; cats also are both edible and non-restricted, just like saá.

The chicken would be assigned by the rules to the 'birds' class, and this is also how it is classified by the Enga. The introduced carp are assigned to the eels class by the rules, and also by the Enga. Cattle are not only assigned to the 'pigs' class, they are also considered to be the 'father' of this class (cf. Chart 3.3 above). Pigs have long been a staple item in exchanges, marriage payments, and death and homicide restitutions (cf. 1.1 above). In 1969 it was reported that cattle were soon likely to be similarly exchanged in the téé ceremonies featured by the Mae and Laiapo Enga. An additional test was provided when we presented Enga informants with photographs of some more exotic animals. Bears were immediately identified (on the basis of morphological features only, i.e., the Enga did not question as to habitat, etc.)
as saá 'game mammals'. We could predict that Enga would soon classify these as the father of the game mammals on the basis of size. Photographs of other quadrupeds (giraffe, antelope, etc.) brought forth queries to us as to 'what kind of things are those?', with more sophisticated Enga who might have seen the Mt. Hagen Show asking if they were +ōsa 'horses'.

The final example in the case of loan items is that of the +mangīi 'monkey': the Enga had always exhibited a strong interest in what kind of animal this might be. We obtained a colored photograph of a chimpanzee dressed in a vest, tie, straw hat, and smoking a cigar; the immediate response was terrific: "what kind of a human is that?" (endakāli aipālepe?)

In the discussion that followed among the Enga, the following features were noted: that this 'human' was wearing clothes, that it was wearing a hat (which led to the assumption that it was a man, akāli, rather than a woman), and that it was smoking. These are all clearly human activities, and as final proof, the Enga questioned us on other relevant points: was he married and what did his wife look like? Did he build houses, and what kind? Did he plant gardens and eat cooked food/sweet potato? Thus, it would seem that humans are actually contrasted to all other animates on the basis of social and cultural activities, rather than gross morphological features.16

3.4 Change of Class

This phenomenon has been discussed in 0.2.3.3 above; presented here are some cases from informants in which animate nouns change class. The interesting point is that the animates which do change class generally change into 'brothers' or the most closely related animate; large jumps from one level of the taxonomy to another, i.e., from insect to birds say, are not made. For example, the game mammals which were always climbing up and down trees to reach their tree nests got tired of this activity, so they grew wings and became bats. (The game mammals and the bats are brothers, cf. Chart 3.3). Smaller rats may grow up into the larger game mammals (and these two are also brothers).
Another case is that of a particular kind of green lizard who was drinking water near a stream and the stones cut off its tail, causing it to become a particular kind of green frog (cf. node 10 of Diagram 3.2). One belief is that water 'makes things grow', and may cause metamorphosis: worms living in very wet soil or water are likely to become snakes. Children are warned that they shouldn't leave their feet in water too long, as they may become frogs.

The few examples suggest that certain items are related to one another by rules which change segments of features or add new features, e.g., we can propose the following to occur:

6 lizard [-tail] $\rightarrow$ frog
7 worms [+wet,+larger] $\rightarrow$ snakes
8 rat [+larger] $\rightarrow$ game mammal
9 game mammal [+wings] $\rightarrow$ bat

These (6-9) confirm the validity of some of the features and rules postulated above.

3.5 Comparison of Features

The features of the animate nouns (3.1) contain two kinds of features comparable to those given (2.2.2) for the EV; these two kinds of features are habitat and size. The occurrence of cross-classification (0.2.2) among the items (i.e. animate nouns and EV features) is also briefly discussed.

Habitats (among the animate nouns) are also mutually exclusive among the EV, since palengé (subterranean), katengé (heavenly), and singi (aquatic) denote mutually exclusive places of existence. An example of this is presented in the case of the birds, which show a tri-partite division based on place of existence (or habitat): flighted birds (arboreal) use the EV petengé, aquatic birds use the EV singi, and terrestrial cassowaries use the EV katengé.

The second feature, size (or potential harmfulness) is exemplified among the animate by the covert feature of 'parenthood': the largest animate of the group is designated the 'father', e.g., the tree python being considered the 'father' of all the reptiles. Groups of animals which have two or more 'fathers' differentiate these on the basis of habitat, again emphasizing the importance of habitat: birds have the eagle or hawk as the arboreal 'father', and the
cassowary as the terrestrial 'father'; the spiny anteater (terrestrial) shares the 'fatherhood' of the game mammals with the tree kangaroo, the largest of the arboreal game mammals (cf. Chart 3.3 for additional examples).

One major point about size is that this is obviously relative, and the next question to be considered would be, "to the Enga, what size is large, potentially harmful, etc.?" From the observation that the pig, dog, and cassowary are the animates sharing the EV class katengé (i.e., large) with men, it would seem that animals of dog-size or larger are potentially harmful and regarded by the Enga as such. When called upon to classify various exotic (i.e., Taronga Zoo) animals, one informant flatly stated: 'Large animals will take katengé, small animals will take petengé.'

Of the two features (size or habitat) used in both animate and EV classes, it is extremely difficult to determine which is higher ranking. Firstly, all potentially harmful animates among the Enga are both terrestrial and large (in Enga terms). The only conclusion for determining the importance of some particular semantic feature is that those items most important in the culture may be arbitrarily classed into what might be regarded (by an outsider) as an 'inappropriate' class. Dixon makes a similar statement when formulating rules for noun class membership in Dyirbal:

(1) If some noun has characteristic X (on the basis of which its class membership would be expected to be decided) but is, through belief or myth, connected with characteristic Y, then generally it will belong to the class corresponding to Y and not that corresponding to X.

(2) If a subset of nouns has some particular important property that the rest of the set do not have, then the members of the subset may be assigned to a different class from the rest of the set, to 'mark' this property; the important property is most often 'harmfulness' (1968:20).

Dixon applies these two rules in the explanation of the noun classes in Dyirbal, and notes additionally...

...that the semantic basis of class membership in Dyirbal can only be explained in terms of an intimate knowledge of the beliefs, myths and habits of the people, knowledge that is presumably not normally available concerning the ancestor language (1968:123)
and further that

it seems likely that some [class memberships] are WITHOUT EXPLANATION (as would be the case in any natural language): some may have had an explanation in terms of an earlier stage of the language, but the class assignment has been retained and the explanation lost as the language has altered (1968:122).

Another point of interest in the comparison of features of EV and animates, is the occurrence of cross-classification among the items. Among the animate nouns (Diagram 3.2), the quadrupeds form a sub-group [-winged], yet the EV usage divided this group in two, with the yâi 'rodents', and saá 'game mammals' using petengé, and the mená 'pig' and yána 'dog' using katengé. This also occurs among the plants, which are divided in the taxonomy into two main groups, hollow and solid-stemmed [+káita singi]. The tânu 'grasses' and sambář 'canes' are in contrast to the itá 'trees', akaípu 'Cordyline', and ánga 'pandanus': yet all of these are classed by EV usage as tall, upright -- katengé. This is also true among the cultivated plants, which form a group in the taxonomy as 'gardened' plants, yet use different EV: mapá 'sweet potato' uses palengé, lyáá 'sugar cane' uses katengé, and áwa 'leafy green cultigen' uses singi. In the taxonomy the focus is on the function, or morphology of the plants, and in the EV usage the focus is on the shape/posture of the plant. Thus, the conclusion is that clearly in differing situations (i.e. taxonomy versus noun classes), the Enga focus on different features, which results in the cross-classifications mentioned above.
Notes: Chapter Three

1 It is also true that [+concrete] nouns are more readily researchable than, for example, [+inner state] or abstract nouns.

2 On return to Canberra, identification of all the primary taxa (and many of the terminal taxa) was made with the assistance of Dr. J. Hope, Department of Prehistory, the ANU, using only the folk definitions. Future work would include additional research in this area, and complete identification (preferably in the field) by a zoologist.

3 The contrast here is between the primary taxa or generic terms, such as dog (Canus sp.) and terminal taxa, such as Labrador, Doberman, poodle, etc. Intermediate taxa are such as terriers, hounds, retrievers, etc.

4 Saá 'game mammals' includes tree rats (which may be eaten); yūi 'rodents' are the domestic rats (which are eaten only by women).

5 Láima 'cassowary' is a member (the takâne 'father') of the birds, (cf. Capell 1948:368 yáka láima), but also holds a very special place in the Enga culture (along with bats), since these two are the only animates considered to have intelligence. Cf. Bulmer 1967 on the Karam beliefs regarding the cassowary. Other Highlanders also have such beliefs: Lyle Steadman reports (personal communication) that the Hewa believe male cassowaries to be female (since the males sit on the eggs), and the female cassowaries to be male. Cf. also note 11.

6 [+Aquatic] and [+pond dwelling] are in fact two different features, since aquatic in this case [+endakīnyâ singi] is wholly water dwelling (i.e., not at all capable of terrestrial life), while pond dwelling [+endâki petê petengé] in this case implies that the animate is capable of terrestrial life, but lives near water and perhaps returns there periodically; thus the contrast is between an amphibian-type existence and a wholly-aquatic one.

7 Meggitt (1965) gives the Enga origin myth:

The Mae believe that long ago the land was uninhabited. The only quasi-human beings then living were the sun and moon, 'the father and mother of us all'. Eventually they had many children, 'the causal or originating people', who reside in the sky in conditions similar to those on earth. These sky dwellers...in turn have had many descendants, who, although pale-skinned, resemble Enga; they are organized into partilineal descent groups and they marry, feud, grow crops, raise pigs, pay death compensations and so on. After a time the sky beings colonized the earth...The terrestrial society is thought to be isomorphic with the celestial society of the causal people (107f.).
While the sky people are considered by the Enga to be either disinterested or possibly benevolent, the ghosts, demons, and pond woman are all actively malevolent.

These kéwá are the Hewa, not the language group known as the Kewa.

Both bats and cassowaries occupy a special place in the taxonomy; bats are believed to be harbingers of death, and bring the omens of impending disaster (earthquake or landslide) sent by the timángo 'ghosts'. Since the bats hear and understand the ghosts' language/omen and bring this to the Enga, they are considered to be intelligent. Cf. also note 5.

Would this awápá petengé 'living together' in fact imply also that neither eats the other, since to do so would constitute game mammal cannibalism? Cf. that the native cat is considered to be a brother of the dog, since it is carnivorous.

The semantic 'gaps' on chart 3.3 (items which lack a 'brother' or a 'father') would most likely be filled by additional elicitation. These may be either 'occurring' or 'possible but non-occurring' items (as contrasted to 'impossible' items. Cf.0.2.2, and Chomsky 1965:170 on 'accidental semantic gaps'.

Humans' parents are the sky people (directly) and the sun and the moon (indirectly). Cf. note 7 above on the Enga origin myth.

The only example given of 'motherhood' is ípa/endáki which is given for the wapáká 'eels'. The explanation given was that since wapáká are completely aquatic and their only food is water, that water was their 'mother'.

When ordering the rules (based mainly upon criteria of formal simplicity), one other major possibility of an ordering form does present itself. In Enga folk classification the feature [+tailed] appears frequently as a distinguishing marker: the presence or absence of a tail, the kind of tail, whether it is all skin, furry, tufted, etc., all are relevant. Cf. 3.4, in which lizards lose their tails become frogs; i.e., node 10 of Diagram 3.2). (This is in contrast to the non-chalance with which reproductive methods of various animates are regarded: they are not used for classification similar to our egg-laying, amphibian, marsupial and placental mammals). One of the questions asked of the chimpanzee was does he have a tail? Tails appear in the rules once (node 10: lizards and frogs). This could lead to some speculation as to the possibility of ordering the feature [+tailed] into a higher node of the tree.

Embarking briefly on this train of thought, we could postulate introducing the feature [+tailed] at Node 8. Under these conditions, the following revised tree would result:
There are at least three difficulties in this ordering. The first is that [hairy] clearly IS applied twice giving more than a suspicion of cross-classification (cf. 0.2.2) or incorrect ordering of the features/rules; this is contrasted to the prior ordering, in which the 'tailed' features differed in [hairy] (cf. Diagram 2.2, nodes 10 and 15). The second difficulty is that not only is [hairy] applied twice, the distinction which the previous ordering of that rule made, (i.e., that of the skinned or non-hairy animates as a sub-set of the animate group), has been completely obliterated. The final difficulty is that the new ordering has also lost the distinction made by the Enga in regards to the cassowaries and bats, i.e., that these animates are considered to be [+intelligent] while all other animates are not so considered. In view of these difficulties, the previous ordering was preferred (i.e., that of Diagram 3.2).

This problem is that of the selection of features from the possible universe of features. One of the major assumptions in ethnoscience is that of the contrast set: "a class of mutually exclusive segregates which occur in the same culturally relevant environment...these segregates 'share at least one defining feature' ...i.e., that which characterizes the environment in which they occur... The domain of the set is the total range of meanings of its segregates" (Sturtevant 1964:107). This leads once again to the problem of discovery, as to how one determines the culturally significant sets and their included units. In the Enga comparison of two terminal items, the feature noted should be the highest mutual node: i.e., in the contrast between birds and eels, the noted feature should be that eels are hairless; as far as I can determine, it is just as likely to be that the informant reports that birds have wings, that eels are aquatic, etc.
Dr. Andrew Strathern (personal communication) reports that the Melpa of Mt. Hagen classify monkeys as game mammals; it is probable that Enga, on seeing small arboreal monkeys in a zoo, might well, too.

A point of interest is the comparison of the animate nouns' features with those of another language. Mathiot (1962) divided Papago folk taxonomy into plants and living things, with a further sub-division of living things into people, birds and animals. Pilcher (1967) also worked with Papago and his work is comparable to the one presented here for Enga on yet another point, since it was based on the folk definition technique first used by Casagrande and Hale (1966) in Papago. "My own research was oriented toward the examination of the folk taxonomy of the Papago by means of semantic components derived from 'folk definitions'...This approach was much influenced by Conklin's call for lexicographical treatments of folk taxonomies (1962), and by the work of Casagrande and Hale (1967)" (Pilcher 1967:204). Pilcher extracted the features from the definitions that had been obtained for the named taxa, and these are:

1 ...(which think)
2 ...(which are afraid of people, fearful things)
3 ...(which are domestic animals)
4 ...(which fly)
5 ...(which are thorny)

These features (or semantic components) also occur in Enga, where we have such features as [+intelligent], [+winged], the covert feature of brotherhood, based on the distinction between wild and domestic animals, and the feature [+thorny] (which applies in both Enga and Papago to plants, although the spiney anteater is said to have 'thorny fur' (íti néngenéné katápæ 'spines')). Thus, of the five features Pilcher uses in Papago, all five are found in Enga.
4.0 Predications

We have now discussed one type of classificatory verb in Enga, the EV (2.0) which co-occurs with the [+concrete] nouns, and a sub-set of nouns (the animates) which co-occur with the EV. This chapter will deal with the second type of Enga classificatory verbs, the predications.

The form of the predications is an adjunct (usually a noun) with a specific meaning, which co-occurs with a pro-verb which has a more general meaning. With very few exceptions, the pro-verbs of the predications are in complementary distribution with the EV in relation to the types of co-occurring nouns, viz., the pro-verbs of the predications co-occur only with [-concrete] nouns (or adjuncts).

This chapter will deal firstly with the form and syntactic properties of predications, and secondly with their semantics. A brief discussion of the problems arising from attempts to account for the predications in a generative transformational framework will conclude the chapter.

4.1 Syntactic Properties

This section first presents some of the syntactic properties of the predications, secondly, the discussion of the kinds of adjuncts and modifications which are permitted in the predications, and thirdly, a description of the verbs which co-occur in the predications. The section concludes with a description of one of the problem areas, the [+inner state] group of adjuncts.

In predications the co-occurring adjunct may not be deleted without alteration of the meaning:

1. Baa-mé weé le-ly-á-mo.
   he-AG song utter-PRES-3SG-AUG
   He is singing (a song).

2. Baa-mé le-ly-á-mo.
   he-AG utter-PRES-3SG-AUG
   He is uttering (something). (NOT: He is singing).

When predications are used in modalities, the appropriate co-occurring verb (and no other) must also appear; in the case of kaláí pingí 'work, do work', we cannot have *kálai pingí (or any other verb):
3 Baa-mé kalái pyá-a pe-ly-á-mo.
he-AG work do-INF go-PRES-3SG-AUG
He is going in order to work.

3a *Baa-me kalai pya-la pe-ly-a-mo
hit-INF

4 Baa-mé kalái pyá-a-nya masi-ly-á-mo.
he-AG work do-INF-GEN think-PRES-3SG-AUG
He wants to work.

4a *Baa-me kalai pya-la-nya masi-ly-á-mo
hit-INF-GEN

The same holds true for other cases of complementation:

5 Baa-mé kalái pyó-o etá-pa-la ipá-t-á.
he-AG work do-O finish-COMP-INF come-FUT-3SG
When the work is finished, he will return.

5a *Baa-me kalai pya-o eta-pa-la ipa-t-a.
hit-O

6 Baa-mé kalái pyó-o andá-ka ka-ly-á-mo.
he-AG work do-O house-LOC BE-PRES-3SG-AUG
He is at home working.

6a *Baa-me kalai pya-o anda-ka ka-ly-a-mo.
hit-O

4.1.1 Lengé 'utter'

Some of the adjuncts which may co-occur with the verb lengé 'utter' to form predications are presented here grouped by semantic domains. The domains are indicated as subheadings in terms of the semantic features of the domain.

[+utter a (characteristic) sound]
'speak' pií 'speech,talk'

This is to be read as: pií lengé consists of the adjunct pií 'speech, talk' and the pro-verb lengé 'utter'; adjunct and pro-verb together mean 'to speak'. The entries to follow are to be read in the same manner.

'sing' weé 'song'
'call out' wií 'call'
'grunt' gaá 'grunt'
'explode' tôkó 'banging sound'
'bark(of dogs)' úa 'bark'
'knock,creak' jáa 'knock,creak'
'squeal(of pigs)' kaé 'squeal'
'chirp(of birds)' taé 'chirp'
'lie' sambó 'false, untrue'
'tell truth'  kíni  'true, genuine'
'disapprove'  bízá  'noise of disapproval: 'tsk''

[+inner state]
'be weak'  tambó  'soft, flacid, tame'
'pain sear-
ingly'  tíí  'sharp'
'be wet'  tómbe  'wet'
'be strong'  púpú  'strong, powerful'
'be faint, dizzy'  leóámbe  'faint, dizzy'

[+play games]
'play with'  kupí  'tree name'
'tree fruit'  dií  'seed'
'play a flute'  pulupólé  'flute'
'play a flute'  alaiyóle  'flute'
'play sledding'  súú  'sled'
'dance'  mále  'dance': stand in place and bend knees

[+cut/break]
'cut in two'  lépo  'two' (cf. lá pó 'two')
'break'  popó  (?)
'break off'  loó  'pieces'

[+motion, activity]
'bend sideways'  kuií  'bend sideways'
'pull, skin'  lyóó  'pull'
'bend'  táka  'bend'
'release water from dam'  táó  'damned' (?)

Pidgin Loan Items

'vote'  +bósa  'vote'
'play cards'  +kásá  'cards'
'litigate'  +kósa  'court'
'win, beat'  +wini/wini mí  'win'
'attend school'  +sukúlu  'school'
'go on patrol'  +pasatóle  'patrol'
'be full'  +pulapú  'full up'
'change'  +sanísa  'change'

Examples representative of the semantic domains listed are:
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7 Akáli dúpa-me wií le-ly-amí-no. 
man the-AG call utter-PRES-3PL-AUG 
The men are calling out.

8 Akáli dóko leoámbe lá-l-u-mu. 
man the faint utter-PRES=3SG-SENSE 
The man is fainting.

9 Akáli dúpa-me mále le-ly-amí-no. 
man the-AG dance utter-PRES-3PL-AUG 
The men are dancing.

10 Akáli dúpa-me mená loó le-ly-amí-no. 
man the-AG pig pieces utter-PRES-3PL-AUG 
The men are breaking off pig pieces.

11 Akáli dúpa-me kása le-ly-amí-no. 
man the-AG cards utter-PRES-3PL-AUG 
The men are playing cards/gambling.

4.1.2 Adjuncts

Examination of the kinds of nouns which may occur in predications reveals that these are limited, and that certain types of nouns do not occur in the predications. Presented below are firstly, those nouns which may occur in predications, and secondly, those which do not. A brief discussion of the significance of these facts follows the examples. The adjuncts are presented by semantic domains.

Inner State Domain:

12 Náima ímbu kae-ly-ama-nó. 
we anger be-PRES-1PL-AUG 
We are angry.

13 Namba-nyá mókó dóko tándá py-ú-mu. 
I-POSS leg the pain do-PRES=3SG-SENSE 
My leg is paining/hurting.

14 Nambá móna kólá py-ú-mu. 
I heart heavy do-PRES=3SG-SENSE 
I am sad (\'my heart is heavy\').

Event Domain:

15 Namba-mé émba-kisá yánu pi-ly-o. 
I-AG you-ON debt hit-PRES-1SG 
I am repaying you.

16 Kamángo dokó-mé mená dúpa itákí pi-ly-á-mó. 
big-man the-AG pig the count hit-PRES-3SG-AUG 
The big man is counting the pigs.

17 Pepé kéléya kéléya pi-ly-a-mó. 
Pepe slip slip do-PRES-3SG-AUG 
Pepe is slipping.
Quality Domain:

18  Akáli dokó-mé koó pi-ly-a-mó.
    man the-AG bad do-PRES-3SG-AUG
    The man is doing wrong.

19  Akáli dokó-mé nongó pi-ly-a-mó.
    man the-AG clumsy do-PRES-3SG-AUG
    The man is clumsy.

20  Yokó dúpa sáká pí-pae
    leaves the green do-STA
    Leaves are green.

21  Akaípu kalyá taiyóko pí-pae mándé.
    cordyline kalya red do-STA a
    'Kalya' is a red cordyline.

Time Domain:

22  Indúpa páina pi-ly-a-mó.
    now dry do-PRES-3SG-AUG
    Now it's the dry season.

23  Indúpa kaná báta pi-ly-a-mó.
    now moon full do-PRES-3SG-AUG
    Now it's full moon (i.e. a good time for possum hunting).

Some of the kinds of nouns which may not appear in the
predications are:

Locatives/Directionals

24  *Akali doko-me tenge-sa pi-ly-a-mo.
    man the-AG near-LOC do-PRES-3SG-AUG

25  *Akali doko-me alya pi-ly-a-mo.
    near-up

Proper Nouns

26  *Akali doko-me Tumu pi-ly-a-mo.
    Tumu

Kinship Nouns

27  *Akali doko-me takange pi-ly-a-mo.
    father

Body Parts

28  *Akali doko-me moko pi-ly-a-mo.
    leg

Concrete Nouns

29  *Akali doko-me mena pi-ly-a-mo.
    pig
As noted above (2.1), the EV co-occur only with [+concrete] nouns; as demonstrated here [+concrete] nouns (here exemplified by the Concrete, Proper, Kinship, and Body Parts) may not co-occur with verbs to form predications. Instead, the adjuncts occurring in the predications are [-concrete], as best exemplified by what is most likely the largest or most frequently co-occurring adjuncts, the Inner State and Event Adjuncts. It is clear that the EV classify Enga [+concrete] nouns into seven classes; it also seems highly likely that the verbs used in the predications (of which there is also a limited number, cf. 4.1.3 below) are also used to classify the co-occurring adjuncts, which in the first place, may be only [-concrete].

4.1.3 Modification of Adjuncts

Some possibilities for the modification of adjuncts are exemplified and discussed in this section. This is to show that the predications are not complex lexical entries (i.e. idioms). The types of modifications are limited, however; the complete range of possible modifications will not be discussed here. Instead 1) determiners, 2) adverbs, 3) adjectives, and 4) locative phrases will be presented since these illustrate the problem without undue complications. Of the possible verbs which may occur in predications, we will use pingi 'do, make' [+activity] as an example. The predicative constant to be modified will be

30 Baa-mé kaláí pi-ly-a-mó.
he-AG work a do-PRES-3SG-AUG
He is doing some work.

In the cases of modification with pingi as the co-occurring verb in the predication, note that time adverbs may occur either before or after the adjunct (i.e. between the adjunct and the verb (36), that modification by inner state forms is ungrammatical (39), that modification by color adjectives is ungrammatical (40), and that numerals are questionable (41a).

(1) Determiners

31 Baa-mé kaláí méndé pi-ly-a-mó.
he-AG work a do-PRES-3SG-AUG
He is doing some work.
32 Baa-mé kalái dóko pi-ly-a-mó. 
the He is doing the work.

(2) Adverbs
33 Baa-mé kalái elyakáo pi-ly-a-mó. 
sneaky He is working sneakily.
34 Baa-mé kalái álo pya-ó pi-ly-a-mó. 
run hit-O He is working quickly.
35 Baa-mé kalái alémbo p-i-á. 
day=before=yesterday do-PP-3SG He worked the day before yesterday.

36a Alémbo baa-mé kalái p-i-á.

(3) Adjectives
36 Baa-mé kalái andáke pi-ly-a-mó. 
big He is doing a big job.
36a *Andake baa-me kalai pi-ly-a-mo.
37 Baa-mé kalái (eteté) lóngó pi-ly-a-mó. 
(very) He is working (very) much.
38 Baa-mé kalái épé pi-ly-a-mó. 
good He is doing good work.
39 ?*Baa-me kalai imbu pi-pae mende pi-ly-a-mo. 
anger do-STA
40 *Baa-me kalai pumbuti pi-ly-a-mo. 
black
41 Baa-mé kalái lápó pyó-o pi-ly-a-mó. 
two do-O He is working twice.
41a ?Baa-me kalai (tata) lapo pi-ly-a-mo. 
kind two He is doing two kinds of work.
42 Baa-mé kalái pitaká pi-ly-a-mó. 
all He is doing all the work.

(4) Locative Phrases
43 Kalái nambí-sa yuú dokó-nyá pi-ly-a-mó dóko work coast-LOC land the-FOSS do-PRES-3SG-AUG the He likes the work that he is doing on the coast.
auú kae-ly-a-mó.
like be-PRES-3SG-AUG.

The examples (31-43) may give the impression that, since the adjuncts may be modified in a number of ways, they do not differ, for example, from ordinary objects. There are several reasons, however, why the adjuncts should not be considered as objects of what we have called pro-verbs. Firstly, in the case of genuine objects the agentive is obligatory if the subject is present in the surface structure, as in (44 and 44a)

44 Baa-mé nambá kande-ly-á-mo.
he-AG I look-PRES-3SG-AUG
He is looking at me.

44a *Baa namba kande-ly-a-mo.
It is (at best) optional with certain adjuncts, as in (45) versus (46)

45 Baa-mé pí le-ly-á-mo.
he-AG word utter-PRES-3SG-AUG
He is speaking.

46 Baá pi le-ly-á-mo.
he word utter-PRES-3SG-AUG
He is speaking.

while with certain other adjuncts, the presence of the agentive marker makes the sentence ungrammatical as in (47) versus (48):

47 *Namba-nya moko doko-me tanda pi-ly-a-mo.
I-POSS leg the-AG pain do-PRES-3SG-AUG

48 Namba-nyá mókó dóko tándá pi-ly-a-mó.
I-POSS leg the pain do-PRES-3SG-AUG
My leg is hurting.

There are stronger reasons for not regarding adjuncts as, for example, objects. These relate to matters associated with the pro-verbs. In brief, while normally any noun may occur with nearly every verb, there are extremely stringent restrictions in regard to the adjuncts and the co-occurring pro-verbs. This will be discussed in detail in the following sections.

4.1.4 Verbs

Table 4.1 presents a list of the major verbs which co-occur in the predications with adjuncts. As mentioned above (4.0) only a limited number of verbs co-occur in the
predications, and three of these (lengé 'utter', pingí 'do', and píngi 'hit,strike') account for 61 per cent of all verbs recorded in the predications. The predications themselves account for 66 per cent of all Enga verb forms (in the corpus of 5,445 entries), while the remaining verb forms cover 34 per cent. Thus, we have twice as many predications as other verb forms in the corpus, and of these (i.e. the predications), two-thirds are limited to co-occurrence with one of the three pro-verbs listed above.

Table 4.1

<table>
<thead>
<tr>
<th>Verb</th>
<th>Gloss</th>
<th>no.</th>
<th>per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>lengé</td>
<td>'utter'</td>
<td>334</td>
<td>32</td>
</tr>
<tr>
<td>pingí</td>
<td>'do,make'</td>
<td>247</td>
<td>23</td>
</tr>
<tr>
<td>píngi</td>
<td>'hit,strike'</td>
<td>80</td>
<td>8</td>
</tr>
<tr>
<td>síngi</td>
<td>'hear'</td>
<td>45</td>
<td>4</td>
</tr>
<tr>
<td>nyíngi</td>
<td>'get,take'</td>
<td>40</td>
<td>4</td>
</tr>
<tr>
<td>miníngi</td>
<td>'hold'</td>
<td>29</td>
<td>3</td>
</tr>
<tr>
<td>kaengé</td>
<td>'be'</td>
<td>30</td>
<td>3</td>
</tr>
<tr>
<td>palengé</td>
<td>'lie (inside)'</td>
<td>24</td>
<td>2</td>
</tr>
<tr>
<td>katengé</td>
<td>'stand'</td>
<td>21</td>
<td>2</td>
</tr>
<tr>
<td>pengé</td>
<td>'go'</td>
<td>15</td>
<td>1</td>
</tr>
<tr>
<td>nengé</td>
<td>'eat,consume'</td>
<td>16</td>
<td>1</td>
</tr>
<tr>
<td>tengé</td>
<td>'burn'</td>
<td>15</td>
<td>1</td>
</tr>
<tr>
<td>miscellaneous</td>
<td></td>
<td>172</td>
<td>16</td>
</tr>
</tbody>
</table>

The total corpus was 5,545 items; of these, the verbal forms totalled 1,607:

1,068 Predications
539 Other Verbs
1,607

4.1.5 A Problem

The eastern Enga dialects (Kyaka and Laiapo) permit verbalization (i.e., inflection for person, number and tense) of certain types of adjuncts ([+inner state], [+color] and [+quality]), which in all other Enga dialects occur only as adjuncts in the predications (i.e., cannot be inflected for person, number and tense). Following are some examples to illustrate this phenomenon and a brief discussion of it.
In the Kyaka and Laiapo dialects the following are permissible:

49  Baa tandá-1-u-mu.
   he. pain-PRES-3SG-SENSE
   He is paining (i.e., he is in pain).

50  Baa maká-1-u-mu.
   he fed=up-PRES-3SG-SENSE
   He is fed up (with someone or something).

51  Baa kondá-1-u-mu.
   He pity-PRES-3SG-sense
   He is pitying (someone).

In other dialects the same examples would be expressed via predications using the verb kaengé

49a Baa tandem kayá-1-u-mu.
   he. pain be-PRES-3SG-SENSE
   He is paining/He has pain.

50a Baa maká kayá-1-u-mu.
   he fed=up be-PRES-3SG-SENSE
   He is fed up.

51a Baa kondá kayá-1-u-mu.
   He pity be-PRES-3SG-SENSE
   He is pitying, he has pity.

(2) [+color] In Kyaka and Laiapo we have:

52  Itá dokó saká-1-u-mu.
   tree the green-PRES-3SG-SENSE
   The tree is green (i.e., healthy,living).

In other dialects, (52) would be expressed by

52a Itá dokó sáká py-ú-mu.
   tree the green do-PRES=3SG-SENSE
   The tree is green (i.e., healthy,living).

(3) [+quality] In Kyaka and Laiapo we have

53  Akáli dokó kendá-1-u-mu
   man the heavy-PRES-3SG-SENSE
   The man is heavy.

54  Akáli dokó muiyá-1-u-mu.
   man the short-PRES-3SG-SENSE
   The man is short.

In the other Enga dialects these would be
There are several points of (theoretical) interest involved here. However, since they are beyond the scope of this study only brief mention of these will be made. The first concerns the possible derivation of adjectives from verbals, such that adjectives are considered to be verbals.\textsuperscript{10}

Secondly, the presence of the verbalized adjunct (with no co-occurring 'cognate object' adjunct) in the eastern dialects of Enga leads us to the formulation of the question, what exactly is present in the deep structure of the predications (in the western dialects) and what is present in the deep structure of the verbalized adjuncts? This question will be discussed in Section 4.3.

We will conclude this section by drawing special attention to some negative examples which illustrate several points:

i that the verbalized adjuncts must occur only in the predications (49a,50a,51a)

ii that some of these may occur only in a specific form of predications (i.e. the stative form) (examples 53a,54a) and

iii that the verbalized adjuncts are a set which is mutually exclusive with those [+concrete] nouns which co-occur with EV (2.0); examples 55-57 will illustrate this:

55 *Akali dupa akali-ly-ami-no.
   man the man-PRES-3PL-AUG
   The men man.

56 *Dii dupa dii-lya-ami-no.
   fruit the fruit-PRES-3PL-AUG
   *The fruits fruit.

57 *Taiyoko taiyoke-ly-a-mo.
   blood blood-PRES-3SG-AUG
   *Blood bloods.

These [+concrete] nouns cannot occur as inflected verbals, but instead co-occur with the existential verbs:
55a Akáli dúpa kate-ngé.
man the BE-HAB
Men exist.

56a Dií dúpa lyí-ngi.
fruit the BE-HAB
Fruits exist.

57a Taiyóko dóko pale-ngé.
blood the BE-HAB
Blood exists.

This is, of course, still further evidence for classificatory verbs in Enga: both the existential classificatory verbs and the pro-verbs as classificatory verbs (or verbals), since they occur in complementary distribution in relation to the [+concrete] nouns.

4.2. Semantics

4.2.1 Rules

In the preceding section we have discussed the predication, its form, the adjuncts and co-occurring verbs, and one particular problem (4.1.5). We will now turn to the major question, i.e., to what extent is it possible to formulate a set of rules which will operate on the semantic features of the adjuncts used in the predications and which will thus enable us to determine the correct assignment of the adjuncts to their co-occurring verb in the predication?

In attempting to formulate these rules, we will limit ourselves to the first three of the co-occurring verbs (i.e., lengé, pingí, and pingi) for two reasons, firstly, these three verbs account for 65 per cent of all the co-occurring verbs, and secondly, since a limited number will avoid unnecessary complication of the rules.

A tree diagram is presented in Diagram 4.2 and will be discussed in the following section.
The rules presented in Diagram 4.2 are ordered through only the first seven nodes. The first node presents the choice of loan word or not, since (as we will discuss in 4.2.2 below) the assignment of loan words is highly predictable. The second node is tentative, but it seems very predictable that [+concrete] loan items are assigned pingi 'hit', with all others taking lengé 'utter'. Two examples for this node would be:
The rules would not permit:

58a *+liti pi-ngi
read do-HAB

or

59a *+pěpa le-ngé
paper utter-HAB

The third node would remove all other [+concrete] nouns and send them to the EV semantic redundancy rules (cf. Diagram 2.1). Of necessity, this node must follow the loan words (i.e. to allow the [+concrete] loan words to be correctly assigned to pro-verbs), yet we want it as near the top of the tree as possible (in order to remove the [+concrete] nouns which co-occur with EV as soon as possible). An example for node three would be (3), with (3a-b) showing ungrammaticalities arising from incorrect application of the rules:

60 akáli kate-ngé
man BE-HAB
men exist.

60a *akali pi-ngi
man do-HAB

60b *imbu kate-nge
anger BE-HAB

Nodes (5-7) in Diagram 4.2 remove adjuncts which fall into the 'main' semantic domain/features of the three most frequently used pro-verbs: lengé 'utter', pingí 'do', and pingí 'hit'. These are ordered by frequency of the pro-verb in the predications, based upon the data presented in Table 4.1. Examples for each of these nodes would be

61 weé le-ngé
song utter-HAB
to sing (a song)

61a *kalai le-nge
work utter-HAB

61b *wee pi-ngi
song do-HAB
Node seven is the last of the ordered nodes; it is ordered after the 'main' domain of the main pro-verbs, and is the first node which allows intersection (cf. 4.2.3) for the [+inner state] adjuncts. This group of adjuncts has been discussed in 4.1.4, and will be further discussed in 4.2.3 (on the intersection of kaeng and pingi and their assignment to inner state adjuncts). Some examples for this node would be

64 ímbu kae-ngé
anger be-HAB
'to be angry'

64a *ímbu pi-ngi
anger hit-HAB

64b *tee kae-nge
restitution be-HAB

The remaining nodes are ordered by frequency, and, like the inner state (node seven) also allow the intersection of pro-verbs. The point to be noted is that the assignment of pro-verbs over nodes eight through eleven, even though allowing intersection, does not allow the pro-verbs to be assigned in random order; the pro-verbs are not in free variation: even though two pro-verbs may be permitted, the others are excluded. Some examples to illustrate this point are:

65 watapáe pi-ngí OR pí-ngí
marriage do-HAB OR hit-HAB
'to make marriage payment'

65a *watapae le-nge

65b *watapae kae-ngé
Node eight (payments) is puzzling, since some payments may occur only with pingí 'do', while others occur only with pingí 'hit' (and yet others, as in (8) may occur with both pingí and pingí). It would seem just as likely that payments should co-occur with lengé 'utter'.

Two possible alternatives offer themselves to account for these problem cases; it is either such that

(i) Assignment of verbs to predications is in fact completely arbitrary, therefore a multiple-choice node forces an arbitrary choice; or

(ii) Additional very specific semantic investigation on only the multiple choice nodes, in a variety of contexts and with a large group of informants, might provide additional data which would enable additional semantic features to be postulated, providing additional branches and unique assignment of verbs in predications.

(i) presents the possibility that the problem is essentially unsolvable at the present stage of semantic development (or perhaps unsolvable at any time); (ii) presents the possibility that the problem is in fact solvable, but that it is not with the present data; additional data and work would be necessary.

4.2.2 Loan Items

The assignment of loan items often provides additional evidence for semantic features. Adjuncts which are loan items from Neo-Melanesian Pidgin are presented in Table 4.3. Of the twenty-eight cases presented, only four involve a verb other than lengé 'utter'. The four cases are those using pingí 'hit' and furthermore only these four of the twenty-eight adjuncts are marked [+concrete]: +lóko 'lock', +pépa 'paper', +kosá 'ball', and +takísa 'tax, tax money'. It would seem that it is the [+concrete] feature which determines the assignment of these adjuncts to pingí, while all others are assigned lengé.

The loan adjuncts which all take lengé are all [-concrete] and most are [+event/activity]. In this context it is notable that even when loan items borrowed are verbs in Pidgin (includ-
ing the verbal marker for Pidgin -im) the items are NOT borrowed as verbs, but used as adjuncts in predications with the pro-verb lengé. This would seem to indicate that, while Enga may borrow nouns from Pidgin (cf. section 3.3), Enga does not borrow verbs as such.13 Some of the Pidgin verbs assigned to predications in Enga include:

daunimi 'overcome', makimi 'mark', pósimi 'boss', sakimi 'sack/jostle', and supimi 'swim'.

TABLE 4.3: Loan Items in the Predications

Adjuncts assigned to píngi 'hit'

<table>
<thead>
<tr>
<th>Adjuncts assigned to</th>
<th>Pidgin</th>
<th>Enga</th>
</tr>
</thead>
<tbody>
<tr>
<td>to lock</td>
<td>lóko píngi</td>
<td>lóko 'lock'</td>
</tr>
<tr>
<td>to write</td>
<td>pépa</td>
<td>pépa 'paper'</td>
</tr>
<tr>
<td>to play ball</td>
<td>kosá</td>
<td>kosá 'ball'</td>
</tr>
<tr>
<td>to pay taxes</td>
<td>takísa</td>
<td>takísa 'tax'</td>
</tr>
</tbody>
</table>

Adjuncts assigned to lengé 'utter'

<table>
<thead>
<tr>
<th>Adjuncts assigned to</th>
<th>Pidgin</th>
<th>Enga</th>
</tr>
</thead>
<tbody>
<tr>
<td>to ruin, destroy</td>
<td>bakatapú lengé</td>
<td>bakatapú 'ruin'</td>
</tr>
<tr>
<td>to vote</td>
<td>bóta/bósa</td>
<td>bóta/bósa 'vote'</td>
</tr>
<tr>
<td>to boil</td>
<td>boló</td>
<td>boló 'boil'</td>
</tr>
<tr>
<td>to assemble</td>
<td>búqa</td>
<td>búqa 'assembly'</td>
</tr>
<tr>
<td>to overcome</td>
<td>daunimi</td>
<td>daunimi 'down'</td>
</tr>
<tr>
<td>to arrive</td>
<td>kámapu</td>
<td>kámapu 'come up'</td>
</tr>
<tr>
<td>to gamble, play cards</td>
<td>kása15</td>
<td>kása15 'cards'</td>
</tr>
<tr>
<td>to gamble, play Lucky</td>
<td>lakíí</td>
<td>lakíí 'lucky'</td>
</tr>
<tr>
<td>to be crooked</td>
<td>kutungúsa</td>
<td>kutungúsa 'crooked'</td>
</tr>
<tr>
<td>to read</td>
<td>líti</td>
<td>líti 'read'</td>
</tr>
<tr>
<td>to have election</td>
<td>lesísa/letésa</td>
<td>lesísa/letésa 'race'</td>
</tr>
<tr>
<td>to lose</td>
<td>lúsa</td>
<td>lúsa 'lose'</td>
</tr>
<tr>
<td>to mark</td>
<td>makimi</td>
<td>makimi 'mark'</td>
</tr>
<tr>
<td>to patrol</td>
<td>pasatóle</td>
<td>pasatóle 'patrol'</td>
</tr>
<tr>
<td>to supervise</td>
<td>pósimi/púsa</td>
<td>pósimi/púsa 'boss'</td>
</tr>
<tr>
<td>to be full</td>
<td>pulapú</td>
<td>pulapú 'full up'</td>
</tr>
<tr>
<td>to jump/hop</td>
<td>sakími</td>
<td>sakími 'sack/jostle'</td>
</tr>
<tr>
<td>to change money</td>
<td>sanísa</td>
<td>sanísa 'change'</td>
</tr>
<tr>
<td>to dislike</td>
<td>súkú</td>
<td>súkú 'change'</td>
</tr>
<tr>
<td>to attend school</td>
<td>sukúlu</td>
<td>sukúlu 'school'</td>
</tr>
<tr>
<td>to swim</td>
<td>supími</td>
<td>supími 'swim'</td>
</tr>
<tr>
<td>to win, triumph</td>
<td>winí/winími</td>
<td>winí/winími 'win'</td>
</tr>
<tr>
<td>to litigate, to have a court</td>
<td>kósa</td>
<td>kósa 'court'</td>
</tr>
</tbody>
</table>
4.2.3 Intersection

The total number of predications (cf. Table 4.1, 4.1.3) is 1182; of this total we have 19 cases (1.7%) in which more than one verb can appear in the verb slot of the predication. We will discuss these 19 cases in this section, since all the others are uninteresting by virtue of their very regularity. However, it must be stressed that the alternate verbs are not in free variation; the only two pro-verbs to intersect with respect to pake 'steal' are nyíngí 'take' and nengé 'eat', as in (67) and (68); any other pro-verbs in co-occurrence with pake would make the utterance ungrammatical as in (69).

67 pake nyí-ngí
   steal take-HAB
   'to steal'

68 pake ne-ngé
   steal eat-HAB
   'to steal'

69 pake
   steal
   *pi-ngí
   do-HAB
   *le-ngé
   utter-HAB
   *te-ngé
   burn-HAB
   etc.

Again, we must look at both parts of the predication:
(i) the adjunct: what kinds of adjuncts occur in the cases of intersection?
(ii) the verb: what verbs occur in these cases; and are these the most frequent of the verbs occurring in the predications, or instead some entirely different group of verbs?

Table 4.4 presents a matrix of the 19 cases of intersection in the predications.

4.2.3.1 The Adjuncts in Intersection

The adjuncts presented in Table 4.4 are grouped by semantic features into roughly four groups, [+inner state] with twelve of the twenty one cases; [+quality] with five cases; [-concrete] with three cases; and one miscellaneous item, pod 'wind', which may well be a member of [-concrete], too.
# TABLE 4.4: Intersection in the Predications

<table>
<thead>
<tr>
<th>Adjunct Type:</th>
<th>Pingo, do</th>
<th>Kaeng, be'</th>
<th>Leng, 'un'</th>
<th>T'ang, 'iri'</th>
<th>Pung, 'e</th>
<th>Nyu, 'e</th>
<th>Neng, 'e</th>
<th>Teng, 'e</th>
<th>Faing, 'e</th>
<th>Mung, 'e</th>
<th>Sing, 'e</th>
<th>Ting, 'e</th>
<th>Ping, 'e</th>
<th>Song, 'e</th>
<th>Sung, 'e</th>
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<tbody>
<tr>
<td>1. [+inner state]</td>
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<tr>
<td>auú 'like, love'</td>
<td>x</td>
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<tr>
<td>élya/yála 'shame'</td>
<td>x</td>
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<tr>
<td>ímbu 'anger'</td>
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<td>enapóti 'hot'</td>
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<td>kénda 'heavy'</td>
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<td>kóndo 'pity'</td>
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<tr>
<td>kekéná 'fed up'</td>
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<tr>
<td>kípa 'like'</td>
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<tr>
<td>lemongótí 'sleepy'</td>
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<td>myúku 'nausea'</td>
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<td>páka 'fear'</td>
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<td>tandá 'pain'</td>
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<tr>
<td>vaíná 'ill, sick'</td>
<td>x</td>
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<td>mána 'manner, way'</td>
<td>x</td>
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<tr>
<td>tombó/ máki 'boundary'</td>
<td>x</td>
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<td>3. [+event] (?)</td>
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<td>nánga 'sharp'</td>
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<tr>
<td>waá/páke 'steal'</td>
<td>x</td>
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<tr>
<td>angamáá 'yawn'</td>
<td>x</td>
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<tr>
<td>topó 'buy/sell'</td>
<td>x</td>
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<td>wáipa 'add on'</td>
<td>x</td>
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<tr>
<td>pyángatu nángatu 'hiccough'</td>
<td>x</td>
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<td>4. [+concrete] (?)</td>
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<tr>
<td>'poó 'wind'</td>
<td>x</td>
<td>x</td>
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The most important point to note from the adjuncts appearing in Table 2 is the high frequency of [+inner state] adjuncts (i.e. more than 50% of all the cases). This would indicate that a suitable problem for further investigation would be the possible intersections of all the other [+inner state] adjuncts.

4.2.3.2 The Verbs in Intersection

The verbs presented in Table 4.4 are grouped in order of frequency. The readily observable major point among the verbs is the extremely high degree of intersection between two of the verbs, pingi 'do' and kaengé 'be (of emotion)'. Kaengé occurs eleven times, and in all of these it intersects with pingi 'do'; furthermore, the striking fact is that these occurrences are all within the [+ inner state] group of adjuncts. We will regard kaengé as an essentially meaningless verb, which functions only as the carrier of person-number and tense with [+inner state] adjuncts in those Enga dialects which do not verbalize these. Additional evidence in favor of this view is presented by Draper (nd a:44):

70 Nambá máká pi-lya-mó.
I fed=up do-PRES-3SG-AUG
I am fed up. (lit.: "weariness is happening in me")

70a Nambá maká-ly-o.
I fed=up-PRES-1SG.
I am fed up/weary.

71 Nambá páka pi-ly-a-mó.
I fear do-PRES-3SG-AUG
I am afraid. (lit.: "Fear is happening in me")

71a Nambá paká-ly-o.
I fear-PRES-1SG
I am afraid.

Draper calls all of our [+inner state] predications 'Compound Impersonal Verbs' (nd a:44), Impersonal Verbs being those in which something happens to a person voluntarily. The Kyaka Impersonal Verbs are often expressed by pingi 'do' (although as in Enga proper, other verbs are also used, i.e., lengé, pingi 'hit', etc.). Since we are not able to investigate Kyaka (at present), we will in fact regard kaengé as a virtually meaningless verb used in predications with [+inner state] adjuncts (and no others).
4.3 Conclusion

In the preceding sections we have described the predications of Enga. The question now arises, how can these be accounted for within a generative transformational framework. We have pointed out above (4.0) that the EV classify [+concrete] nouns and the pro-verbs of the predications [-concrete] nouns, and that they are in complementary distribution in this respect. This suggests that we might be able to use the same mechanism to account for both kinds of classificatory verbs in Enga. The only formal difference between the two kinds of verb would then be that the EV is introduced only in certain environments, while the pro-verb of the predication is obligatory in all environments.

In (2.3) we have accounted for the insertion of the EV by means of a convention of feature spreading and an agreement rule which transferred the features of the noun onto the predicate node. A reverse feature spreading convention moved these features down to the dummy node where they would be realized phonologically as the correct surface form of the co-occurring EV. We will here posit the same mechanism for the predications, except that in the case of the predications, feature spreading and the insertion of the appropriate pro-verb is obligatory. Examples are presented in (72 and 73):

72  Tée pi-ngí
restitution do-HAB
to pay restitution

72a  72b

\[
\begin{array}{c}
\text{VP} \\
\text{N} \\
\text{tee} \\
[+pi] \\
\text{restitution} \\
\end{array}
\quad
\begin{array}{c}
\text{VP} \\
\text{N} \\
[+pi] \\
\text{tee} \\
\text{restitution} \\
\end{array}
\]

\[
\begin{array}{c}
\Delta \\
\text{do} \\
\end{array}
\]
For the Enga predications, the following steps are necessary:

(i) Obligatory insertion of a dummy V node for the predication's pro-verb at the VP node.

(ii) The convention of feature spreading, which duplicates the noun's features onto the dominating NP node.

(iii) A rule of agreement, which copies the features of the dominating NP node onto the dominating VP node.

(iv) The convention of reverse feature spreading, which duplicates the noun's feature from the dominating VP node onto the dummy V node.

(v) The phonological realization of the features at the dummy V node as the appropriate pro-verb.
Notes: Chapter Four

1 There are four items which are [+concrete] and occur in the predications. They are loan items and will be discussed in 4.2.2 below. We also have the case of kalái 'work', which does occur in predications (with the pro-verb pingí 'do') and may also occur with síní in what appears to be an existential use:

a Kalái sí-ly-a-pe?
work BE-PRES-3SG-PE
Is there work?

This is a problem case: if taken as a [-concrete] noun, then (a) should be ungrammatical; if assumed to be [+concrete], then it should not co-occur with pingí. Additional work on this adjunct in particular is needed, as we could not uncover another one like it in the corpus.

2 Loan items will be discussed in detail in 4.2.2.

3 The term 'nouns' is used here in the widest possible sense, including any item not inflected for person, number or tense.

4 All [+concrete] nouns may occur with EV, but not all [-concrete] nouns occur as adjuncts in the predications: note the Locatives and Directionals in this section.

5 A similar point has been made by Pawley for Karam:

...N6 bases occur only in subject relation and N7 bases occur only in direct object relation to the verb phrase of a clause, while N14 bases are compatible with one small sub-class of verb stems as subject only, and with another small sub-class of verb stems as direct object only (1966:196).

6 Cf. Kachru (1970) on the conjunct verbs of Hindi. Kachru states that the claim that the conjunct verbs are complex lexical items is refuted by the fact that "...most nominals involved...can take a relative clause and/or sentential complement. If the nominal + verb made up a complex lexical item, this clearly would be impossible." (1970:974).

7 The modifications to follow have also been performed on a number of predications involving different pro-verbs. However, these modifications differed only trivially from the ones given here and they have, therefore, been omitted.

8 The longer the modification becomes, the more ungrammatical becomes the sentence if the modification is preposed, i.e.,
b  Kalái épé p-i-á-
work good do-FFP-3SG
He did good work.

c  ?Épé kalái p-i-á-
as against (d and e)

d  Kalái wàmbá waká eteté épé p-i-á-
word before very very good do-FFP-3SG
He did very good work a long time ago.

e  ?*Wamba waka etete epe kalai p-i-a.

9  Sáká has a wide range of meaning, including green, healthy, living, mature and (of humans) middle-aged. Sáká may be unique, since we have

f  Talye-ly-á-mo.
yellow-PRES-3SG-AUG
It is yellow.

but not *talya plus a pro-verb, i.e., 'yellow + pro-verb.'


11  It will be recalled that + marks loan items and * ungrammatical items. Thus, (59) and (60) are grammatical utterances containing loan items, while (59a) and (60a) are ungrammatical.

12  When one considers the amount of verbal negotiation and elaborate speech-making (often in highly metaphoric language) which accompanies almost all of the various payments made by one group of Enga to another, it seems all the more likely that lengé 'utter' should, rationally, be a pro-verb for the payment adjuncts.

13  Pawley (personal communication) has noted: "Karam has never borrowed a verb".

14  A 'vote' is not a [+concrete] ballot paper, since the vast majority of Enga are illiterate and verbally signify their choice via a photograph to the attending clerk; hence, one does in fact 'utter a vote'.

15  Although the loan item +kása is similar to the English 'cards', the [+concrete] playing cards are most often referred to colloquially as itá yokó 'tree leaves'; the predication refers to the activity of gambling, games of chance, etc.

16  Pawley has noted a similar phenomenon in Karam:

It should be noted even though it is the adjunct which carries the more specific meaning, the verb stem is not empty of meaning. There are many adjuncts which can occur with several different verbs, and the verb stem is what distinguishes them. For example the adjunct sy, which means 'illegal(ly)', occurs with several verb stems:
to steal  sy  d-
  illegally  obtain

to trespass  sy  md-
(by remaining)  illegally  remain

to steal food,  sy  nŋ
  eat food  illegally  consume

illegally

to commit  waŋ  sy  d  aŋ
  fornication  penis  obtain copulate
(of woman)

(of a man)  mgn  sy  d  aŋ
  vagina  obtain copulate (1969:30).

17 Another solution (i.e., rather than regarding kaengę as 'meaningless') would be to postulate that kaengę is the EV for all [+inner state] nouns. This has serious consequences, and does not correspond to the data, since the EV classify all the [+concrete] nouns, (and the [+inner state] are assumed to be [-concrete]). Also, since the inner state adjuncts may be verbalized in the eastern Enga dialects (cf. 4.1.4), we would have to postulate that the [+inner state] adjuncts were verbs in two of the Enga dialects, and nouns using the EV in the other dialects.

18 As an alternative to the solution proposed in the conclusion, we could assume that both the N and V are present in the deep structure; the following (simplified) tree would result:

g

  VP

  N

  tee

  [...]

  V

  teeŋę

  [...]

  restitution

  restitute
(We will assume here and following that the features of the lexical item are contained in the brackets beneath both the N and the V). The presentation of (g) is typical of cognate object verbs, those in which there is a "high selectivity between a specific V and an 'object' N, and in which the V + N combination in one language might well be matched by a V alone in another" (Fillmore 1968:85). Probably the best known English cognate object verb is 'dream a dream'. Fillmore has analysed this such that 'dream' may appear as a V alone in its own right ('I dream of Jenny with the light brown hair'), as a cognate object verb (1) ('John dreamed a dream about Mary'), or (2) with 'dream' as its representative object and 'have' as a pro-verb ('I had a dream'). It is the latter case which most closely corresponds to the Enga predications (since there are no actual occurrences of cognate object verbs as predications in Enga, although these do occur in Asmat and Kamoro, cf. 5.2). In this last case (with the associated pro-verb), the associated N is copied into a dummy F ("factitive", Fillmore 1968:85), and the associated pro-verb replaces the V. This series of steps is outlined here for the Enga predication, tée pungi 'pay restitution for a homicide':

\[ h \quad P \quad i \quad P \]

\[ N \quad V \]

\[ \varphi \quad \text{teenge} \quad \text{tee} \quad \text{teenge} \]

\[ j \]

\[ P \]

\[ N \quad V \]

\[ \text{tee} \quad \text{pingi} \]

The case that both the N and V are present in the deep structure, seems highly unlikely in Enga, since there are no cognate object verbs or predications, i.e., in none of the data do both the N and the same V appear in the surface structure together. We do not have

\[ k \quad *\text{tee} \quad \text{tee-nge} \]

\[ \text{restitution restitute-HAB} \]
Supplementary evidence for this statement can be adduced from the [+inner state] group of adjuncts, which as stated above may be verbalized in two of the Enga dialects. In the Kyaka and Laiapo dialects (l) is permissible, but must be expressed with the co-occurring pro-verb in the other dialects as (m) (i.e., NOT with a cognate object verb)

1  Tande-ly-á-mo.
   pain-PRES-3SG-AUG.
   It is paining (me) OR I am in pain.

m  Tândá kae-ly-a-mó.
   pain be-PRES-3SG-AUG
   It is paining (me) OR I am in pain.

It is not permissible in Enga to have sentences such as (n)

n  *tanda tande-ly-a-mo.
   pain pain-PRES-3SG-AUG

This fact, together with the complete lack of any cognate object verbs in the predications, indicates that the chances are remote that the deep structure of Enga contains both the N and the V in the predications.

Instead, as we have seen above (j), the verbs of the predications correspond closely to pro-verbs.

Assumption of the verb only in the deep structure introduces unnecessary complexity into the formation of predications. The steps necessary to derive the complete (surface) predication from a V-only deep structure would parallel the substitution for the pro-verb 'have' in 'have a dream', i.e., examples (h) through (j). Indeed, the simplest and most elegant solution is the one suggested in the conclusion above.
5.0 Comparative Perspective

Enga is a non-Austronesian (or NAN) language of New Guinea. Of this group, Capell has said

To class two languages as 'Papuan' (to use the older terminology, or as NAN to use the present nomenclature) does not imply that the two are in any way related to each other...there is no NAN family and there was no one NAN mother tongue. So far no genetic classification of NAN languages is possible...(1969:65).

The recent work of McElhanon and Voorhoeve (1970) presents evidence for possible genetic relationships between the widely-separated Central and South New Guinea Phylum (which would be represented on Map 2 by Kamoro, Asmat, Awju and Marind) and the Finisterre-Huon Phylum (which would be represented on Map 2 by Käte). The East New Guinea Highlands Phylum (of which Enga is a member) will be seen to lie directly between these two areas.

Having examined the evidence presented above (2.0 and 4.0) for classificatory verbs in Enga, the next step is clearly to determine if these are present in other New Guinea languages. All of the available source materials (mentioned in 0.0) deal with other topics of the New Guinea languages (i.e., such as presenting a descriptive grammar), usually with the topics we are interested in being mentioned only in passing. The languages used in this chapter were selected on the basis of the availability of materials, and the study was further limited by requirements of time, so that additional languages as well as additional materials from most of the languages treated here could be added, as available.

The proposed comparative perspective suffers from the lack of in-depth work or analysis on the topic of the verbs by the authors cited below, although some descriptive syntactic work has been done. In regards to both the EV and the Predications, these suffer from the lack of semantic description or abstraction in the descriptions. In some cases (and especially with the EV), the paucity of the data, the lack of referents and examples all combine to make only the most elementary statements possible (i.e., such that 'There are EV present in language X,' but that is all that is known). The chapter is divided into two sections, presenting the comparative materials on the EV in (4.1), then those for the Predications in (4.2).
5.1 The EV

As described in detail above (2.0), the EV in Enga classify the [+concrete] nouns into classes, usually based upon features of size, shape and posture. In describing the comparative materials, two points should be kept in mind, 1) what are the typical referents of the EV in these languages, are they also the [+concrete] nouns, and 2) upon what kinds of features are the nouns divided into classes.

In the majority of cases, the EV are given only a passing mention in the literature, usually by missionary-linguists concerned with the translation of the English copula; otherwise the EV are mentioned as 'verbs of state' or 'positional verbs'.

The languages presented here are arranged in a west to east order, beginning in the western half of West-Irian and proceeding to the Huon Peninsula in Australian New Guinea. For each (as available), we will give a brief verbal description of the EV, the EVs for that language, some typical referents of the EV, and, when possible, the cognate Enga EV.

For Kamoro, Drabbe reports in his description of the language that in the case of 'positional' verbs,  

The problem...is which one to choose in any given case. The choice can depend on the [temporary] position of the verbal subject at the time the action takes place, or it can depend on the [positional] properties ascribed to the verbal subject. In most cases the choice depends on what, in the opinion of the Kamoro people, is the habitual position of the verbal subject. For the Kamoro, all beings fall into [positional] classes, so to say: the sitting, the standing, the floating class, etc. (1953:39).

The EV of Kamoro and some typical referents are:

- **ame** 'stand' (? cognate to Enga kata-)  
  people, houses, trees (alone, singular), vertical, high and tall or slender things.

- **epe** 'sit' (? cognate to Enga pita-)  
  pots, dishes, pans, boats on land, plants, mountains, clouds and celestial bodies.

- **kai** 'lie' (? cognate to Enga sa-)  
  land, rivers, lakes, fallen trees or wood.

- **mariki** 'float'  
  fish, people in canoes, anything floating on water.

- **naa** 'be there, be above'  
  hanging objects, small things, big masses such as a heap of rice or a pile of sago, things lying on top of something else.
To the east of the Kamoro people live the Asmat.

C. L. Voorhoeve reports that they "divide all existing things into .... five 'position' classes" (1965:48). The EV of Asmat and some typical referents are:

- **em** 'stand' (? cognate to Kamoro ame above)
  men, trees, upright poles, anything that is tall and slender.

- **ap** 'sit' (? cognate to Kamoro epe above)
  women, houses, carrying bags, anything that is about as high as it is broad.

- **amis** 'lie'
  small animals, reptiles, fallen trees, the just-risen sun or moon, anything that is much broader than it is high, or is low to the ground.

- **se** 'be in the water'
  fishes, canoes, rivers, anything in or on the water.

- **tep** 'be above'
  flying animals, hanging objects, objects stored away on the rafters of the house, anything that is above eye-level.

Still further to the east are the Kiwai. In his Kiwai grammar, S. H. Ray presents the following EV with typical referents:

- **otoi** 'stand'
  trees, mountains, food plants (? cognate to Enga kata-)

- **ereu** 'remain, lie'
  objects in fixed positions which do not move,
  "It carries the idea of permanence..." (Ray 1938: 60).

- **orou** 'lie'
  persons or things lying down

- **omi** ) 'stay'
  orowomi) "to be in a place, of persons" (Ray 1938:61)

Kamoro, Asmat, and Kiwai are all along the South Coast of New Guinea. As one moves north from the Kiwai into the Southern Highlands, one encounters the Huli (slightly to the west of Mendi on Map 2). The Huli EV have been described by Rule who gives, firstly, more data on the EV than one usually encounters, and, secondly, a preliminary analysis of the EV as class markers. Rule points out that
...the three verbs ka, bira and nga constitute the nearest equivalent of the verb "to be" in English. All nouns take one of these three verbs, and it is therefore necessary to divide all nouns into three classes according to which particular verb they take...(1954:32).

The three EV and typical referents are:

**ka**
'stand' (cognate to Enga kata-)
men, boys, male relatives, pigs, dogs, and other large animals, trees and all kinds of plants, houses and all things which have their roots in the ground, parts of the body.

**beda**
'sit' (cognate to Enga pita-)
women, girls, female relatives, birds, still water, squirrels, insects.

**nga**
'put' (cognate to Enga sa-)
all inanimate objects which have simply been placed on the ground, snakes, reptiles and all creeping things which crawl along the ground.

These referents which Rule presents for Huli are strikingly similar to those presented for Enga in 2.0. A further correspondence is mentioned by Rule:

It should be noted that if a man is known to be seated, then be.da is used, and similarly, if a woman is known to be actually standing, then ka is used. It is only when they are not known to be either standing or sitting, that the above distinctions are made (1954:33).

(Cf. this statement with 2.1, examples (7) through (10)).

To the east of the Enga but still in the Western Highlands are the Melpa. Strauss reports that there is no equivalent to the European 'be' verbs in Melpa. Instead, Melpa uses "constructions with verbs that take the place of European be verbs" (1955:9). The EV used are:

**mogla**
'live, be there'

**aŋkela**
'stand' (? cognate to Enga kata-)

**pea**
'lie' (? cognate to Enga pita- or pala-)
(animate)

**tea**
'lie' (inanimate) (? cognate to Enga sa-)

Strauss gives two examples of change-of-state (cf. 2.2.6 above) involving water and sweet potatoes. The Hageners regard water as animate (cf. 3.0 above), so that the statement "There is a water pail there" may be expressed by example (1) or (2):
1. No pake ti teetem. (uses teə 'lie of inanimates')
2. No pake ti morom. (uses mogla 'be there of animates')

In the case of (1), the implication is that the water pail is empty, and in (2), it is full (i.e. with the animate water). The examples for sweet potatoes are similar:

3. Oka teetem (uses teə 'lie of inanimates')
4. Oka peetem (uses pea 'lie of animates')

The meaning of both (3) and (4) is "There are sweet potatoes there", but (3) implies that the sweet potatoes have been taken from the ground and are lying ready to be cooked and eaten, while (4) implies that the sweet potatoes are still 'animate', i.e., alive in the garden.

The Banz and Sinasina languages to the east of Melpa also have EV. L. J. Luzbetak notes that in the Banz language a non-native speaker often finds it difficult to decide whether he should in a given case say mem, tem or pam. All three verbs mean more or less the same, sc., "he, she, it is." However, the three words may not be used indiscriminately (1954:159).

The EV of Banz with Luzbetak's definitions are:

mem 'is' (cognate to Melpa mogla 'live')
(in the sense of apposition or identity, and in the sense of 'is present').

tem 'put' (cognate to Enga sa-)
(Connotes possession, and refers to a temporary presence of impersonal objects).

pam 'exists, rests' (cognate to Enga pala-)
(Connotes a permanent state of being)

Some of the typical referents (as extracted from Luzbetak's text) are:

mem (bird, stomach, bottle, cassowary, tree, dog, pig fence, lizard, cockatoo, patrol officer)

tem (book, river, ax, rat hole, eggs, places, road)

pam (fire, work, earth, sun, name, nose, mouth, word, car)

The EV of Sinasina are presented in a similar manner by McVinney and Luzbetak, with the same introductory statement that the EV may not be used "indiscriminately" (1954:153). The four EV of Sinasina are
moŋwa  'is' (? cognate to Melpa mogla 'live')
(used with animate beings and the word for water; in the sense of apposition or identity, and in the sense of 'is present')

yoŋwa  'put' (? cognate to Enga sa-)
(connotes possession and refers to a temporary presence of inanimate objects)

paŋwa  'exists, rests' (? cognate to Enga pala-)
(connotes a permanent state of being)

duŋwa  'says'
(inanimate objects and used to state a fact).

As one moves from the Eastern Highlands to the North Coast of New Guinea, one encounters the Käte. Schneuker, in his short handbook of Käte, makes the statement which we have come to expect for the EV:

there are constructions with verbs that take the place of the European be verbs...The verbs used are JU, FO, QE and DOMA. The native concept of whether the person or article under consideration is living, lying, sitting, or standing determines which of the four verbs is to be used in a given situation (1962:10).

The Käte EV and some of their referents (drawn both from Schneuker (1962) and Pilhofer (1953)) are:

ju  'living'
(man, boy)

fo  'lying, sleeping'
(river, coconuts, wine, pen, bananas, sweet potato, knife, wire, boards)

e  'sitting'
(village, places, bird, car, bottle, house, woman, mountain; said of short, wide objects)

doma  'stand'
(coconut palm, lamp; said of long objects)

Thus, it can be shown that EV can be found in NAN languages from all parts of the mainland of New Guinea.

5.1.2 Discussion of the Comparative EV

The data presented in 5.1.1 are summarized and presented in Chart 5.1. The languages are again listed from west to east, including Enga. At the onset of the comparative description, two main questions were listed for note, and the results are presented here. Firstly, that, in all cases in which referents
were available for the EV given, none of these were [-concrete] nouns. Since we have shown that in Enga the EV co-occur only with [+concrete] nouns, the possibility strongly suggests itself that the EV of these languages may also act as classificatory verbs, in terms of the [+concrete] nouns, at least. Needed to make this a tenable hypothesis is much additional data on the EV of other NAN languages, as the present paucity of data is the major limiting factor of such a study.

Secondly, we were interested in the types of features which would be used to divide the noun classes. In the EV data as presented above, features of shape ('long objects', short, broad objects') and posture ('standing', 'lying') are recurrent, just as these are the main features of the Enga EV. Kamoro and Asmat also correspond with Enga in two of the EV, each having an EV for 'aquatic, floating', and an EV for 'hanging, lying above'. The one spot of Chart 5.1 which is most notably different is that for the EV of the Melpa-Banz-Sinasina group of languages: this group of languages all share EV which are different from the other languages in the major respect that, while the EV of other languages are based on features of shape and posture, these seem instead to be based upon features of animate versus inanimate and permanent versus impermanent. The materials available clearly indicate that these are EV; the possible historical causes for this difference in type of features of the EV would be an interesting conjecture, but the present lack of data and analysis prevent us from exploring this as a problem.

In conclusion, we have determined that EV do exist in other NAN languages, and that the EV features most frequently are based (as in Enga) on shape and posture. Furthermore, the likelihood seems good that the EV found in other languages co-occur with [+concrete] nouns, possibly as classificatory verbs like the Enga EV.
<table>
<thead>
<tr>
<th>Kamoro</th>
<th>Asmat</th>
<th>Kiwai</th>
<th>Huli</th>
<th>Enga</th>
<th>Melpa</th>
<th>Banz</th>
<th>Sinasina</th>
<th>Kate</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>mariki</td>
<td>se</td>
<td>era,omi</td>
<td>nga</td>
<td>sa-</td>
<td>tea</td>
<td>tem</td>
<td>yōnwá</td>
<td></td>
<td>'stay'</td>
</tr>
<tr>
<td>ame</td>
<td>em</td>
<td>otoi</td>
<td>ka</td>
<td>kata-</td>
<td>āŋkela</td>
<td></td>
<td>doma</td>
<td></td>
<td>'stand'</td>
</tr>
<tr>
<td>kai</td>
<td>amis</td>
<td>orou</td>
<td>pala-</td>
<td>pea</td>
<td>pam</td>
<td>pānwá</td>
<td>fo</td>
<td></td>
<td>'lie'</td>
</tr>
<tr>
<td>epe</td>
<td>ap</td>
<td>beda</td>
<td>pita-</td>
<td></td>
<td></td>
<td></td>
<td>ŋe</td>
<td></td>
<td>'sit'</td>
</tr>
<tr>
<td>naa</td>
<td>tep</td>
<td></td>
<td>lya-</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>'hang'</td>
</tr>
<tr>
<td>eri</td>
<td></td>
<td></td>
<td>ipa-</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>'come'</td>
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<td></td>
<td></td>
<td></td>
<td>'live'</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>'state a fact'</td>
</tr>
</tbody>
</table>
5.2 The Predications

As described above (4.0) in detail, the Enga predications are formed of an adjunct (or [-concrete] noun) co-occurring with a pro-verb. In contrast to the comparative materials on the EV, the predications have been mentioned in more detail in the literature (Bee 1965, P. Healey 1965 and Pawley 1969); they are given a variety of names: primary verbs, periphrastic verbs, auxiliary verbs, complex verbs, verb phrases, verb compact, and nuclear verbs, to mention a few.

In the following sections we will firstly give a brief verbal description of the phenomena, then a comparison of the verbs used in the predications, and finally, some specific examples of types of predications. The body of data used in this section on the comparative predications was too large for inclusion in the main text as it was felt to be of minor interest to many readers, and so it is presented in full in Appendix E.

5.2.1 The Phenomenon

The following material will be presented in roughly the order of nearness of relationship to Enga. To the south of Enga, Franklin has stated that Kewa has at least two types of verb phrase which might be termed periphrastic verbs, and he also notes "none of the verb phrases are exactly paralleled (except in the semantic or total meaning sense) with those of either Young or Healey" (1969:167 underlining mine). East of Enga, in the Melpa language near Mt. Hagen Ross has noted that one verb, 'hit,strike,affect', when used in combination with nouns, adjectives, and verbs, has over a hundred different meanings; he also presents six other verbs which are used in Enga-type predications (Ross 1946:41f.). In the Banz language of the Wahgi Valley, Luzbetak mentions the paucity of independent verbs and the "great abundance of idiomatic verbal expressions composed of a frequently occurring verb joined to another verb, a noun, adjective, or another part of speech...We find a small number of verbs... which occur again and again, each time with a different meaning, depending on the combination we find them in"
Nilles (1969) for Kuman, and McVinney and Luzbetak (1954) for Sinasina make similar statements for their respective languages. For Benabena Young (1964) states that the periphrastic verb complex accounts for more than 50 per cent of all verb constructions in text; this is defined as a "verb complex consisting of a free-form word of specific verbal implication in close knit sequence with a fully inflected nuclear verb, which together have a unique semantic content" (1964:78).

Bee discusses idiom-type verb phrases for Usurufa, which have 'restricted co-occurrence potential of constituent words and a limited degree of productivity...Only a few verbs are potential fillers of the verb slot. The more common ones account for about two-thirds of the verbal idioms" (1965:117).

Pawley states that "Karam has only a small number of verb stems (about 100 in all)...In spite of this very restricted range of verbs, with very general meanings, the Karam manage to talk about much the same range of quite specific events as English speakers. They do this by attaching to each verb an adjunct or adjuncts which contain specific information not in the verb stem" (1969:28).

In the Binandere languages, Wilson states that Binandere itself forms 'compound verbs' with the auxiliary verb ari 'to do'; he adds that Mailander set up five verb classes in Zia, four of them based on the fact that they took different auxiliary verbs, and that this could also be done for Suena (Wilson 1969:104). For Kapau, Oates and Oates describe the noun-verb verb phrase as a very common one which is not close-knit structurally since the noun may be separated from the verb by object, adverb and other things, but as one which is close-knit semantically (1968:36f.).

Pilhofer (1933) describes the 'primary verbs' of Kâte, of which ke 'do' is again the most frequent. P. Healey in her article on Telefol Verb Phrases (1965) describes the auxiliary verbs, a small group which commonly occur with verbal adjuncts. Most of the adjuncts occur with only one of these auxiliary verbs; although the verbs normally have distinctive meanings when they occur alone, when used in these complex verbs they may have "virtually no semantic significance when they occur with an Adjunct... Their
function is as carrier of aspect, tense, subject person-number, and other suffixes" (1965:30).

In both the Flamingo Bay (Voorhoeve 1965) and Ajam (Drabbe 1959) dialects of Asmat, "verbal expressions of which the first part is nominal and the second verbal" (Drabbe 1959:25) express many actions and situations not expressed by a verb; in "some cases both parts are entirely alike or similar to each other..." (25). It is Asmat which has 'cognate-object' constructions which must express certain predications with a specific V and specific 'object':

5  mbetsj mbetsj-
    weep weep
to cry (lit. 'to weep a weep')

6  mbui mbui-
    bath bathe
to bathe (lit. 'to bathe a bath')

Finally, in Kapauku (Ekagi) we find auxiliary verbs, of which Drabbe gives as the main one tai 'do' (1952:43). The following section presents an overview of both the languages and the major verbs used in these phenomena.

5.2.2 Comparison

Table 5.2 presents a matrix diagram. Languages used are given in the columns and grouped roughly according to the relationship to Enga from left to right. The rows present the verbs used in the predications in the various languages. In all cases this information (i.e., as to which verbs are used) is based upon the original sources for that language; the subsequent ordering of the most frequently occurring row/verb to the top is based on this information. While in most cases the authors give the most frequently occurring verb as 'do', which compares favorably with the matrix of Table 5.2, the one exception is Ross for Melpa, who gives 'hit' as the most frequent (in both text and examples). Pawley for Karam gives ag- 'utter' as most frequent. The point is that Table 5.2 presents the order of frequency based upon the occurrence of that verb ('do') in all the languages, not the frequency of occurrences of that verb, which in some cases is different. (Cf. Table 4.1.3, on the frequency of the verbs in predications, in which 'utter' is most frequent).
<table>
<thead>
<tr>
<th>Language</th>
<th>Prefix</th>
<th>Main</th>
<th>Suffix</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asmat</td>
<td>e-</td>
<td>kec</td>
<td>min</td>
<td>cover</td>
</tr>
<tr>
<td>Telefol</td>
<td>kec</td>
<td>min</td>
<td>e-</td>
<td>language</td>
</tr>
<tr>
<td>Kâte</td>
<td>ke</td>
<td>mu</td>
<td>-</td>
<td>drink</td>
</tr>
<tr>
<td>Kapau</td>
<td>ti</td>
<td>-</td>
<td>-</td>
<td>pull</td>
</tr>
<tr>
<td>Suena</td>
<td>wai</td>
<td>sal</td>
<td>-</td>
<td>gather</td>
</tr>
<tr>
<td>Karam</td>
<td>g-</td>
<td>pk</td>
<td>-</td>
<td>rip</td>
</tr>
<tr>
<td>Usurufa</td>
<td>te</td>
<td>los</td>
<td>-</td>
<td>meet</td>
</tr>
<tr>
<td>Bena</td>
<td>e</td>
<td>di</td>
<td>-</td>
<td>see</td>
</tr>
<tr>
<td>Sina</td>
<td>si</td>
<td>ne</td>
<td>-</td>
<td>come</td>
</tr>
<tr>
<td>Kuman</td>
<td>el</td>
<td>di</td>
<td>-</td>
<td>go</td>
</tr>
<tr>
<td>Banz</td>
<td>e</td>
<td>de</td>
<td>-</td>
<td>know</td>
</tr>
<tr>
<td>Melpa</td>
<td>e</td>
<td>ro</td>
<td>-</td>
<td>make</td>
</tr>
<tr>
<td>Kewa</td>
<td>e</td>
<td>mea</td>
<td>la-</td>
<td>come</td>
</tr>
<tr>
<td>Enga</td>
<td>e</td>
<td>mea</td>
<td>la-</td>
<td>talk</td>
</tr>
</tbody>
</table>

**Translation**:
1. do, make
2. utter
3. bit
4. 'get, take'
5. 'eat'
6. 'see'
7. 'go'
8. 'know'
9. 'come'
10. 'put'
11. 'die'
12. 'give'
13. 'hear'

**Notes**:
- The chart lists the prefixes, main root, and suffixes for various languages, indicating how the words are formed in each language.
- The meanings are given in English, showing the word's function or action.
The Table essentially speaks for itself, but a few points will be noted. The first is simply the occurrences of the two most used of the verbs, 'do' and 'utter', which are present in all ('do') and all but one ('utter') of the languages. Also, the high frequency of 'hit' will merit later consideration in comparison to English. The second point of interest is the occurrence in Enga of kaengé 'be' (of inner states) which has been discussed above in various sections (4.1.4 and 4.2.3) as a problem case; in all the other languages examined, no similar verb (either as 'be' or as 'be of inner state') was discovered.

5.2.3 Examples

In the following section we will present some examples drawn from the comparative materials on predications. Three topics will be discussed: (i) bodily processes, chosen since they would occur in most of the data, and thus, as a typical semantic domain of the predications; (ii) the domain of inner state, since we found no occurrence of a verb similar to the Enga kaengé in any of the other data on predications, and this domain has been mentioned above in connection with various problems (4.1.4 and 4.2.3); (iii) anomalies, which we would expect to find in any semantic description, and which are of interest here in connection with the general topic of exceptions.

(i) Bodily Process

This domain was selected as one likely to be present in all languages. Examples of one process are presented below; the English gloss for all would be 'to urinate'.

7 puú te-ngé. (Enga)
urine burn-HAB

8 pu ro-num. (Melpa)
urine hit

9 poll to- (Banz)
urine hit

10 awima te- (Usurufa)
urine say

11 ss yap- (Karam)
urine fall
The variation in verbs used in the predication is notable: 'burn', 'hit', 'say', 'fall', and 'urinate'.

(ii) Inner State

This area was chosen for comparison because of Enga kaengé 'be of inner states', which we did not find present in any of the other languages. Instead, many of the [+inner state] items/adjuncts are expressed via the verb 'do'. This would correspond well to the fact noted in 4.2.3 that kaengé intersects most frequently with pingi 'do' in the Enga [+inner state] adjuncts. Other verbs also used with such adjuncts include 'hit', and 'say', recalling 4.2.1 and the discussion of the different verbs permitted by the semantic rules to co-occur with [+inner state] in Enga, i.e., kaengé, pingi, pingi 'hit', lengé 'utter', and singi 'hear'. Clearly, the [+inner state] adjuncts are a problem case and need further investigation.

Some examples from this domain are:

14 kae enem (Melpa)  
good do 
it is good.
15 pipil enem (Melpa)  
shame do 
be/feel ashamed
16 imbil ere (Banz)  
pain do 
have pain
17 gi ul si (Sinasina)  
pain hit 
have pain
18 nabg̣ g- (Usurufa)  
shame do 
be ashamed/shy
19 omar e- (Asmat - Ajam dialect)  
do 
be afraid
Anomalies

The anomalies are of interest as exceptions to the postulated semantic redundancy rules. The case is such that if Enga has a predication of the form 'adjunct X plus co-occurring verb 'utter'' and we assume that 'utter' has a similar semantic content in the other NAN languages discussed above, then we would assume that adjunct X of that language would also co-occur in the predication with 'utter'. If it instead co-occurs with 'do' (i.e., is anomalous), then it is of interest to us for its content, the semantic features of the adjunct X, and the two verbs 'utter' and the anomalous verb.

A few examples of anomalies in the predications in regard to 'utter' are presented from the source data. In Usurufa we have

14 ibiga yara- a cry to weep to cry
15 akuga ita- odor to hear to smell

(14) contrasts to Karam's

16 sm g- do to weep (ritual language)

and Banz's

17 tow'll ere laugh do to laugh

contrasts to Enga's

18 giú le-ngé laugh utter-HAB

It would seem that (14), (15) and (16) would use 'utter', (as Enga does); (but Enga also has

18a giú kaengé laugh be-HAB to laugh).
In Banz we also find

19  wii ro
    call hit
    to call

when we would also expect 'utter'. Another anomaly from Enga is

20  yandá pi-ngí
    bow do-HAB
    to fight

This was expected to be

20a *yandá pí-ngi
    bow hit-HAB

5.3 Conclusion

We have noted that the comparative perspective for other NAN languages indicates the presence of both EV and predications. The EV (from the referents given) co-occur with [+concrete] nouns, and the majority have the same type of features, shape and posture, with the Melpa-Banz-Sinasina group differing in feature types in the EV. The predications have received more attention in the literature and much more data are available on them (cf. Appendix E); again, the languages investigated show striking similarities. It would thus seem that covert classificatory verbs are present in many of the NAN languages. Of the total nine languages with EV, seven of these also have predications (Enga, Asmat, Kamoro, Melpa, Banz, Sinasina, and Kate). Of the fifteen languages with predications (seven with EV), we know that only one (Karam) does NOT have EV. Clearly the next step is to more thoroughly investigate these languages for EV. The topic is worthy of more investigation, and the inadequacy of the data available indicates that the work could be profitably undertaken, even extending to all the NAN languages of New Guinea (and beyond).
Notes: Chapter Five

1 With thanks to Dr. C. L. Voorhoeve for the English translation; the actual Dutch text is:

Bij het gebruiken van deze hulpwerkwoorden komt de kwestie, welk werkwoord uit de reeks men in een gegeven geval moet nemen. De keuze kan afhangen van de houding waarin het onderwerp zich op het ogenblik der handeling bevindt of van de toegeschreven toestand, eigenschap enz. van het onderwerp. Veelal hangt ze af van de houding waarin het onderwerp zich gewoonlijk, volgens de Kamorose opvatting, bevindt. De Kamorose verbeelding verdeelt a.h.w. alle wezens in klassen: de zittende, de staande, de drijvende, enz., zie de volgende nummers (Drabbe 1953:39).

2 I am indebted to Professor S. A. Wurm for making available the unpublished materials of M. Rule on Huli.

3 It seems likely that the class referred to here is actually something like the Enga game mammals.

4 Some additional referents for Melpa EV have been provided by Dr. A. J. Strathern, who gives the following:

mo- cassowary, birds, penis, testicles, vagina, breasts, skin, arms, fire, water, lake, stream, sun, frogs, beard, hair, wasp, bee, house, tree, fence, fish (?), furniture (?)

an- mountains (?), houses (?)

pe- fruit, seeds, plants, mushrooms, heart, any animate that is in a place, habitat, liver (?), nails (?)

te- lizards, snakes, cars, cut wood, books, bucket, centipedes, crawling animates, dead animates, harvested sweet potatoes

5 Some additional referents for Banz EV have been provided by Dr. Marie Reay, who gives the following:

mem men, women, pigs, water, fire, lake, stream, nuts, fruits, flowers, dead people (?)

pam used for duration of being

tim buckets, cars, frogs, house, mountains, trees (?), snakes, centipedes

baim ('be there/present'); house, fence, firewood, any improvements made by human effort
Some other languages in which EV have been noted include:

Dani, which has "a number of verbs, all of them denoting some kind of being..." (Van der Stap 1966:126f.). These include menasin 'to stand', welasin 'to lie', belasin 'to fall', akasin 'to be', and welakasin 'to stay, to exist'.

Kaugel, a language located to the west of Mt. Hagen township (i.e., between Enga and Melpa): molo- 'be', agili 'stand', pe- 'lay', and le- 'place' (Blowers 1970:39).

Koiari, which does not have EV, has a system of specifiers (cf. Dutton 1969:223-241), which might well be remnants of EV. These specifiers group the nouns into classes and it is possible that they derive historically from EV. They must be inserted transformationally and under conditions similar to those where the EV in Enga is introduced.

Franklin (forth.) also states:

The verb expounding the Predicate tagmeme in comple­mentive clauses can often be recognised as a form of the verb 'to be' which is based, e.g. upon such verbs as: píra 'to sit', sā 'to put', aa 'to stand' and ya 'to affirm'.

This particular example was selected since it was actually present in the source data; cf. Appendix E.

It would seem very likely (considering the nearness of relationship with Enga) that Huli has both EV and predications.

Some additional languages with predications are: Awju and Marind from brief examples given in Boelaars (1950:15f. and 75f.).
6.0 Conclusion

In this thesis the semantics of a portion of the verb system of a New Guinean language has been described and explored. Focus was upon two kinds of classificatory verbs, the existential verbs and the pro-verbs of the predications, which were shown to be mutually exclusive in regards to co-occurring nouns. A sub-set of [+concrete] nouns which co-occur with the EV, the animates, was also analyzed. The semantic features and semantic redundancy rules for the EV, the animate nouns, and the predications were described. It was pointed out that the rules for the pro-verbs would profit from additional materials and study. Considerable emphasis has been given to the analysis of exceptions and semantic irregularities to determine whether there were systematic regularities and where possible, to formulate rules to account for these.

Several points of general interest were discussed: possible support for Lyons's hypothesis of the derivation of all existential and possessive sentences (in Enga, sentences with the EV) from indefinite locatives was presented in 2.2.1. Covert features as semantic markers were presented in 3.1.2 for the animates. 'Feature spreading' was presented as a solution to the problem of predicate nouns and EV conflict resolution in 2.3. Possible support for the priority of semantics over syntax was briefly presented in 3.4, in the discussion of the nature of the deep structure of Enga predications. The verbs of the Enga predications were discussed as cognate object verbs, and as pro-verbs, similar to various English 'auxiliary' verbs, such as 'have', 'do', 'get', etc. Wider implications here are that the EV are based upon features of shape and posture, such as those mentioned by Friedrich (1970) and Berlin (1968) as having world-wide significance in terms of semantic universals.

In relation to New Guinea linguistics, chapter five presented the comparative materials from other NAN languages for the EV and the predications. It was shown that both the EV and the predications could be used as a diagnostic criterion for a large number of NAN languages.
Thus, although a preliminary semantic investigation, this study has provided some materials of interest to not only New Guinea linguistics, but also of general and possibly theoretical interest as well.

At least four problems deriving from the investigation command attention. Firstly, the description and analysis of the EV and predications of other NAN languages. Secondly, additional work on the EV, as definite or indefinite locatives. Thirdly, materials and analysis on EV conflict resolution. And finally, additional data and analysis on the [+inner state] group of nouns, in all the Enga dialects.

Needless to say, these problems were not known to exist prior to the study, but have instead arisen from the description and analysis presented here; that these questions can be phrased now is one of the major results of this study. The importance of the Fragestellung is related in the following interchange between Gertrude Stein and Alice B. Toklas:

"Alice, what is the answer?"
"Gertrude, we don't know."
"Well then, Alice, what is the question?"
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The following abbreviations are used:

AA American Anthropologist
IJAL International Journal of American Linguistics
NGLM-MS New Guinea Lutheran Mission-Missouri Synod
PLA Pacific Linguistics, Series A (Occasional Papers)
PLB Pacific Linguistics, Series B (Monographs)
PLC Pacific Linguistics, Series C (Books)
PLD Pacific Linguistics, Series D (Special Publications)
SIL Summer Institute of Linguistics

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APPENDIX A: Semantic Classes of Verbs

The semantic classification presented below is based upon informants' statements of similarity (primarily via synonym-type definitions), which provided one means of determining semantic classes. Further support for the classification derives from the matched co-occurrences of nouns and verbs produced and displayed in matrix form by the computer discussed in A-8. The semantic classes of verbs are

A-1 Verbs of Effect
   a) Activity
   b) Cutting/Breaking
   c) Holding

A-2 Verbs of Motion

A-3 Verbs of Position

A-4 Verbs denoting Inner States

A-5 Verbs of Bodily Activities/Processes

A-6 Verbs of Payments

A-7 Verbs of Existence

A-1 Verbs of Effect
   a) Activity

Verbs of effect are those which denote activity, especially activity which results in a change of state. These verbs are [+activity], and the class is composed almost entirely of 'ordinary' verbs. Some members of this class are yangengé 'cook in ashes/on stove'; yawengé 'steam in earth oven'; pokengé 'plant a garden'; wasingí 'make, create, fix, repair'; eténgé 'complete, finish'; lumbingí 'open'; támbenge 'shell (nuts, coffee, etc.)'; and tamungí 'rot'. All members of this class, whose activity results in a change of state, may be expressed via the Enga stative form:

1 Mapú yange-ly-á-mo.  
   sweet=potato cook-PRES-3SG-AUG
   He is cooking sweet potato.

1a Mapú yangá-pae doko
   sweet=potato cook-STA the
   The cooked sweet potato
b) Cutting and Breaking

Verbs of cutting and breaking have the characteristics of verbs of effect (i.e., denote activity which results in a change of state and may be expressed via the stative form); the reason they are presented here as a sub-class is because of the Enga specification of cutting (i.e., as to the direction of the cutting in relation to the grain, (lengthwise and crosswise) and to the instrument used for the cutting (axe, knife, etc.)) and breaking (i.e., as to the original size of the object broken (large, small, etc.) and the amount broken in relation to this). Some members of this class are: konjìngi 'to cut across the grain, esp. with a knife'; tokengé 'to cut to a point, sharpen'; waìngi 'to cut lengthwise, usually with an axe'; képengé 'to cut against the grain, esp. with a knife'; tukìngi 'to break off' (a medium sized object); loléngè 'to break in two'; pongengé 'to break off a part' (of a larger whole). Examples of this sub-class are

3 Mapú konjá-pae dóko
sweet=potato cut-STA the
The cut sweet potato

4 Wánìngi pongá-pae dóko
branch break-STA the
The broken branch

c) Holding

Verbs of holding also have the characteristics of verbs of effect in denoting an activity which results in a change of state and may be expressed via the stative form; they also are presented here because of the Enga specifications regarding the various ways of holding (in the hand, in the arms, on the shoulders, over the shoulder, in a net-bag, etc.). Some members of this sub-class are: mínìngi 'to hold in the hands'; kupinyìngi 'to hold in the arms'; kapùsìngi
'to hold between the teeth'; aúsingi 'to carry on the shoulders (of a child)'; mandengé 'to carry in a net-bag'; singí 'to carry on shoulders'. Examples of these are:

5. Mapú mandí-pae dóko
   sweet=potato carry-STA the
   The carried sweet potato

6. Mapú miná-pae dóko
   sweet=potato hold-STA the
   The held sweet potato

A-2 Verbs of Motion

This class contains members marked [+motion]; the members of this class may be used in the stative form, but this very rarely occurs.

7. ?Akáli pú-pae dóko
   man go-STA the
   ?The gone man

Some items are: pengé 'go'; epengé 'come'; watengé 'to follow, chase'; kisingi 'to climb'. Various direction suffixes may be added to bases of this group to indicate the direction of the motion: -a- 'nearby'; -o- 'further away'; -n- 'down'; -m- 'level'; -ly- 'up' etc. A base such as kolondéngé 'to enter' may thus be modified to kolandéngé 'to enter nearby'.

A-3 Verbs of Position

Members of this class are [-motion]. Members of this class, in contrast to those marked [+motion], may often occur in the stative form. Some members of this class are katengé 'stand'; petengé 'sit'; palengé 'lie (inside)'.

8. Mapú palí-pae dóko
   sweet=potato lie-STA the
   The lying sweet potato (or The sweet potato inside)

9. Akáli pití-pae dóko
   man sit-STA the
   The sitting man

A-4 Verbs of Inner States

The major characteristic of verbs of this class is the feature [+internal]. [+internal] implies to the Enga that members of this set are not available for verification visually/externally.
10 Baá ímbu kayá-1-u-mu.
He anger be-PRES-3SG-AUG
He is angry.

This statement could be made only after the subject had perhaps beaten his wife (which thus showed his anger externally). Verbs of this set often appear in the sensed and deduced forms

11 ímbu py-ú-mu.
anger do-PRES-3SG-SENSE
He seems to be angry.

12 ímbu kae-ly-a-mé lámo.
anger be-PRES-3SG-AUG DEDUC
He is evidently angry.

but may appear in the non-sensed form only in the first persons, a further indication that the speaker must be reporting on his internal state.

Members of this set almost always appear in the form of a predication (cf. Chapter Four in the main body of the thesis); the pro-verb is frequently kaengé 'be (of inner states)'. (The Kyaka and Laiapo dialects verbalize the adjunct directly and do not use kaengé.)

Some members of this set are ímbu kaengé 'be angry'; máká kaengé 'be tired of someone/something'; páka kaengé 'be afraid'; kóndó kaengé 'have pity (on someone)'; auú kaengé 'like/love'; tálo kaengé 'be hungry'; náná kaengé 'be thirsty'; kóndá kaengé 'be sad' and gií kaengé 'laugh'.

13 Nabá páka kae-ly-ó.
I fear be-PRES-1SG
I am afraid.

14 Nabá pakaé-ly-o.
I fear-PRES-1SG
I am afraid. (Laiapo dialect).

A-5 Verbs of Bodily Activities/Processes

Verbs of this class are [+external], and typical members are ée lengé 'cry'; sambó lengé 'lie/tell falsehood'; puú tengé 'urinate'; tókó lengé 'explode/thunder'.

15 Namba-(mé) ée lé-ly-o.
I-(AG) cry utter-PRES-1SG
I am crying.
16 Namba-mé wáné méné mandé-ly-o.
   I-AG  child a  bear-PRES-1SG
   I am giving birth to a child.

A-6 Verbs of Payments

Birth, death and marriage payments play a large part in Enga culture, as do gifts of various kinds. The verb 'give' is marked for pronominal reference

17 Namba-mé émba mená méné dí-ly-o.
   I-AG  you pig a  give-PRES-1SG
   I am giving you a pig.

18 Namba-mé baá mená méné maí-ly-o.
   I-AG  him pig a  give-PRES-ISG
   I am giving him a pig.

Some typical members of this class are tēe pingí 'death payment (among western Enga), pig exchange (among eastern Enga)'; laítá pingí 'payment for injury'; keé lengé 'bride payment'; betá pingí 'pay restitution/compensation'; kepá singí 'restitution paid for killing (made in pig quarters)'; pandétá pingí 'payment at death of child made to wife's patriline by father's'; taá díngi/máíngi 'payment made as restitution for theft'; wáta pingí 'marriage payment of bride's family to groom's'; saándi pingí 'to give with expectation of return with interest'.

19 Ípane dúpa-me betá pi-ly-amí-no.
   Ípane the-AG restitution hit-PRES-3PL-AUG
   The Ipanes are paying restitution.

A-7 Verbs of Existence

These have been discussed in detail in Chapter Two.

A-8 The Matrix

Co-occurrence relations between approximately 250 (generic) nouns of all classes and 40 verbs (excluding predications) were elicited during the second field trip. These were coded directly onto data processing forms for the computer, which then produced and displayed in a matrix form the relations between (1) the nouns and verbs, (2) the 250 nouns against each other (i.e., a matrix 250 by 250 items), and (3) the 40 verbs against each other (i.e., a matrix 40 by 40). The information obtained from this study, as well as the original materials of elicitation, have not
been fully analysed at present because of time limitations, but promise further verification of the work on classificatory verbs and noun classes, with present evidence that the concrete nouns of the matrices group themselves together (in co-occurrence relations with the verbs) and even, possibly, sub-grouping themselves into the semantic domains (i.e., artifacts tend to co-occur with certain verbs, while animates co-occur with others, etc.).

The ideal for this study would be to compose a matrix of all nouns (3,000) crossed with all verbs (1,721), but the matrix resulting would be so formidable (as well as having such low correlations in many parts), that the above smaller study was undertaken instead to discover if such a larger matrix would be worthwhile (also, if possible to process by computer, as 3,000 items crossed would require a large amount of computer storage space).
APPENDIX B: Data Compilation

B-1 Informants

All informants used in the study were native speakers of the Kopetesia (Torename) dialect of Enga, a western Enga dialect spoken about 20 miles from Laiagam (see Map 1, page 22). All were monolingual in Enga (except as noted below), and all elicitation was conducted in Enga.

My first principal informant, Councillor Alua Walyisa was an illiterate man of about 25 years, and was bilingual in (Neo-Melanesian) Pidgin. My second principal informant was Pesatusa Waelisa, an illiterate man of about 23 years. Other informants included Pasone, a young (illiterate) woman of about 16 years; Pisini, a semi-literate woman of about 20 years (and one of Alua's wives); Yoane, a semi-literate man of about 25 years; Jone, a semi-literate and bilingual (in Pidgin) 22 year old man; and Kane, a literate and bilingual (in Pidgin) 20 year old man. Older informants, informally consulted, included Lesepina (Alua's mother), an illiterate woman of about 40 years; and Lapale, an illiterate man of about 45 years. Non-systematic informant work and checking was done with whoever happened to be sitting around the fire in our house when a problem arose. Tumu Popeoko and Ngangane Yaetusa of Aipusa (near Wabag), while not employed as my informants but as my husband's, often helped in my early work and during language learning.

B-2 Questions Used in Elicitation

"One might assume...that the speakers of any language would quite naturally and spontaneously themselves frame questions to elicit...semantic information" (Weinreich 1962: 190). I attempted to elicit such questions via the original question

1. Ńmba-me pīf medē-nyā tengé dōko-māsā-la nāya-t-e-no you-AG word a-POSS root the know-INF NEG-FUT-2SG-AUG If you didn't know the meaning of a word, how would you kanda-ō dōko ēmba-me aipā-lā-o...tipā pi-pe-ngē-pē? see-0 the you-AG how utter-0 ask do-COMP-HAB-PE ask it?
Other introductory questions which I used were

2. Aki tengé pale-ngé-pé?
   what root BE-HAB-PE
   What is the meaning?

3. Kengé/pií waká méndé le-ngé-pé?
   name/word other a utter-HAB-PE
   Is there another name/word?

   At the time I used the questions below, Casagrande and Hale (1967) was not available in the field, and upon my return to Canberra, I noticed a close correspondence between the questions which I had used and those used by Casagrande and Hale in their work on Papago semantic relationships and folk definitions. For comparison with their work, I include their 13 types of semantic relationships identified in Papago in brackets []. The questions are listed in the order in which I elicited with them; I attempted to apply them systematically to every lexical entry.

[Synonymy]

4. Kengé/pií lápó le-ngé-pé?
   name/word second utter-HAB-PE
   Is there a second name?

5. Kengé/pií waká méndé le-ngé-pé?
   name/word other a utter-HAB-PE
   Is there another name/word?

6. Tengé wáká méndé palé-ly-a-pe?
   root other a BE-3SG-PRES-PE
   Is there another meaning?

[Class Inclusion]

7. Baá tátá api-ní-pí?
   he/it line who-POSS-PE
   What is his clan?

[Attributive]

8. Baá aípá-le-pe?
   it what-CONF-PE
   What is it like?

9. Baá aípá pí-pae-pe?
   it how do-STA-PE
   What is it like?

10. Baá èmba-nya aki-ngi-pí?
    he/she you-POSS what-NGV-PE
    What relation is he/she to you?
[Operational]

11 Endakáli dúpame X-mé áki kalái pi-ngi-má-pé?
people the-AG X-INST what work do-HAB-PL-PE
What do people do with X?

12 X-mé aípá pi-pe-ngé-pé?
X-AG what do-COMP-HAB-PE
What should one do with X?

13 Endakáli dúpa-me X-mé aípá pi-ngi-má-pé?
people the-AG X-INST what do-HAB-PL-PE
What do people do with X?

[Functional]

14 Baamé áki kalái pi-ngí-pí?
it-AG what work do-HAB-PE
What work does it do?

[Spatial]

15 Baá ánjá sí-ngi-pi/kate-ngé-pé/pete-ngé-pé/pale-ngé-pé?
it where BE-HAB-PE
Where is it located?

[Contingency]

16 Aípá lá-o máso-o endakáli méndé asemánga pya-
what utter-O think-O people a sneeze hit-
pe-ngé-pé?
COMP-HAB-PE

[Comparison]

17 Baá Y-yalé mendé-pé?
it Y-like a-PE
Is it like Y?

[Provenience]

18 X-dóko ajetáe epe-ngé-pé?
X-the whence come-HAB-PE
From whence does X come/originate?

(Time)

19 Andukú-pá endakáli dúpa-me X pi-ngi-má-pé?
which-TEMP people the-AG X do-HAB-PL-PE
When do people do X?

(Explicative)

20 Aípá lá-o máso-o endakáli dúpa-me X pi-ngi-má-pé?
How utter-O think-O people the-AG X do-HAB-PL-PE
Why do people do X?

(Ostensive)
The last three of the definition types (Time, Explanatory, Ostensive) are not mentioned by Casagrande and Hale, but were used in work with Enga. Casagrande and Hale have postulated several other types which I did not use in Enga.

[Exemplification]

"X is defined by citing an appropriate co-occurrent, Y" (Casagrande and Hale 1967:168). I was unable to find a suitable question-answer sequence for this definition type in Enga.

[Grading]

"X is defined with respect to its placement in a series or spectrum that also includes Y" (Casagrande and Hale 1967:168).

21 Áki kóte satandíi ongó-nyá wambaó epe-ngé-pó?
what day Sunday the-POSS before come-HAB-PE
What day comes before Sunday?

This definition type exists in Enga as a possible question but as one that is relevant in only some cases, i.e., months, days of the week, etc. I did not use it much.

[Antonymy]

"X is defined as the negation of Y, its opposite" (Casagrande and Hale 1967:168).

[Circularity]

"X is defined as Y" (Casagrande and Hale 1967:168). In both of these definition types, Enga answers exist

22 Ênda dúpa akáli' daá.
woman the man not
Women are not men.

23 Yána dóko, baá yána méndé.
dog the, he/it dog
The dog is a dog.

but I myself was unable to formulate a reasonable question, (cf. comments below on comparison with R. Lang's question sequences).

[Constituent]

"X is defined as being a constituent or part of Y" (Casagrande and Hale 1967:191). This semantic relationship
and folk definition type was not used by Casagrande and Hale in their Papago data and I did not use it in Enga either. Provenience is a reasonable question in Enga only in relation to certain classes of nouns, such as rivers, rain, hail, streams, etc. (any noun that is of the gender class of epengé?) and of humans in the sense of where does some person come from, i.e., his home village or 'place' (cf. in English: 'He's a New Yorker', 'He's a Queenslander').

It is also interesting to note that in Enga one can use the same kinds of questions for different relationships (compare Contingency and Explicative, Function and Operational, Attributive and Class Inclusion). In these cases, even though the questions are essentially of the same kind, the responses/answers allow us to classify the relationships involved. Casagrande and Hale note the same in Papago. In Exemplification, the attribute itself is being defined rather than the possessor of the attribute; while in the attributive, the possessor of the attribute is being defined by the attribute. Exemplification is the inverse of the relationship used in the Attributive. Furthermore, Casagrande and Hale note that class inclusion is often implied in attributive definitions, since certain characteristics of behavior and appearance are shared by all members of a large class (Casagrande and Hale 1967:18). This difficulty (i.e., non-mutually exclusive questions) is only problematic in those cases in which the answer does not indicate the focus of the definition (as it in fact does indicate in exemplification and attributive).

The questions used in my data elicitation were verified when further checked via the patterned frame for questions used by R. Lang (1970:6); using R. Lang's trained informant, I presented him with selected items/entries (mainly concrete, animate nouns) and elicited from him the questions he would use in questioning about that item. The results were extremely encouraging in verifying the accuracy of the questions used.

In their conclusions Casagrande and Hale mention topics for additional work on semantic relationships; these include
1) What additional types of semantic relationships are employed in folk-definitions made by speakers of other languages? (1967:192).

As we have seen above, Enga does provide some additional types for comparison with their work on Papago.

2) To what extent are various types of semantic relationships employed by speakers of all languages; are these universals of language behavior? (192).

Again, the comparison with Enga is of interest.

3) Are particular types of semantic relationships consistently associated, across languages and across cultures, with definitions of words falling into various form classes (e.g., antonymy with adjectives; contingency with verbs) or belonging to different lexical domains (e.g., attributive and class inclusion with plant and animal terms; function with instruments and body parts)? (192).

It was with this topic in mind that various statistical programs were run on the dictionary file to determine what percentage of each form class was defined by what particular type of folk definition (or semantic relationship). These results were most encouraging, and would allow additional (statistical) evidence to be presented. At present the results are primitive (i.e., allowing only such statements as "Of 3,000 nouns, 85% used class inclusive folk definitions"). The next stage is to produce more sophisticated results which are linked: "Of the 500 animate nouns, 95% are defined first by a class inclusive definition, then 90% of those are further defined by an attributive definition, 80% of those still further defined by a functional definition, etc."
Appendix C: The Existential Verbs

The following data are primarily the primary taxa extracted from the total corpus of approximately 3,000 nouns and noun phrases. The data are presented by the existential verb used, then sub-grouped by semantic domain. Items which permit intersection (cf. 2.2.5) are indicated with the second existential verb following. The least frequent existential verbs are presented first.

1. **Mandengé**

Parts of a Whole:
- alíí, telé
- kambáke
- pongó
- dií, dingí
- dungí, lání
- wáingí
- pupukú

2. **Lyingí**

Parts of a Whole:
- dií, dingí

Plants:
- líta
- kenapíti, kamalúmbi
- bíní

Animates:
- ambúlya

3. **Palengé**

Parts of a Whole:
- píngí
- amé, amengé
- makonámbí
- kúlí, kólí
- móna, kípi
- ingí, litísá
- lénge
- mamándá
pólýá, pólyá
pungí
kondengé, kutapápú
itá kálanga
móna yokó
andatómba
kongápú
lákapo
+mísa, mínju
túnduingi

'bladder'
'liver'
'womb'
'small intestine'
'lungs'
'stomach, womb'
'Vein, tendon'
'testicles'
'muscle, meat'
'spinal cord, marrow'

Plants:
mapú, áina
konjá
+ samúu
+katósa

'sweet potato'
'yam'
'Irish potato'
'carrots'

Animates:
ímá, mánga
pombáta
néne ándá

'worm, grub'
'termite' (?)
'maggot'

4. Petengé

Natural Phenomena:
endákí peté

'lake, pond'

Plants:
+ letésa

'lettuce'

Animates:
énda, wanáku
yáka
saá
móngé
yúí
+ pusii
néne
nómbe
yuú endángi
indingí
ína

'women, girls'
'fowls, birds'
'game animals'
'frogs'
'rodents'
'cat'
'insects'
'snail'
'spirit woman'
'woman demon'
'non-human females'
5. *Epengé*

**Natural Phenomena:**
- aiyúu: 'rain'
- endáki,ípa: 'water,river'
- kindúta: 'hail,frost'
- tandáke: 'hail'
- poó: 'wind'
- popó: 'vapor'
- linji,lindi: 'clay'
- nongeané: 'clay'
- wakái: 'tree oil,resin'

**Parts of a Whole:**
- mambá: 'tree oil'
- aposötó,apúpú: 'saliva'
- liní,maú: 'pus,plasma'
- mànjó: 'mucus'
- taidyóko: 'blood'
- ipange: 'fluid'
- ítí: 'hair'
- ándu: 'milk'
- angaáti: 'beard'
- kindúpa: 'nails'

**Plants:**
- kútá: 'reed'
- kámbe: 'fern'
- kénđe: 'vine,rope'

6. *Katengé*

**Natural Phenomena:**
- nikí: 'sun'
- kaná: 'moon'
- bdí: 'stars'

**Parts of a Whole:**
- lyáa: 'nose'
- maltá: 'back'
- páenge: 'thigh'
- pinyéte: 'temple of head'
- kíngi: 'arm,hand'
mökó  'leg, foot'
yokó  'leaves'
paká  'tree fork'
angapú  'jaw'
alyóko káita  'armpit'
yanú  'skin'
kondé  'nut'
ayómba  'head'
ayokondé  'shoulder'
enómbá  'forehead'
kámbá  'lips'
kalé  'ears'
katái  'fat'
pápa  'fin, wing'
keké  'tongue'
kengé  'buttocks'
lénge  'eyes'
láma  'knee'
m ámbi  'scab'
m ámbitenge  'umbilical cord'

Artifacts:
ándá  'house'
kamé  'fence'
tóko  'table'
ándá íki  'sparkshield'
ándá máu  'wall studs'
†ínga  'hinge'
†lóko  'lock'
kalúmbá  'gate'
kílyá  'purlins'
kembó  'stile'
kópa, kon ámbi  'wall'
malúsa  'porch'
kanángé  'ladder, rungs'
yokó  'page, leaf, money'

Plants:
ítá  'trees'
alámó, ítá máí  'ginger'
tupáita  'bean'
máa 'taro'
mapú ángí 'sweet potato plant'
tánu 'grasses, weeds'
elyóko 'string - shrub'
kinapíti 'moss'
akaípu 'Cordyline'
sambáí 'pitpit cane'
kalípu 'peanuts'
kanápá 'corn, maize'
lyáá 'sugar cane'
amá 'yam'
saé 'banana'
kuíma 'bamboo'
ánga 'pandanus'
lépa 'century/kenaf plant'
lépé, sangái 'sweet flag'

Animates:
akáli, wáné 'men, boys'
yályakali, táakali 'skypeople'
mená 'pigs'
yána 'dogs'
láíma 'cassowary'
tindío 'bat'
putútuli 'forest demon'
timángo, talépo 'ghost'
imámbu 'spirit'
ípi, máipa 'non-human males'
yáka paúli 'chicken'
bulumakáo 'cow'

7. Singi

Natural Phenomena:
molé 'clouds, fog'
kaití 'sky, heaven'
kaná 'stones'
yuú, yanái 'earth, place, ground'
dáakí kea 'gravel'
peté 'pond, depression'
endákí peté 'pond'
<table>
<thead>
<tr>
<th>Term</th>
<th>Translation</th>
</tr>
</thead>
<tbody>
<tr>
<td>éé</td>
<td>'garden'</td>
</tr>
<tr>
<td>lânga</td>
<td>'coals'</td>
</tr>
<tr>
<td>kákasa</td>
<td>'bush, rainforest'</td>
</tr>
<tr>
<td>kamánda</td>
<td>'outside'</td>
</tr>
<tr>
<td>lémba</td>
<td>'edge'</td>
</tr>
<tr>
<td>kungúma</td>
<td>'trash'</td>
</tr>
<tr>
<td>mandáú</td>
<td>'marsh'</td>
</tr>
<tr>
<td>yúlí</td>
<td>'hole'</td>
</tr>
<tr>
<td>itáté</td>
<td>'fire'</td>
</tr>
<tr>
<td>mánda</td>
<td>'mountains'</td>
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</table>

**Parts of a Whole:**

<table>
<thead>
<tr>
<th>Term</th>
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<tbody>
<tr>
<td>pánga</td>
<td>'marsupial pouch'</td>
</tr>
<tr>
<td>íí</td>
<td>'feces'</td>
</tr>
<tr>
<td>múmbi</td>
<td>'navel'</td>
</tr>
<tr>
<td>ingyándá</td>
<td>'womb'</td>
</tr>
<tr>
<td>kalé káita</td>
<td>'earhole'</td>
</tr>
<tr>
<td>lânge kápá</td>
<td>'eyeball'</td>
</tr>
<tr>
<td>nénge káita</td>
<td>'mouth'</td>
</tr>
<tr>
<td>íí káita</td>
<td>'anus'</td>
</tr>
<tr>
<td>lyákaita</td>
<td>'nostril'</td>
</tr>
<tr>
<td>ánga túu</td>
<td>'single pandanus nut'</td>
</tr>
<tr>
<td>síta</td>
<td>'hole in tree'</td>
</tr>
<tr>
<td>mambá</td>
<td>'tree oil'</td>
</tr>
</tbody>
</table>

**Plants:**

<table>
<thead>
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<tbody>
<tr>
<td>alyóngo</td>
<td>'bean'</td>
</tr>
<tr>
<td>painapóló</td>
<td>'pineapple'</td>
</tr>
<tr>
<td>kapúsa</td>
<td>'cabbage'</td>
</tr>
<tr>
<td></td>
<td>petengé</td>
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**Artifacts:**

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</thead>
<tbody>
<tr>
<td>dengé</td>
<td>'corner'</td>
</tr>
<tr>
<td>+dóa</td>
<td>'door'</td>
</tr>
<tr>
<td>káita, káitiní</td>
<td>'door, path, road'</td>
</tr>
<tr>
<td>íma</td>
<td>'ridgepole'</td>
</tr>
<tr>
<td>kainámbu</td>
<td>'area inside door'</td>
</tr>
<tr>
<td>lukúná</td>
<td>'inner room'</td>
</tr>
<tr>
<td>pálo</td>
<td>'room, pig stall'</td>
</tr>
<tr>
<td>pánáda</td>
<td>'space, place'</td>
</tr>
<tr>
<td>pepélyó</td>
<td>'fireplace'</td>
</tr>
<tr>
<td>típi</td>
<td>'back of house'</td>
</tr>
<tr>
<td>+windóa,winindóa</td>
<td>'window'</td>
</tr>
<tr>
<td>+kolósa</td>
<td>'clothing'</td>
</tr>
<tr>
<td>tóma</td>
<td>'stopper,lid'</td>
</tr>
<tr>
<td>+bakésa</td>
<td>'bucket'</td>
</tr>
<tr>
<td>+láma</td>
<td>'lamp'</td>
</tr>
<tr>
<td>+bosólo</td>
<td>'bottle'</td>
</tr>
<tr>
<td>laíne</td>
<td>'drum'</td>
</tr>
<tr>
<td>+gumíi</td>
<td>'rubber,plastic'</td>
</tr>
<tr>
<td>+jatáma</td>
<td>'drum'</td>
</tr>
<tr>
<td>+kosá</td>
<td>'ball'</td>
</tr>
<tr>
<td>+súsa</td>
<td>'shot, injection'</td>
</tr>
<tr>
<td>+jípi</td>
<td>'car, jeep'</td>
</tr>
<tr>
<td>+kátó</td>
<td>'car'</td>
</tr>
<tr>
<td>+kíi</td>
<td>'key'</td>
</tr>
<tr>
<td>kaléta</td>
<td>'disk money'</td>
</tr>
<tr>
<td>kaná</td>
<td>'shilling, money'</td>
</tr>
<tr>
<td>+kilóko</td>
<td>'clock'</td>
</tr>
<tr>
<td>kápá</td>
<td>'bullet'</td>
</tr>
<tr>
<td>+kápo</td>
<td>'cup'</td>
</tr>
<tr>
<td>+katasíni</td>
<td>'kerosene'</td>
</tr>
<tr>
<td>kemá</td>
<td>'knife'</td>
</tr>
<tr>
<td>kendái</td>
<td>'walking stick'</td>
</tr>
<tr>
<td>uaá</td>
<td>'axe'</td>
</tr>
<tr>
<td>+lésa</td>
<td>'razor'</td>
</tr>
<tr>
<td>+litióo</td>
<td>'radio'</td>
</tr>
<tr>
<td>lítá</td>
<td>'boundary'</td>
</tr>
<tr>
<td>mamá</td>
<td>'arrow'</td>
</tr>
<tr>
<td>mándi,nuú</td>
<td>'basket, netbag'</td>
</tr>
<tr>
<td>+mání</td>
<td>'money'</td>
</tr>
<tr>
<td>+masísa</td>
<td>'matches'</td>
</tr>
<tr>
<td>mená púngi</td>
<td>'pig rope'</td>
</tr>
<tr>
<td>+mataséne</td>
<td>'medicine'</td>
</tr>
<tr>
<td>mimá</td>
<td>'bow'</td>
</tr>
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</table>
Appendix D: The Predications of Enga

The data presented here on Enga predications is grouped by the co-occurring verb, in order of frequency. Within the verb groups, the adjuncts have been sub-grouped as to semantic domains.

<table>
<thead>
<tr>
<th>Page number</th>
<th>Verb</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>160</td>
<td>D-1</td>
<td>lengé 'utter'</td>
</tr>
<tr>
<td>169</td>
<td>D-2</td>
<td>pingi 'do'</td>
</tr>
<tr>
<td>175</td>
<td>D-3</td>
<td>pingi 'hit'</td>
</tr>
<tr>
<td>179</td>
<td>D-4</td>
<td>singi 'hear'</td>
</tr>
<tr>
<td>181</td>
<td>D-5</td>
<td>nyíngi 'get, take'</td>
</tr>
<tr>
<td>182</td>
<td>D-6</td>
<td>miníngi 'hold in hands; control'</td>
</tr>
<tr>
<td>183</td>
<td>D-7</td>
<td>kaengé 'be (of inner states)'</td>
</tr>
<tr>
<td>184</td>
<td>D-8</td>
<td>palengé 'lie (inside)'</td>
</tr>
<tr>
<td>185</td>
<td>D-9</td>
<td>pengé 'go'</td>
</tr>
<tr>
<td>185</td>
<td>D-10</td>
<td>katengé 'stand'</td>
</tr>
<tr>
<td>186</td>
<td>D-11</td>
<td>nengé 'eat'</td>
</tr>
<tr>
<td>186</td>
<td>D-12</td>
<td>tengé 'burn'</td>
</tr>
</tbody>
</table>
D-1 lengé 'utter'

I Basic Meaning

áá 'say 'ah' in surprise'
aé 'squeal, scream/cry'
angá 'open mouth wide (as in yawn)'
aiyá 'call out name to come and get something'
alí 'exclaim'
álí 'express comfort'
alówaki 'express happiness'
ápa 'express oneself'
ápú 'say 'apu' to child'
áso 'call dog to come'
bízá 'express dislike by saying 'tsk''
bótó 'flatulate'
bulú 'sound of hum/roar'
dilindaó 'noise of bell'
dúlú/duú 'splash into water'
éé 'cry'
Gaá 'grunt'
gátá 'knock, sound of something striking (wood/iron)'
geé 'call pig or dog'
gíti 'show teeth in pleasure'
góe 'swallow'
goó gaá 'pant'
gulangalú 'stomach growls'
ísu 'exclaim 'ish''
jáa 'sound of crack/creak'
jálo jálo 'knock'
kaá 'sound of pigs/squeal'
kaakaá 'women/girls laugh together'
kaé 'pigs squeal'
káipya/kaítí 'thunders'
tóka 'whisper'
kauú 'dogs bark'
keá 'pigs squeal'
keáá 'sound of tapping/knocking'
keé 'call out'
kéké 'sound of dry rustling'
<table>
<thead>
<tr>
<th>Lengé Word</th>
<th>English Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>kiiyá kauú</td>
<td>'stomach rumbles'</td>
</tr>
<tr>
<td>kilituló</td>
<td>'grind/click teeth together'</td>
</tr>
<tr>
<td>kípú</td>
<td>'thunder'</td>
</tr>
<tr>
<td>keé kaá</td>
<td>'pant'</td>
</tr>
<tr>
<td>kítá kátó</td>
<td>'grind teeth'</td>
</tr>
<tr>
<td>kóe/koláa</td>
<td>'whistle through teeth'</td>
</tr>
<tr>
<td>kopetá</td>
<td>'speak badly'</td>
</tr>
<tr>
<td>kosée</td>
<td>'cough'</td>
</tr>
<tr>
<td>kóto</td>
<td>'cough'</td>
</tr>
<tr>
<td>kuíi</td>
<td>'gulp noisily'</td>
</tr>
<tr>
<td>kálu</td>
<td>'sound of fire/water/river'</td>
</tr>
<tr>
<td>kálu mundu</td>
<td>'snore'</td>
</tr>
<tr>
<td>kúu laó</td>
<td>'snort, sniff'</td>
</tr>
<tr>
<td>kuú</td>
<td>'snore'</td>
</tr>
<tr>
<td>kyaá</td>
<td>'pigs scream'</td>
</tr>
<tr>
<td>kyúkú/kyúú</td>
<td>'sound of crash/thud'</td>
</tr>
<tr>
<td>lambá</td>
<td>'argue/quarrel'</td>
</tr>
<tr>
<td>laiyá</td>
<td>'argue/quarrel'</td>
</tr>
<tr>
<td>létó</td>
<td>'speak clearly'</td>
</tr>
<tr>
<td>lákó</td>
<td>'tell a lie'</td>
</tr>
<tr>
<td>liíi</td>
<td>'suck back saliva'</td>
</tr>
<tr>
<td>lipá</td>
<td>'wail/mourn'</td>
</tr>
<tr>
<td>lyii</td>
<td>'mouth waters'</td>
</tr>
<tr>
<td>lúmbu lúmbu</td>
<td>'talk together at same time'</td>
</tr>
<tr>
<td>makú</td>
<td>'boast'</td>
</tr>
<tr>
<td>máma</td>
<td>'exclaim in amazement'</td>
</tr>
<tr>
<td>mána</td>
<td>'teach'</td>
</tr>
<tr>
<td>+misíi</td>
<td>'preach gospel'</td>
</tr>
<tr>
<td>mokalípi</td>
<td>'curse'</td>
</tr>
<tr>
<td>moló</td>
<td>'sound of buzz-roar'</td>
</tr>
<tr>
<td>mulí mauwá</td>
<td>'swear for truth of it'</td>
</tr>
<tr>
<td>múlú</td>
<td>'hum/roar'</td>
</tr>
<tr>
<td>múlú málú</td>
<td>'stomach growls'</td>
</tr>
<tr>
<td>muú</td>
<td>'sound of hum'</td>
</tr>
<tr>
<td>náká</td>
<td>'foul talk'</td>
</tr>
<tr>
<td>nalú</td>
<td>'talk of other line withholding pigs'</td>
</tr>
<tr>
<td>ñaá</td>
<td>'cry - infants'</td>
</tr>
<tr>
<td>ñái</td>
<td>'blow nose'</td>
</tr>
<tr>
<td>ñañá</td>
<td>'moan'</td>
</tr>
</tbody>
</table>
ηαύ 'sound of engine/hum'
ηέ 'groan'
ηέε ηάα 'pant'
ηί 'engine whines'
ηίι ηάι 'stomach growls; quarrel'
ηό 'infant cries'
ηόλε ηάλ α 'express displeasure'
ηύ 'grunt'
ηύε 'agree'
ηύεε ηάα 'pant'
ηύιι ηάα 'rave, cry out'
ηύιιι ηάι 'rave, cry out'
ηύύ 'pigs roar/grunt'
nόγό 'speak poorly'
nόνύ 'kiss'
όό 'sound of wind/water/tree falling'
pαέ 'wave arm to go away'
pέε 'laugh and play loudly'
pιι 'speak'
pό 'blow'
pulupólé 'play bamboo flute'
pόται 'speak/yell loudly'
sάμβό 'lie/tell falsehood'
sόνδό 'clam up - not talk from anger'
sύκύ 'dislike'
sύλυ 'whistle'
sύυ 'say 'psst' to get someone's attention'
tάμβο 'chew/swallow'
tάε 'birds chirp'
tαμέ ταμέ 'stutter'
tεέ/τιπά 'ask for'
tίί 'squeak/make shrill sound'
tίύιο 'whistle through teeth'
tονόδó 'be unco-operative'
tοκά 'sound of cracking - rifle, wood, stones'
tόκό 'explode, blister, expel gas'
tομβά 'noise of stomach'
tομβίπι 'gossip'
tόμβου 'speak sarcastically'
ύαά 'dogs bark'
<table>
<thead>
<tr>
<th>Word</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>usí</td>
<td>'sound made when dancing'</td>
</tr>
<tr>
<td>úsú</td>
<td>'exclaim to child to make it sleep'</td>
</tr>
<tr>
<td>ūu</td>
<td>'wind/fire sounds of <em>uu</em>'</td>
</tr>
<tr>
<td>wáí</td>
<td>'send message'</td>
</tr>
<tr>
<td>vána</td>
<td>'whisper'</td>
</tr>
<tr>
<td>wee</td>
<td>'sing a song'</td>
</tr>
<tr>
<td>wíi</td>
<td>'call out'</td>
</tr>
<tr>
<td>wóó</td>
<td>'reply with 'woó''</td>
</tr>
<tr>
<td>yaá</td>
<td>'talk loudly'</td>
</tr>
<tr>
<td>yandaítá</td>
<td>'boast'</td>
</tr>
<tr>
<td>yáe</td>
<td>'answer with 'yae''</td>
</tr>
<tr>
<td>yáká pilinó</td>
<td>'give thanks'</td>
</tr>
<tr>
<td>yakó</td>
<td>'cry/shout out'</td>
</tr>
<tr>
<td>yáo</td>
<td>'answer with 'yaó''</td>
</tr>
<tr>
<td>yasó</td>
<td>'call for dog'</td>
</tr>
<tr>
<td>yópe</td>
<td>'whistle with lips'</td>
</tr>
<tr>
<td>yúá</td>
<td>'shout in unison when happy'</td>
</tr>
<tr>
<td>yóó</td>
<td>'lament'</td>
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</table>

### Inner State

<table>
<thead>
<tr>
<th>Word</th>
<th>Meaning</th>
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<tbody>
<tr>
<td>ápu</td>
<td>'be dry'</td>
</tr>
<tr>
<td>auú</td>
<td>'like, love'</td>
</tr>
<tr>
<td>bísa</td>
<td>'dislike'</td>
</tr>
<tr>
<td>dálí</td>
<td>'make strong'</td>
</tr>
<tr>
<td>koó láme</td>
<td>'despise/treat with contempt'</td>
</tr>
<tr>
<td>kotopálu</td>
<td>'wrinkle (of inanimates)'</td>
</tr>
<tr>
<td>kuuí</td>
<td>'be humble'</td>
</tr>
<tr>
<td>kyóo</td>
<td>'be white'</td>
</tr>
<tr>
<td>lambo</td>
<td>'be weak'</td>
</tr>
<tr>
<td>lembé</td>
<td>'die'</td>
</tr>
<tr>
<td>lénge lyuú</td>
<td>'show whites of eyes in displeasure'</td>
</tr>
<tr>
<td>lemongotí</td>
<td>'be tired/sleepy'</td>
</tr>
<tr>
<td>leoámbe</td>
<td>'be dizzy/faint'</td>
</tr>
<tr>
<td>likí malikí</td>
<td>'be decided'</td>
</tr>
<tr>
<td>lumbá</td>
<td>'be shady'</td>
</tr>
<tr>
<td>lyáa</td>
<td>'make/be ready'</td>
</tr>
<tr>
<td>lyáa pyákuá/pyatosë</td>
<td>'turn up nose at'</td>
</tr>
<tr>
<td>lyuú</td>
<td>'show whites of eyes (in displeasure)'</td>
</tr>
<tr>
<td>lyúu</td>
<td>'have peace'</td>
</tr>
<tr>
<td>lyáka</td>
<td>'be dry'</td>
</tr>
<tr>
<td>EN</td>
<td>Lengo</td>
</tr>
<tr>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>qée</td>
<td>'sigh'</td>
</tr>
<tr>
<td>qenaá</td>
<td>'remember'</td>
</tr>
<tr>
<td>qyége</td>
<td>'sigh deeply'</td>
</tr>
<tr>
<td>náwe/naweé</td>
<td>'be stingy/selfish'</td>
</tr>
<tr>
<td>ŋulaŋálú</td>
<td>'express displeasure'</td>
</tr>
<tr>
<td>pápá</td>
<td>'be clumsy'</td>
</tr>
<tr>
<td>papáyá/kóndó</td>
<td>'have pity/mercy'</td>
</tr>
<tr>
<td>púpú</td>
<td>'be strong'</td>
</tr>
<tr>
<td>saá/taá</td>
<td>'be empty/finished'</td>
</tr>
<tr>
<td>sii</td>
<td>'be disgusted'</td>
</tr>
<tr>
<td>súkú</td>
<td>'dislike'</td>
</tr>
<tr>
<td>tándó</td>
<td>'be tame/weak/placid'</td>
</tr>
<tr>
<td>tmédiai</td>
<td>'be wild/strong/crazy'</td>
</tr>
<tr>
<td>taiyú</td>
<td>'be humble/weak'</td>
</tr>
<tr>
<td>talapú</td>
<td>'be strong/well-made' (?)</td>
</tr>
<tr>
<td>támbo</td>
<td>'be weak'</td>
</tr>
<tr>
<td>tánda</td>
<td>'disapprove'</td>
</tr>
<tr>
<td>tangá</td>
<td>'be stubborn/hard/strong'</td>
</tr>
<tr>
<td>tangá tangá</td>
<td>'be proud'</td>
</tr>
<tr>
<td>taipú</td>
<td>'do well'</td>
</tr>
<tr>
<td>talá</td>
<td>'awaken'</td>
</tr>
<tr>
<td>tii</td>
<td>'pain searingly'</td>
</tr>
<tr>
<td>tiokó</td>
<td>'be straight'</td>
</tr>
<tr>
<td>tómbé</td>
<td>'be wet'</td>
</tr>
<tr>
<td>tonsó</td>
<td>'be unco-operative, show disapproval'</td>
</tr>
<tr>
<td>tuíí</td>
<td>'be tense/firm'</td>
</tr>
<tr>
<td>úú</td>
<td>'be shady'</td>
</tr>
<tr>
<td>wéé</td>
<td>'shame by showing backside'</td>
</tr>
<tr>
<td>yáka</td>
<td>'wake up'</td>
</tr>
<tr>
<td>yátu</td>
<td>'finish (of pain, sickness, sound)'</td>
</tr>
</tbody>
</table>

### III Motion

<table>
<thead>
<tr>
<th>EN</th>
<th>Lengo</th>
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</thead>
<tbody>
<tr>
<td>aemé</td>
<td>'hide'</td>
</tr>
<tr>
<td>akémá</td>
<td>'council'</td>
</tr>
<tr>
<td>alemále</td>
<td>'twitch, jerk'</td>
</tr>
<tr>
<td>amí</td>
<td>'cover (up)'</td>
</tr>
<tr>
<td>auma</td>
<td>'mark with eye, select'</td>
</tr>
<tr>
<td>aválí</td>
<td>'encircle/circle'</td>
</tr>
<tr>
<td>daló</td>
<td>'injure'</td>
</tr>
<tr>
<td>depá</td>
<td>'to prepare, make ready (arm oneself)'</td>
</tr>
<tr>
<td>Word</td>
<td>Meaning</td>
</tr>
<tr>
<td>----------</td>
<td>-------------------------------------------------------------------------</td>
</tr>
<tr>
<td>dií</td>
<td>'distribute - inclusively' (?)</td>
</tr>
<tr>
<td>doó doó</td>
<td>'hold and shake (spear) ready to throw'</td>
</tr>
<tr>
<td>dopá</td>
<td>'drip'</td>
</tr>
<tr>
<td>dóli</td>
<td>'drive stakes in solidly, make strong'</td>
</tr>
<tr>
<td>goló</td>
<td>'to boil (of water)'</td>
</tr>
<tr>
<td>kandayokó</td>
<td>'ignore purposely by looking around elsewhere'</td>
</tr>
<tr>
<td>kaí</td>
<td>'pour out, spill'</td>
</tr>
<tr>
<td>káipya</td>
<td>'make way, give room'</td>
</tr>
<tr>
<td>káiyu</td>
<td>'rub'</td>
</tr>
<tr>
<td>kápya</td>
<td>'make way, give room'</td>
</tr>
<tr>
<td>keke káki</td>
<td>'swing legs'</td>
</tr>
<tr>
<td>kilí</td>
<td>'carry away (of birds)'</td>
</tr>
<tr>
<td>kópo</td>
<td>'fall down, descend'</td>
</tr>
<tr>
<td>kúndí</td>
<td>'sacrifice, offer'</td>
</tr>
<tr>
<td>kuí</td>
<td>'bend sideways'</td>
</tr>
<tr>
<td>lánga</td>
<td>'sprout'</td>
</tr>
<tr>
<td>láono</td>
<td>'circumscribe'</td>
</tr>
<tr>
<td>lyáá</td>
<td>'swing arms - as with axe to hit someone'</td>
</tr>
<tr>
<td>lyáa/lyóo</td>
<td>'pull'</td>
</tr>
<tr>
<td>lyándá</td>
<td>'shake (off)'</td>
</tr>
<tr>
<td>lyakalyáká</td>
<td>'wiggle, shake'</td>
</tr>
<tr>
<td>lyóó</td>
<td>'scrape sweet potato cooked in coals'</td>
</tr>
<tr>
<td>lyúú</td>
<td>'to skin off bark'</td>
</tr>
<tr>
<td>málo</td>
<td>'appear'</td>
</tr>
<tr>
<td>oili</td>
<td>'crumble dirt, roll grass'</td>
</tr>
<tr>
<td>paí/pií</td>
<td>'close - gate, door'</td>
</tr>
<tr>
<td>páale</td>
<td>'wave arm to go'</td>
</tr>
<tr>
<td>pápá</td>
<td>'shake, shiver'</td>
</tr>
<tr>
<td>péé</td>
<td>'fly'</td>
</tr>
<tr>
<td>péle</td>
<td>'shuttle string for net bag'</td>
</tr>
<tr>
<td>pilí pyalé</td>
<td>'throw out'</td>
</tr>
<tr>
<td>pokó</td>
<td>'grow (of plants)'</td>
</tr>
<tr>
<td>pungumangá</td>
<td>'cracks open (of earth)'</td>
</tr>
<tr>
<td>pyákuá</td>
<td>'turn aside, miss'</td>
</tr>
<tr>
<td>pyalé</td>
<td>'throw (away)'</td>
</tr>
<tr>
<td>pyatoí</td>
<td>'catch, throw'</td>
</tr>
<tr>
<td>pyukú</td>
<td>'shake, stir, move'</td>
</tr>
<tr>
<td>sáwande</td>
<td>'succeed, triumph'</td>
</tr>
<tr>
<td>taká</td>
<td>'bend (of knee, elbow)'</td>
</tr>
<tr>
<td>tálé</td>
<td>'free, untie'</td>
</tr>
</tbody>
</table>
támbó  'chew, swallow'
támbú  'stick fast, adhere'
táo    'release water from dam'
tátá   'untie'
téálé  'scatter'
tindíki 'stretch'
títi   'stretch'
titiapú 'swing back and forth from a fixed point'
tumbitúmbí 'grow, increase'
túú    'push, press, shove'
uú     'grow in groups/profusion'
wangáyó 'look over'
walú   'shake, be amazed; have malaria'
yándá 'sink, drive into'
yándé 'shake head up and down'
yamé   'grow large (of foliage)'
yóó    'pull, stretch'
yándá 'stretch'

IV Cut/Break
kákua  'split against grain'
kolé   'divide'
lépo   'cut in two'
létō   'cut in two'
loó    'cut/break off (as shelling corn)'
málo   'to cut part on purpose'
pilí pyalé 'cut and divide'
popo   'break'

V Pidgin Loans
+bakatapú 'ruin, destroy'
+bóló    'boil'
+bósa/bóta 'vote'
+búña   'assemble'
+daunimí 'down, beat'
+kámapu 'arrive'
+kása    'play cards'
+kósa/kósimi 'court'
+kutúngusa 'crooked'
lakíi   'gamble'
+lesísa/letésa 'election, race'
+letésa 'recess'
+liti 'read'
+lúsa 'lose, be lost'
+makimí 'mark'
+misii 'preach, worship'
+pasatóle 'go on patrol'
+pósimi 'boss, supervise'
+pulapú 'be full'
+púsa 'boss'
+púsi 'call cat to come'
+sakimí 'hop, jump'
+sanása 'change - money'
+sistóñô 'be stubborn/strong'
+sukúlu 'attend school'
+supimí 'swim'
+wini 'win, triumph'
+wása 'wait'

VI Play

kaná síli 'play jacks'
+kása 'play cards'
+kupi dii 'play with a top'
+lakíi 'gamble, play cards'
+mále 'play'
+súu 'play - sledding'
+tombaépí 'play'

VII Misc.

bipembapa 'flap (of wings)'
bóu 'fly'
dókó 'fly'
kákí 'group of people'
kámu 'raw food' (?)
káyo 'show buttocks to shame'
keé 'pay brideprice'
kolapánali 'shrink from drying'
kópo 'fall down, descend'
lembé 'die'
liná 'catch'
lomá/lumá 'be shady'
<table>
<thead>
<tr>
<th>Word</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>mána</td>
<td>'teach'</td>
</tr>
<tr>
<td>palándí</td>
<td>'watch closely' (?)</td>
</tr>
<tr>
<td>páta páta</td>
<td>'hold carefully'</td>
</tr>
<tr>
<td>páte</td>
<td>'ring tree to kill it'</td>
</tr>
<tr>
<td>pée</td>
<td>'fly'</td>
</tr>
<tr>
<td>pipuli</td>
<td>'make magic'</td>
</tr>
<tr>
<td>telé</td>
<td>'hold firmly'</td>
</tr>
<tr>
<td>tepé</td>
<td>'select'</td>
</tr>
<tr>
<td>yuú lyándá</td>
<td>'shake/knock dirt from roots'</td>
</tr>
</tbody>
</table>
D-2 pingí 'do, make'

I Basic Meaning

akaípu  'wear cordyline'
elyóko  'make string'
kalái  'do work'
kané/ândá  'build (of fence/house)'
kápa  'be able/capable'
kií  'mend'
koó  'wrong'
koyá  'finish'
nuá  'make netbag'
taputí  'protect, defend, assist'
tóko  'make/build a platform'
walé  'roll string on thigh'
yandá  'fight with weapons'
yatí  'decorate'
yokó  'make/produce leaves (of plants)'

II Inter State

ámboi  'be in estrus'
auí  'do well'
ayéne  'be hot, sweaty'
bóko  'be weak/loose'
élya  'be ashamed'
enapótí  'be hot, sweat'
ándo  'dry'
kaá/kaú  'taste bitter/bad/hot'
kaimála  'be dirty'
kálya  'handsome of men'
kaméá  'do well'
kápa  'be able'
káto  'be bitter/sting'
kéndá  'be heavy'
kípa  'like (of inanimates/food)'
kombéa  'dream'
kóngdo  'be heavy/difficult'
koó  'sin, do wrong'
kupá  'be cold'
loó  'be barren (of plants)
máká  'be tired of someone or something'
mályá  'attractive (of women)'
mindimandi  'be naughty'
mindinane  'get angry for nothing'
mokotítí  'be asleep/numb (of a limb)'
myúku  'stink, nauseate'
nangá  'give up and die'
nené  'make a face in disgust'
nikiníki  'be angry/irritated'
uú  'swell'
páka  'scare'
papató  'be cold'
popó/tándá  'be in pain'
púngú  'stink'
sáá  'smell'
sókó  'be tired'
tatáké  'forget, not know'
téndé  'tastes good/sweet'
tiáka  'be satisfied after eating'
tí  'be light, shine'
tómba  'be dull'
túmbi túmbi  'be stubborn'
tundúma  'smell good/pleasant'
uú  'be dry inside'
tuú  'be stubborn/obstinate'
umbi  'be bald'
wámbu  'be filled out' (?)
wámbu  'be skillful'
wáingi  'good'
wámu  'useless'
wáti wáti  'lose appetite'
yála  'be shamed'
yamá kákó  'be stingy; curse'
yuúi  'itch, scratch'
yukú yukú  'tickle'

III Payments
laitá  'pay live pigs at death'
kúmanda  'return cooked pig at death'
pandétá  'death payment'
<table>
<thead>
<tr>
<th>Verb</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>tée</td>
<td>'death payment - live pigs'</td>
</tr>
<tr>
<td>pyamoná</td>
<td>'exchange cut meat'</td>
</tr>
<tr>
<td>makú</td>
<td>'present pigs at tée; payment to maternal line at child's death'</td>
</tr>
<tr>
<td>tée káita</td>
<td>'payment to kill someone else'</td>
</tr>
<tr>
<td>yaé</td>
<td>'perform pig killing ceremony'</td>
</tr>
<tr>
<td>luú</td>
<td>'pay for magic'</td>
</tr>
<tr>
<td>IV Play</td>
<td></td>
</tr>
<tr>
<td>kyangauwále</td>
<td>'play cat's cradle'</td>
</tr>
<tr>
<td>kaú</td>
<td>'fight with mud for fun'</td>
</tr>
<tr>
<td>mále</td>
<td>'play'</td>
</tr>
<tr>
<td>néne</td>
<td>'play'</td>
</tr>
<tr>
<td>V Tie/Untie</td>
<td></td>
</tr>
<tr>
<td>ápaa</td>
<td>'tie/wrap in a sling'</td>
</tr>
<tr>
<td>langapá</td>
<td>'plait a wreath'</td>
</tr>
<tr>
<td>langó/landí</td>
<td>'tie/bind'</td>
</tr>
<tr>
<td>mapó</td>
<td>'roll/wind (as string)'</td>
</tr>
<tr>
<td>monge</td>
<td>'unravel (of string/rope)'</td>
</tr>
<tr>
<td>yakí/yanjí</td>
<td>'tie/bind'</td>
</tr>
<tr>
<td>yákú</td>
<td>'unravel'</td>
</tr>
<tr>
<td>VI Misc.</td>
<td></td>
</tr>
<tr>
<td>laitáka/lakíta</td>
<td>'show'</td>
</tr>
<tr>
<td>látó/látú</td>
<td>'show'</td>
</tr>
<tr>
<td>wámu</td>
<td>'hide'</td>
</tr>
<tr>
<td>yaló</td>
<td>'hide'</td>
</tr>
<tr>
<td>golé</td>
<td>'hide'</td>
</tr>
<tr>
<td>éma</td>
<td>'have motion'</td>
</tr>
<tr>
<td>goya</td>
<td>'wiggle'</td>
</tr>
<tr>
<td>minákó</td>
<td>'turn/stir hand'</td>
</tr>
<tr>
<td>talé</td>
<td>'disperse/scatter (of people)'</td>
</tr>
<tr>
<td>ámbí</td>
<td>'scatter/spread'</td>
</tr>
<tr>
<td>andíkí/anjíkí</td>
<td>'flatter; bribe'</td>
</tr>
<tr>
<td>álo</td>
<td>'lose'</td>
</tr>
<tr>
<td>aló/alóo</td>
<td>'exchange; substitute'</td>
</tr>
<tr>
<td>ámbè</td>
<td>'ramble'</td>
</tr>
<tr>
<td>ámbè</td>
<td>'peel off, husk/shell'</td>
</tr>
<tr>
<td>ándu</td>
<td>'cover, put a lid on'</td>
</tr>
<tr>
<td>atéte</td>
<td>'oppose'</td>
</tr>
</tbody>
</table>
bátá/
bitambatau 'flap (of wings)'
elyámbu 'gather'
gélengele 'disease of sweet potato' (?)
ímbu 'sprout (of plants)'
ímí 'mold'
ín 'set on' (?)
kambapúpu 'mark arm with spit for counting'
kándó 'pile up'
kaé 'rub on (as oil)'
kanjönglele 'procrastinate at work'
kánju 'search for'
kake 'shape with hands'
káki 'fold (of rope)'
kálo 'step across/over'
kapoma 'shape with hands'
katekéta 'slip'
keáno 'fill up from another container'
keé/kií 'break/split with grain with knife'
kéndá 'group/gather (of inanimates)' (?)
kéló 'peel (of vegetable)'
kelyakélya 'slip'
kétá 'cook/steam in ground oven'
kewána 'fill up with liquid'
kíango 'beckon to come with hand'
kimbutilití 'fall asleep (of a limb)'
kindó 'scratch to get attention secretly'
kilyombá 'gesture of contempt'
koé 'finish'
kokótó 'strip leaves off tree'
koyá 'finish'
kónda 'gather'
kumbu 'seal ground oven'
kyoó 'trickle (of water)'
laitáka 'show'
laiyáka 'hold in trust for orphan'
lambú 'stomp'
landá 'disappear'
langatale 'trespass in garden' (?)
laká 'scabies of pig'
<table>
<thead>
<tr>
<th>Word</th>
<th>Translation</th>
</tr>
</thead>
<tbody>
<tr>
<td>lámá</td>
<td>'mature (of pigs)'</td>
</tr>
<tr>
<td>láú</td>
<td>'open up'</td>
</tr>
<tr>
<td>lémbá</td>
<td>'sneak away from someone looking for you'</td>
</tr>
<tr>
<td>lítá</td>
<td>'sweet talk/flatter'</td>
</tr>
<tr>
<td>lókó</td>
<td>'expose oneself (in anger (?))'</td>
</tr>
<tr>
<td>lóngo</td>
<td>'shape with hands'</td>
</tr>
<tr>
<td>líku/lúngú</td>
<td>'scrap out (inside of gourd to make water container)'</td>
</tr>
<tr>
<td>lúngú lúngú</td>
<td>'girl's magic'</td>
</tr>
<tr>
<td>lúú</td>
<td>'finish - talk/singsing'</td>
</tr>
<tr>
<td>lyándi</td>
<td>'get all wet'</td>
</tr>
<tr>
<td>lyéke</td>
<td>'become large in size (of pigs)'</td>
</tr>
<tr>
<td>lyaŋóle</td>
<td>'give example'</td>
</tr>
<tr>
<td>lyuú</td>
<td>'layer ground oven for cooking'</td>
</tr>
<tr>
<td>lyuú</td>
<td>'get fibers for thread making'</td>
</tr>
<tr>
<td>makandé</td>
<td>'try, tempt'</td>
</tr>
<tr>
<td>máki</td>
<td>'stand side by side'</td>
</tr>
<tr>
<td>makóle</td>
<td>'make one's round'</td>
</tr>
<tr>
<td>málu/yúlí</td>
<td>'bury'</td>
</tr>
<tr>
<td>máu</td>
<td>'gather, pile up'</td>
</tr>
<tr>
<td>minákó</td>
<td>'turn/stir hand'</td>
</tr>
<tr>
<td>mondó</td>
<td>'adopt/care for (humans/dogs/pigs)'</td>
</tr>
<tr>
<td>muláó</td>
<td>'eats spots into pod vegetables'</td>
</tr>
<tr>
<td>múti</td>
<td>'cook on top of fire'</td>
</tr>
<tr>
<td>nambó nambó</td>
<td>'slander'</td>
</tr>
<tr>
<td>naloá</td>
<td>'speak vulgarly'</td>
</tr>
<tr>
<td>namú náe</td>
<td>'speak angrily'</td>
</tr>
<tr>
<td>née</td>
<td>'do magic; sacrifice to ghosts'</td>
</tr>
<tr>
<td>nelenelé</td>
<td>'disease of sweet potato'</td>
</tr>
<tr>
<td>némá</td>
<td>'bird feeds baby bird'</td>
</tr>
<tr>
<td>nepo</td>
<td>'play at fighting'</td>
</tr>
<tr>
<td>nenáta</td>
<td>'test to see if eel is in trap/hook'</td>
</tr>
<tr>
<td>néné</td>
<td>'hum, buzz'</td>
</tr>
<tr>
<td>niki niki</td>
<td>'bite on hard object'</td>
</tr>
<tr>
<td>núnya</td>
<td>'kiss'</td>
</tr>
<tr>
<td>pambá</td>
<td>'reheat food'</td>
</tr>
<tr>
<td>pákó</td>
<td>'peel off husk/shell (not skin)'</td>
</tr>
<tr>
<td>pálo</td>
<td>'dam up (of water)'</td>
</tr>
<tr>
<td>páina</td>
<td>'dry season, fair weather'</td>
</tr>
<tr>
<td>Word</td>
<td>Meaning</td>
</tr>
<tr>
<td>------------</td>
<td>--------------------------------------------------------------</td>
</tr>
<tr>
<td>pandá</td>
<td>'set leaf on head as a base for feather decoration'</td>
</tr>
<tr>
<td>pánjú</td>
<td>'scar'</td>
</tr>
<tr>
<td>pápu</td>
<td>'miss, dodge'</td>
</tr>
<tr>
<td>patóko</td>
<td>'peel/skin'</td>
</tr>
<tr>
<td>pau</td>
<td>'scrape ashes off cooked sweet potato'</td>
</tr>
<tr>
<td>peé</td>
<td>'stuff intestine to make sausage'</td>
</tr>
<tr>
<td>pendu</td>
<td>'lick'</td>
</tr>
<tr>
<td>pimapíma</td>
<td>'work black magic'</td>
</tr>
<tr>
<td>tandi</td>
<td>'lick'</td>
</tr>
<tr>
<td>pipuli</td>
<td>'work magic'</td>
</tr>
<tr>
<td>poó</td>
<td>'blow fire'</td>
</tr>
<tr>
<td>putítí</td>
<td>'shake in anticipation; cramp'</td>
</tr>
<tr>
<td>puú</td>
<td>'fill up'</td>
</tr>
<tr>
<td>salé/talé</td>
<td>'divorce; scatter/disperse'</td>
</tr>
<tr>
<td>siki</td>
<td>'rise to height (of smoke)'</td>
</tr>
<tr>
<td>talípi</td>
<td>'distribute'</td>
</tr>
<tr>
<td>táma</td>
<td>'praise/honor, thank'</td>
</tr>
<tr>
<td>tangáí</td>
<td>'split bark'</td>
</tr>
<tr>
<td>tápá</td>
<td>'prepare'</td>
</tr>
<tr>
<td>tembá/tembó</td>
<td>'heat up food'</td>
</tr>
<tr>
<td>tii</td>
<td>'change into a ghost'</td>
</tr>
<tr>
<td>tikilyá</td>
<td>'cut lengthwise'</td>
</tr>
<tr>
<td>tipá</td>
<td>'ask'</td>
</tr>
<tr>
<td>tipatapú</td>
<td>'cut/break lengthwise'</td>
</tr>
<tr>
<td>típú típú</td>
<td>'gossip'</td>
</tr>
<tr>
<td>tísa</td>
<td>'cut/break'</td>
</tr>
<tr>
<td>tóma</td>
<td>'fasten with lid'</td>
</tr>
<tr>
<td>tómó</td>
<td>'shake/vibrate'</td>
</tr>
<tr>
<td>toné</td>
<td>'fill up netbag'</td>
</tr>
<tr>
<td>tóngo</td>
<td>'double up fists'</td>
</tr>
<tr>
<td>tonítica</td>
<td>'throw/hit straight'</td>
</tr>
<tr>
<td>totóma</td>
<td>'make forked for house building'</td>
</tr>
<tr>
<td>uatí</td>
<td>'praise' (?)</td>
</tr>
<tr>
<td>umbi</td>
<td>'be bald'</td>
</tr>
<tr>
<td>wáipa</td>
<td>'add on/join together'</td>
</tr>
<tr>
<td>wámbu</td>
<td>'be skilful'</td>
</tr>
<tr>
<td>wátá wátá</td>
<td>'knock'</td>
</tr>
<tr>
<td>yandó</td>
<td>'dry (by fire)'</td>
</tr>
<tr>
<td>yóngé péé</td>
<td>'wear manufactured clothes'</td>
</tr>
</tbody>
</table>
D-3 pingi 'hit, strike'

I Basic Meaning

angí 'have a landslide'
áili 'after-effects of lightning strike'
aló 'make fire by friction with bamboo'
kánda 'beat with a bamboo pole'
kaú 'fight with mud'
kimbutia 'kick'
kindúta 'hail'
konjame 'whip'
lánga 'make fire glow'
laté 'cut/slash (of weeds/grass)'
minjílí 'have a landslide'
múmbá 'scar'
nánga 'sharpen'
néngne 'sharpen' (néngne = 'tooth, horn, tusk')
patá 'split pandanus nut'
pepó 'to slash down vegetation'
tánú 'mow grass'
wáné maíta 'have birth pains'
yaé 'kill pigs - sequel to tée'
yuú wápáka 'lightning strikes'

II Peel

káká 'skin peels off'
kéló 'peel (of vegetables)'
kombá 'shed skin'
lómba 'shed skin'
pakóna 'peel off husk/shell'
táka 'peel'
yanú 'peel/strip (of bark/skin)'

III Cut

lámbá 'cut/break with grain'
lánga 'cut/break with grain'
leé 'shorten by breaking'
lyóó 'cut in pieces'
mándu 'slice, cut up'
túú 'split (as pitpit)'

...
paté/patá 'split wood, nut'
nánga 'sharpen'

IV Payments
betá 'pay restitution'
kímbu 'pay back, revenge'
nyokó 'to repay'
saándi 'give loan with expectation of return with interest'
watápa 'pay marriage payment'
yáno/yánu 'repay'

V Loan Items
+kosá 'play ball'
+lóko 'lock'
+níli 'inject; nail'
+pépa 'write'
+pusá 'play soccer'
+takísa 'pay taxes'
+wasawása 'wash'

VI Misc.
sángá/sánga 'cover up'
yámbé/yambi 'cover up'
yamé/yamí 'cover up'
yánu/yáno 'answer'
itingi 'answer'
wangatátó 'wriggle'
wángó wángó 'turn around'
malá 'play guess which hand'
aí 'stink'
álo 'run'
ámbé 'do by accident/unknowingly'
angainá 'have a cold'
asémangá/asimangá 'sneeze'
atómé 'recount news'
aúti 'open, remove contents'
beé 'have sore matted eyes'
elyámbo 'gather'
<table>
<thead>
<tr>
<th>English</th>
<th>Pangi</th>
</tr>
</thead>
<tbody>
<tr>
<td>éngeme</td>
<td>'bribe to kill/injure'</td>
</tr>
<tr>
<td>eteké</td>
<td>'like/love'</td>
</tr>
<tr>
<td>itákí</td>
<td>'read/count'</td>
</tr>
<tr>
<td>kái</td>
<td>'rub on (of paint/oil)'</td>
</tr>
<tr>
<td>kolo/koto</td>
<td>'magic'</td>
</tr>
<tr>
<td>komé</td>
<td>'sprout'</td>
</tr>
<tr>
<td>kumbu</td>
<td>'start a singsing'</td>
</tr>
<tr>
<td>kundí</td>
<td>'miss'</td>
</tr>
<tr>
<td>lama</td>
<td>'tame (of pigs)'</td>
</tr>
<tr>
<td>leé</td>
<td>'naughty child'</td>
</tr>
<tr>
<td>lií</td>
<td>'fall down'</td>
</tr>
<tr>
<td>lítá</td>
<td>'mark off (boundary)'</td>
</tr>
<tr>
<td>lombelómbe</td>
<td>'be incapable'</td>
</tr>
<tr>
<td>lúngu</td>
<td>'be angry within'</td>
</tr>
<tr>
<td>maá</td>
<td>'appear'</td>
</tr>
<tr>
<td>mámbo</td>
<td>'praise/worship'</td>
</tr>
<tr>
<td>nángátu</td>
<td>'hiccough'</td>
</tr>
<tr>
<td>némá</td>
<td>'black magic with corpse'</td>
</tr>
<tr>
<td>nongó</td>
<td>'be clumsy/incapable'</td>
</tr>
<tr>
<td>paa</td>
<td>'cross arms on chest'</td>
</tr>
<tr>
<td>paká</td>
<td>'brace (of banana trees)'</td>
</tr>
<tr>
<td>pití</td>
<td>'close'</td>
</tr>
<tr>
<td>pongéma</td>
<td>'blacken with soot/charcoal'</td>
</tr>
<tr>
<td>póngo</td>
<td>'tie knot'</td>
</tr>
<tr>
<td>pókó</td>
<td>'cross'</td>
</tr>
<tr>
<td>póo</td>
<td>'work black magic'</td>
</tr>
<tr>
<td>póo</td>
<td>'miss'</td>
</tr>
<tr>
<td>púmbu</td>
<td>'be muscular/filled out'</td>
</tr>
<tr>
<td>pupú</td>
<td>'pierce'</td>
</tr>
<tr>
<td>pyóngo</td>
<td>'soothsay; fortune-tell'</td>
</tr>
<tr>
<td>pyángá</td>
<td>'belch'</td>
</tr>
<tr>
<td>tángó</td>
<td>'be strong/hard'</td>
</tr>
<tr>
<td>teé</td>
<td>'begin'</td>
</tr>
<tr>
<td>tépé</td>
<td>'put a barrier so something won't fall down'</td>
</tr>
<tr>
<td>taú</td>
<td>'shape/press with hands'</td>
</tr>
<tr>
<td>tóle</td>
<td>'be with'</td>
</tr>
<tr>
<td>tombó</td>
<td>'mark off (boundary)'</td>
</tr>
<tr>
<td>tómoka</td>
<td>'bribe to injure/kill'</td>
</tr>
<tr>
<td>topó</td>
<td>'buy' (also topó nyíngi 'sell')</td>
</tr>
<tr>
<td>Word</td>
<td>Meaning</td>
</tr>
<tr>
<td>--------</td>
<td>------------------------------</td>
</tr>
<tr>
<td>túngi</td>
<td>'fire; be in authority'</td>
</tr>
<tr>
<td>túmbi</td>
<td>'be stubborn/obstinate'</td>
</tr>
<tr>
<td>túmbu</td>
<td>'be stunted'</td>
</tr>
<tr>
<td>tumú</td>
<td>'wrap/bind'</td>
</tr>
<tr>
<td>yáe</td>
<td>'mourn, weep'</td>
</tr>
<tr>
<td>yaíná</td>
<td>'be sick'</td>
</tr>
<tr>
<td>yaú</td>
<td>'shout out'</td>
</tr>
<tr>
<td>D-4 singi</td>
<td>'hear'</td>
</tr>
<tr>
<td>-----------</td>
<td>--------</td>
</tr>
<tr>
<td>aí</td>
<td>'smell, sniff'</td>
</tr>
<tr>
<td>baná kapá</td>
<td>'be bald'</td>
</tr>
<tr>
<td>élya</td>
<td>'be ashamed'</td>
</tr>
<tr>
<td>ende (M)/</td>
<td>'warm oneself'</td>
</tr>
<tr>
<td>endó (T)</td>
<td></td>
</tr>
<tr>
<td>káka (T)/</td>
<td>'loosen, untie'</td>
</tr>
<tr>
<td>kaká (L)</td>
<td></td>
</tr>
<tr>
<td>kakáná</td>
<td>'be left over/undone'</td>
</tr>
<tr>
<td>káme</td>
<td>'forget'</td>
</tr>
<tr>
<td>kepá</td>
<td>'restitution for a killing (paid in pig quarters)'</td>
</tr>
<tr>
<td>kií</td>
<td>'avoid territory of slain enemy'</td>
</tr>
<tr>
<td>kií</td>
<td>'be abandoned (of house)'</td>
</tr>
<tr>
<td>kímbu</td>
<td>'sing at courting party'</td>
</tr>
<tr>
<td>kisá</td>
<td>'accuse'</td>
</tr>
<tr>
<td>lamángá</td>
<td>'together with' (?)</td>
</tr>
<tr>
<td>langálú</td>
<td>'show anger/disappointment'</td>
</tr>
<tr>
<td>latilátí</td>
<td>'speculate'</td>
</tr>
<tr>
<td>lóma</td>
<td>'pray; dedicate/sacrifice to the spirits'</td>
</tr>
<tr>
<td>lópo</td>
<td>'famine'</td>
</tr>
<tr>
<td>lyakí</td>
<td>'lay fallow (short time with only grasses growing)'</td>
</tr>
<tr>
<td>máki</td>
<td>'mark'</td>
</tr>
<tr>
<td>mapú</td>
<td>'plague comes and many die'</td>
</tr>
<tr>
<td>mapú</td>
<td>'lay fallow (short time)'</td>
</tr>
<tr>
<td>mondó</td>
<td>'mound up'</td>
</tr>
<tr>
<td>múku</td>
<td>'fertile (of land)'</td>
</tr>
<tr>
<td>nánga</td>
<td>'sharpen (with file or stone)'</td>
</tr>
<tr>
<td>pakélyó</td>
<td>'scar'</td>
</tr>
<tr>
<td>palé palé</td>
<td>'be overgrown/fallow'</td>
</tr>
<tr>
<td>pándu</td>
<td>'trap'</td>
</tr>
<tr>
<td>páté</td>
<td>'wash out (bridge)'</td>
</tr>
<tr>
<td>pií</td>
<td>'obey, listen/hear'</td>
</tr>
<tr>
<td>pyalí</td>
<td>'summon/beg'</td>
</tr>
<tr>
<td>sanda</td>
<td>'break off'</td>
</tr>
<tr>
<td>titíki</td>
<td>'stretch'</td>
</tr>
<tr>
<td>tombá</td>
<td>'be bounded, be fenced'</td>
</tr>
<tr>
<td>tombáuli</td>
<td>'fall down on face, cover face with hands'</td>
</tr>
<tr>
<td>tombó</td>
<td>'mark'</td>
</tr>
</tbody>
</table>
tukúme          'rub noses'
tundumá          'smell good'
túpí             'be stiff/unconscious, faint'
yámbo yámbo     'be light (not heavy)'
yanái apáka/     'strike (of lightning)'
                 yánái tamangali
yapí             'give to give to someone else'
yyú apáka        'strike (of lightning)'
<table>
<thead>
<tr>
<th>nyíngi</th>
<th>'get, take'</th>
</tr>
</thead>
<tbody>
<tr>
<td>D-5</td>
<td></td>
</tr>
</tbody>
</table>

| anígi       | 'break down (mountains)'  |
| até          | 'tattoo'              |
| dengé        | 'repay, pay back'    |
| énda         | 'copulate'           |
| énote        | 'shave sideburns'    |
| imámbú       | 'take a holiday, rest' |
| ípa          | 'stroke pig before killing (women only)' |
| ípa          | 'be baptized'         |
| kaé lão       | 'magic-rub pigs before killing' |
| kaímbu       | 'receive baptism'     |
| kakó          | 'remove skin from drum' |
| kayá         | 'compost mounds in garden' |
| kíí          | 'take and lead by hand' |
| kíngi         | 'shake hands'         |
| kípu         | 'misbehave'           |
| kitútu       | 'wrap around'         |
| kumbú        | 'shade'               |
| leé          | 'be stunted'          |
| luú          | 'pay (especially for sorcerer)' |
| mána         | 'learn, catechumen'  |
| mangá        | 'jump down'           |
| móka         | 'loose/free'          |
| mómo         | 'rip/tear (paper)'    |
| móya         | 'inherit'             |
| nángala      | 'dig a ditch'         |
| nyokó        | 'take/pull back'      |
| páke         | 'steal'               |
| pindí        | 'cut/split across grain' |
| putútu       | 'get string used on wigs' |
| sána/syána   | 'dig a ditch/boundary' |
| támá         | 'release from trap'   |
| tándá        | 'afflict'             |
| tíi          | 'stroke pig for sacrifice' |
| tílyá tílyá  | 'persecute' (?)       |
| topó         | 'sell'                |
| túu          | 'rip open'            |
| waá          | 'steal'               |
| yainá        | 'become sick'         |
| yapaó        | 'choose/elect'        |
| yólé         | 'be paid salary/wages' |
D-6 miningi 'hold in hands; control'

angamáe 'yawn'
buú 'fall down and break, be drunk'
ía 'copulate'
itá 'conquer, win over'
káita 'befriend'
kenángé 'crochet (intestines for cooking)'
kékó 'build a fire by friction'
kikiki 'close door with a barrier of wood and rope to lock it'
kuní 'level mound for planting'
langálú 'swear (oath/vow)'
lélyo 'be incompetent'
lyáá 'steer/drive (of car/plane)'
maa 'stand guard/watchman'
maá 'hold every one'
makéá 'make fire by friction'
makimí 'mark (boundary)'
masi 'guard'
matípu 'question in court'
mímí 'do correctly'
minjukú 'crumble with fingers'
mókó 'leave footprints'
opóñé 'show hospitality'
pánga pánga 'have skin disease - scabies?'(?)
pépé 'do magic with arrow'
timina 'flood'
timína 'braid (of men)'
títowali 'quake (of earth)'
tumú 'hold and elevate, categorize'
waímá 'apportion/divide'
D-7  **Kaengé**  'be (of inner states)'

<table>
<thead>
<tr>
<th>Term</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>ayéne</td>
<td>'be hot, heated; to sweat'</td>
</tr>
<tr>
<td>auú</td>
<td>'like, love'</td>
</tr>
<tr>
<td>élya</td>
<td>'be ashamed, shame'</td>
</tr>
<tr>
<td>enapóti</td>
<td>'sweat'</td>
</tr>
<tr>
<td>eteké</td>
<td>'like, love'</td>
</tr>
<tr>
<td>gií</td>
<td>'laugh'</td>
</tr>
<tr>
<td>ímbu</td>
<td>'be angry'</td>
</tr>
<tr>
<td>káiyo</td>
<td>'expose buttocks to someone'</td>
</tr>
<tr>
<td>kekéná</td>
<td>'be fed up; tired of someone/something'</td>
</tr>
<tr>
<td>kéndá</td>
<td>'be heavy'</td>
</tr>
<tr>
<td>kípa</td>
<td>'like/love (of inanimates ?)'</td>
</tr>
<tr>
<td>kóndó</td>
<td>'have mercy/pity'</td>
</tr>
<tr>
<td>kúli</td>
<td>'be stubborn'</td>
</tr>
<tr>
<td>lemongotí</td>
<td>'be tired/sleepy'</td>
</tr>
<tr>
<td>lóko</td>
<td>'be tired of someone/something'</td>
</tr>
<tr>
<td>lópo</td>
<td>'be hungry'</td>
</tr>
<tr>
<td>maitále</td>
<td>'be tired of someone/something'</td>
</tr>
<tr>
<td>máká</td>
<td>'be tired of someone/something'</td>
</tr>
<tr>
<td>myúku</td>
<td>'be sick of someone; nauseated'</td>
</tr>
<tr>
<td>nánú</td>
<td>'be thirsty'</td>
</tr>
<tr>
<td>neyá</td>
<td>'think' (?)</td>
</tr>
<tr>
<td>nikiníki</td>
<td>'be angry at someone'</td>
</tr>
<tr>
<td>paá/páka</td>
<td>'be afraid/fear'</td>
</tr>
<tr>
<td>pombáta</td>
<td>'be bored/angry'</td>
</tr>
<tr>
<td>pópó</td>
<td>'be hot and dry'</td>
</tr>
<tr>
<td>putítí</td>
<td>'shake in anticipation, be greedy'</td>
</tr>
<tr>
<td>tálo</td>
<td>'be hungry'</td>
</tr>
<tr>
<td>tiáka</td>
<td>'be satisfied (from food)'</td>
</tr>
<tr>
<td>yála</td>
<td>'be ashamed'</td>
</tr>
</tbody>
</table>
D-8 Palengé 'lie (inside)'

I Basic Meaning

angó 'fall down (when hit by arrow)'
bálo 'lay fallow'
ingí 'have food in stomach, be full'
luú 'sleep'
lyíta 'swell (up)'
maá 'eavesdrop, appear secretly'
máki 'mark'
máú 'cover/seal (of earth oven)'
ŋeé ɓaá 'pant'
sóto 'offer hospitality'

II Disease

genángé 'have diarrhoea'
imbú 'have a parasite (of sweet potato)'
inginyá 'have diarrhoea'
kítú 'scabies (of pigs)'
kulingi 'have dysentery'
mángá 'have a fungus (of sweet potato)'
meké 'scabies (of pigs)'
mónda 'die at roots (of trees)'
mulú 'disease of sweet potato/beans'

III Menstruate

andáka náó 'menstruate'
iki náó
yangúpae
kamáka náó
yoó náó
D-9 Katengé

akálí 'be married (of women)'
ámbé 'doesn't think; doesn't want to do something'
ángó 'be appointed by Govt. Officer; forbidding fighting during settlement'
kaítí 'thunder (sky)'
kámbú 'be furtive/stealthy'
kápu 'stab, poke'
káti 'thunder'
kotó 'take a break'
kuaá/kueta 'be abandoned (of house)'
léta 'be alive'
máki 'be a boundary sign; mark a boundary'
páma 'take a break'
pupú 'impale/pierce (onto)'
sáká 'be alive'
titi 'line (in rows)'
tóle 'live together'
tóo/toyá 'stand upright'
tuná 'rise to height (smoke)'
wáa 'be skilful, avoid deception'

D-10 Pengé

ámbé 'ramble'
angú 'step across'
anjú 'go slowly'
baí baí 'roll'
kóko 'be deep, go inside'
léte 'become well'
makóle 'make a round trip'
mángá mángá 'hop/skip/jump; boil/bounce (water)'
pimbipápu 'flap (wings), fly'
pitimá pitimá 'crawl'
pongó 'go stealthily; be sneaky'
pukimíná 'snatch and go'
sáká 'become well'
wáki wáki 'limp' (?)
yokópi 'hide'
D-11 Nengé

ingo 'growl (stomach), cramp' (?)
kámbú tango 'bite lips; seem to do something wrong together'
kií 'be cold'
kípongo/kipongoi 'swallow, gulp'
mómo 'rot'
mútí 'smoke tobacco/cigarette'
páke 'steal'
po po 'be difficult'
táa ikí 'be stingy'
tándá 'afflict'
táu 'cross/ford river'
tómò 'be disagreeable, be angry'
tómòó 'be belligerent'
yáína 'be sick'
yuumi 'consume (of ground)'

D-12 Tengé

ií (kúli) 'be constipated'
imbokoi 'flatulate'
koko 'swell up (from allergy/bump)'
lekeléke 'suffer (from affliction/difficulty)'
léngé 'be animate/alive; be a wit (figuratively)'
líni 'fester'
lúngú 'flame'
mandá 'be cold (objects), be dead'
maú 'fester'
némbé 'think, hesitate'
poó 'dry up, shrivel up (of leaves)'
pundí 'be underdeveloped/stunted'
puú 'urinate'
sokosoko 'be stunted'
yúli 'blaze (of fire)'

APPENDIX E: Predications for Comparison

This appendix contains the raw data used for Chapter Five. The languages and page numbers are presented below. Where possible, adjuncts in the predications are given English glosses.

<table>
<thead>
<tr>
<th>Language</th>
<th>Page Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>A Kewa</td>
<td>188</td>
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<tr>
<td>B Melpa</td>
<td>189</td>
</tr>
<tr>
<td>C Banz/Wahgi</td>
<td>192</td>
</tr>
<tr>
<td>D Kuman</td>
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<tr>
<td>E Sinasina</td>
<td>200</td>
</tr>
<tr>
<td>F BenaBena</td>
<td>205</td>
</tr>
<tr>
<td>G Usurufa</td>
<td>207</td>
</tr>
<tr>
<td>H Karam</td>
<td>210</td>
</tr>
<tr>
<td>I Suena</td>
<td>215</td>
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<tr>
<td>J Kapau</td>
<td>216</td>
</tr>
<tr>
<td>K Kåte</td>
<td>218</td>
</tr>
<tr>
<td>L Telefol</td>
<td>219</td>
</tr>
<tr>
<td>M Asmat - Ajam dialect</td>
<td>221</td>
</tr>
<tr>
<td>N Asmat - Flamingo Bay dialect</td>
<td>223</td>
</tr>
</tbody>
</table>
In other cases, the verb expounding the Predicate in a complement clause co-occurs according to the exponent of the Complement tagmeme. The following give an indication of the range of such paired exponents.

'speak' lá
1 'court' kunaná lá
2 'argue' ápe lá
3 'laugh' kíri lá
4 'stretch' rídu lá

'bring' méá
5 'smell' káá méá
6 'ask' ágaa méá

'eat' ná
7 'suckle' ádu ná
8 'commit suicide' òpè ná
9 'steal' páge ná

'emits' ra
10 'defecate' i ra
11 'spit' sópe ra
12 'wilt' nááre ra
13 'flood' ípa ra

'hit' tá
14 'sneeze' girá tá
15 'dance' mátaa tá
16 'thunder' áári tá

'make' pa
17 'file' nága pa
18 'itch' kiru pa
19 'decorate' pépéna pa
20 'be strong' purí pa (Franklin forth.)
The verb 'RONUM' is perhaps the most used of all the Mogei [Melpa] verb forms. In combination with nouns, adjectives, and verbs, there are over a hundred different meanings (Ross 1946:41).

1 'spit' ol ronum
2 'urinate' pu ronum
3 'miss a shot' keda ronum
4 'rotten' kigil ronum
5 'coitus' noimp ronum
6 'string beads' wilya ronum
7 'make friends with a girl' ampoga kwime ronum
8 'bleed' mem ronum
9 'ford a river' nu rump ronum
10 'tired' enimp ronum
11 'wind round' moegup ronum
12 'act as helper' reb ronum
13 'slack or bend something' eg ronum

Examples are:

14 Kona kits ronum. It is raining hard.
15 Nim nabaelinga peper rogun kai mondi na mondunt? Why don't you write neatly?
16 Na kund ronum. I am hungry.
17 Kang namda ilye regreg te ronum? Which boy is always breaking wind here? (Ross 1946:42)

Further examples of predications with ronum are given by Strauss (nd:82):

18 Ten enemp ronom. me sickness is beating I am getting sick.
19 Ten kun rom. us hunger it hit We were hungry.

'do' enem

20 Kiit em. It turned bad.
21 Punt enim.
   It is short.

22 Kae enim.
   It is good.

23 Teğen enim.
   It is tasty. (Strauss nd:82)

24 Ual etiba morumkin na rom.
   He was making a netbag when he struck me.

25 Kongen etiba kenimkin balus om.
   As he finished his task the plane came. (Ross 1946:39)

26 Na kaemp enim.
   me it makes liver
   I feel pity

27 Ten pipil enim.
   we shame it makes
   We feel ashamed

28 Na numan enim.
   I like/love it (Strauss nd:83)

'say' nenem (Strauss nd:87)

29 Masiği ik nenem
   machine 'ik' say
   The engine is making a noise - is running.

30 Na apra nem.
   me forgetful it said
   I forgot

31 Ik nent.
   word I am saying
   I am talking

32 Oi nem.
   It ran over (spilled).

33 Mot nenem.
   It comes to light (i.e., is revealed).
   (said of stones in river, stars in sky)

'eat' nonom (Strauss nd:82)

34 Nim koropa nonom.
   it is eating you poor
   You are poor.

35 Nim moka nonom.
   it is eating you lean
   You are emaciated.

36 Na mai nonom.
   me forehead it is eating
   I have a headache

37 Men gu nonom.
   us teeth it is eating
   We have toothache.
'come' onom

38 Kaj e ogl ompa onom.
boy him abdomen coming it goes
The boy has diarrhoea.

39 Ten mik onom.
us vomiting is coming
We are feeling nauseated.

'go' ponom

40 Rontogl ponom.
hard it goes
It is hard.

41 Rogl ponom.
long it is going
It is long.

'give' ngunum (Ross 1946:44)

42 'aid, help' etiba ngunum
43 'scold, talk angrily' ig moera ngunum
44 'advise, admonish' ig kun ngunum
45 'set food to catch a pig' kung hub ngunum
46 'set a fishtrap' auma paga ngunum
47 'be deaf' kum ngunum
C Banz/Wahgi

A very important characteristic of the Banz language (shared, of course, by other non-Melanesian languages of New Guinea) is the relative paucity of independent verbs and the great abundance of idiomatic verbal expressions composed of a frequently occurring verb joined to another verb, a noun, adjective, or another part of speech. ...we find a small number of verbs in the Banz language which occur again and again, each time with a different meaning, depending on the combination we find them in. These verbs are referred to as 'so-called auxiliary verbs.' They are not auxiliary verbs in the true sense of the word because they are not always 'auxiliary' to another verb but often, if not most of the time...they are the main and only verb in the sentence. Moreover, these so-called auxiliary verbs do not occur only with verbs which they help but with nouns, adjectives, adverbs, etc. They are, therefore, only quasi-auxiliary verbs... The most important of them are: to 'strike!', ne 'speak', kelle 'throw, send', pile 'hear', tse 'take', teye 'put', gollo 'die', no 'eat', and, finally, the verb do, which has no English equivalent. (Luzbetak 1954:136).

'stike'  to

I Basic Meaning

1 Noll mong tonom.
   water a-disturbance it-strikes
   There are waves on the water.

2 Na angell mongom dze ront.
   I arm's appendage knife I-struck
   I cut my finger.

3 Kog'le kal to.
   biting a-break you-strike
   Take a bite.

4 Ants na ronom.
   sun not-it strikes
   The sun isn't shining.

5 Na masket tont.
   I gun I-struck
   I took a shot.

6 Nil tont.
   nail I-struck
   I nailed.

7 Dze na kong to gont tem e.
   axe I pig striking I-die it-is this
   The axe with which I killed the pig is here.

II Cut/Break

8 Dungollyemto kal tom.
   eye part a-break it-struck
   He has only one eye.
9 S'spen mog'ñe nont kal tom.
   saucepan food I-ate a-break it-struck
   The saucepan out of which I was eating is broken.

III  Cover

10 Koi kar pam, usandoal tem, na pipil tont.
   rat's hole there-is, a-road there-is, a-covering I-strike
   I fill the rat hole.

11 Na mog'ñe boki ront.
   I food a-covering I-strike
   I cover the food.

IV Bodily Functions

12 Na peng tonom.
   I(my) head it-strikes
   I have a headache.

13 Na koñe kes tom.
   I hunger badly it-strikes
   I am very hungry.

14 Na koñe ronom.
   I hunger it-strikes
   I am hungry.

15 Na ents munt ket rom (kes tom).
   I bowels lungs bad it-strikes
   I am angry/sad.

16 Kane boll to.
   looking with strike
   Attention!

17 'spit' kuNDzip to

18 'urinate' poll to

   El poll tonal he pisem.
   he urine I-shall-strike saying he-hears
   He wants to urinate.

19 'be intelligent' numan ka rom

   Wall kan'm ye numan ka rom.
   thing he-knows man thought well it-struck
   He is really an intelligent and clever person.

20 'be frightened, excited' mong to

21 'be stubborn' pile wik ro

   Nim pile wik ronom.
   you (s.) hearing stubborness you-strike
   You are stubborn.

22 'be breathless' munt to

   Na munt tonom.
   I lung it-strikes
   I am breathless.

23 Ents ront.
   wind hit
   I flatulate.

24 'be bleeding' mayam to
V Inner State
25 'be red' bang to
26 'be full' pik ro
27 'have fever' kur ro

VI Bind/Tie
28 'bind, tie' kan to

VII Misc.
29 Na mull tont.
I a-heating I-strike
I warm up (the food).
30 'put into' to
31 'make black magic' kum to
32 'chase' tsike ro
33 'make an alliance' tap rol
34 'play ball' kohts ro
35 'adorn' mon to
36 'play Jew's harp' tamball to
37 'be foggy' kamp kum bon tonom
38 'hear' pil poll to
39 'call' wi ro (why not 'speak'?)
40 'bite' to (why not 'eat'?)

'do/make/affect' ere (pp.141-4)

I Basic Meaning
41 'work' köninan ere

II Inner State
42 'be thirsty' numuñ kap'1 ere
43 'be fit/straight' kable're
44 'be happy' ents munt kae ere
45 'have pain' ámbil ere
46 'be very good' ka kine ere
47 'do wrongly; feel bad' kes ere
48 'be strong/be the winner' ombllom ere
49 'make bad, ruin' ere kes mog'le
50 'make trouble' punt ere
51 'do good to' ka ere
52 'be soft' kosil ere
53 'be cold' bi ere
54 'be beautiful, be nice, good' ka ere
55 'be dull'
Dze rumba'nem.
axe dull it-makes
This axe is dull.
56 'be shamed'
E kisal-enem-wall ambell boll erim.
he shame-it-makes-thing girl with he-made
He had sexual relations with the girl.
57 'ridicule' aiem ere
58 'breathe'
E dosa elngin erim mo?
he yet a-breathing-sound he-makes, is-it-so
Is he still breathing?
59 'cry' ga ere (why aren't 58, 59 and 60 used with 'speak'?)
60 'snore in sleep' wur ellënin ero
61 'excrete' ents ere
62 'be angry'
Na popoll enem.
I am angry
63 'be sleepy'
Na dungol ombuň enem.
my eye heavy it-makes
I am sleepy.

III Play
64 'play, joke' urmal ere
65 'play cards' kas urmal ere

IV Misc.
66 'make black magic' kum ere
67 'celebrate a pig festival' kong-gol ere
68 'make noise' ollup ere
69 'laugh' tow'il er (why not 'speak' a laugh?)
70 'forbid' ma pil ere
71 'hide' ogul ere
72 'wash' wasim ere (cf. Enga waswása píngi = hit)
73 'buy' top ere (cf. Enga topó nyingi = take/get)
'be dark'
Dungollemil enem.
eye darkness it-makes
He has poor eyesight.

'speak' ñe (pp.147-9)

I Basic Meaning

75 'speak truth' kuñ ñe
76 'speak (word, language)' yu ñe
77 'make noise' killköi ñe
78 'lie, speak lies' gent ñe
79 'ask' pile ñe
80 'knock' gewgiw ñe
81 'joke' oku ñe

II Inner State

82 'be angry'
Elem eñts munt ñing ñim.
he bowels lung hot it-spoke
He was very angry.
83 'be strong' gi ñe

III Break

84 'break' tundup ñe
85 'break' bugi ñe
86 'break/open'
Na mamats biling ñint.
I passion-fruit a-break I-spoke
I broke open a passion-fruit.

IV Activity/Motion

87 'pull down' meñe ñe
88 'jump' dus ñe
89 'fall down' ber ñe

'throw, send' kelle (pp.149-50)

90 'wash' noll kelle
91 'fishing' wuk kelle

'take' tse (pp.153-5)

92 'ask' ki tse
93 'dodge' ok tse
94 'be married (of man)' amp tse
95 'be married (of woman)' ye tse
<table>
<thead>
<tr>
<th>Page</th>
<th>Expression</th>
<th>Translation</th>
</tr>
</thead>
<tbody>
<tr>
<td>96</td>
<td>'not aware, don't know'</td>
<td>ne pile</td>
</tr>
<tr>
<td>97</td>
<td>'be in pain, suffer'</td>
<td>himbil pile</td>
</tr>
<tr>
<td>98</td>
<td>'smell'</td>
<td>dakel pile</td>
</tr>
<tr>
<td>99</td>
<td>'know/understand language'</td>
<td>yu we pile stink word true</td>
</tr>
<tr>
<td>100</td>
<td>'believe'</td>
<td>kaim pile true</td>
</tr>
<tr>
<td>101</td>
<td>'be thirsty'</td>
<td>noll pile water</td>
</tr>
<tr>
<td>102</td>
<td>'be hungry'</td>
<td>mog'ne pile food</td>
</tr>
<tr>
<td></td>
<td>'show, indicate'</td>
<td>do (pp.151-3)</td>
</tr>
<tr>
<td>103</td>
<td>'be burned'</td>
<td>dop do fire</td>
</tr>
<tr>
<td>104</td>
<td>'be heavy'</td>
<td>na dom</td>
</tr>
<tr>
<td>105</td>
<td>'be hot'</td>
<td>Aing do hot</td>
</tr>
<tr>
<td>106</td>
<td>'be full'</td>
<td>tsil do</td>
</tr>
<tr>
<td>107</td>
<td>'be dry'</td>
<td>aga do</td>
</tr>
<tr>
<td>108</td>
<td>'overflow'</td>
<td>omblak do</td>
</tr>
</tbody>
</table>
The Kuman language does not have an abundance or variety of verbs with different shades of meaning. Instead of this the different shades of meaning are expressed with idiomatic verbal expressions in which verbs, nouns, adverbs or other parts of speech are used with the auxiliary verb. The active verb is as a rule given in the stem or participial form, and the auxiliary verb or adverb is used to bring out the specific shade of meaning (Nilles 1969:264).

The most important of these verbs are given below in the third person singular:

- doŋgwa 'affect, indicate, burn'
- duŋgwa 'state, say'
- erukwa 'make, do, affect'
- golkwa 'die'
- iuŋgwa 'take, hold'
- noŋgwa 'eat, take'
- prukwa 'hear'
- suŋgwa 'strike, hit'
- toŋgwa 'give'
- yoŋgwa 'put, lie'
- aguŋgwa 'hold, touch'
- kanuŋgwa 'see' (Nilles 1969:265)

Some examples of Kuman predications gleaned from the Trefrys' (1967) word list are presented below.

'utter' di-

1 'repeat' agle di-
2 'feel' bala di-
3 'be broken' bigle di-
4 'sweep' birum di-
5 'lose' ebe di-
6 'be strong' gigle di-
7 'be half full' giri begai di-
8 'speak a language' kaiyoko di-
language
9 'lie' kibe di-
false
10 'jump' puglo di-
<table>
<thead>
<tr>
<th>Action</th>
<th>Kuman Language</th>
</tr>
</thead>
<tbody>
<tr>
<td>'do, make'</td>
<td>eri-</td>
</tr>
<tr>
<td>play'</td>
<td>daragl eri-</td>
</tr>
<tr>
<td>cry'</td>
<td>kai eri-</td>
</tr>
<tr>
<td>'be angry'</td>
<td>kuda eri-</td>
</tr>
<tr>
<td>'be warm'</td>
<td>piragledi eri-</td>
</tr>
<tr>
<td>'be strong'</td>
<td>yobuglo eri-</td>
</tr>
<tr>
<td>'die'</td>
<td>gogl-</td>
</tr>
<tr>
<td>'be hungry'</td>
<td>kidan gogl-</td>
</tr>
<tr>
<td>'be afraid'</td>
<td>kodugl gogl-</td>
</tr>
<tr>
<td>'be thirsty'</td>
<td>nigl gogl-</td>
</tr>
<tr>
<td>'give'</td>
<td>te-</td>
</tr>
<tr>
<td>'help'</td>
<td>ake sunade to-</td>
</tr>
</tbody>
</table>

Trefry, D. and J.F. Trefry

## E Sinasina

'hit, strike' si  (McVinney and Luzbetak 1954:144-8)

### I Basic Meaning

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>'cut'</td>
</tr>
<tr>
<td>2</td>
<td>'shine (of sun)'</td>
</tr>
<tr>
<td>3</td>
<td>'kill'</td>
</tr>
<tr>
<td>4</td>
<td>'kick'</td>
</tr>
<tr>
<td>5</td>
<td>'punish, beat'</td>
</tr>
<tr>
<td>6</td>
<td>'crucify'</td>
</tr>
<tr>
<td>7</td>
<td>'shoot'</td>
</tr>
<tr>
<td>8</td>
<td>'bite'</td>
</tr>
<tr>
<td>9</td>
<td>'tattoo'</td>
</tr>
</tbody>
</table>

### II Inner State

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>'think, be intelligent'</td>
</tr>
<tr>
<td>11</td>
<td>'be stubborn'</td>
</tr>
<tr>
<td>12</td>
<td>'be breathless, pant'</td>
</tr>
<tr>
<td>13</td>
<td>'be blind'</td>
</tr>
<tr>
<td>14</td>
<td>'be careful/soft'</td>
</tr>
<tr>
<td>15</td>
<td>'be red'</td>
</tr>
<tr>
<td>16</td>
<td>'pain'</td>
</tr>
<tr>
<td>17</td>
<td>'be bad'</td>
</tr>
</tbody>
</table>

### III Tie, Hide

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>18</td>
<td>'tie up'</td>
</tr>
<tr>
<td>19</td>
<td>'cover up'</td>
</tr>
<tr>
<td>20</td>
<td>'hide/be secret'</td>
</tr>
</tbody>
</table>

### IV Misc.

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>21</td>
<td>'fill up'</td>
</tr>
<tr>
<td>22</td>
<td>'warm up (of food)'</td>
</tr>
<tr>
<td>No.</td>
<td>English Word</td>
</tr>
<tr>
<td>-----</td>
<td>--------------</td>
</tr>
<tr>
<td>23</td>
<td>'have intercourse'</td>
</tr>
<tr>
<td>24</td>
<td>'play Jew's harp'</td>
</tr>
<tr>
<td>25</td>
<td>'spit'</td>
</tr>
<tr>
<td>26</td>
<td>'bleed'</td>
</tr>
<tr>
<td>27</td>
<td>'wash'</td>
</tr>
<tr>
<td>28</td>
<td>'buy/purchase'</td>
</tr>
<tr>
<td>29</td>
<td>'flatter'</td>
</tr>
<tr>
<td>30</td>
<td>'jump'</td>
</tr>
<tr>
<td>31</td>
<td>'fall'</td>
</tr>
<tr>
<td>32</td>
<td>'joke'</td>
</tr>
<tr>
<td>33</td>
<td>'wiggle noose'</td>
</tr>
</tbody>
</table>

'utter, say' di (pp.126-9)

I Basic Meaning

<table>
<thead>
<tr>
<th>No.</th>
<th>English Word</th>
<th>Sinasina Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>34</td>
<td>'speak the truth'</td>
<td>one di true</td>
</tr>
<tr>
<td>35</td>
<td>'lie'</td>
<td>kibd di lie</td>
</tr>
<tr>
<td>36</td>
<td>'speak through nose'</td>
<td>guna ka di nose word</td>
</tr>
<tr>
<td>37</td>
<td>'refuse, forbid'</td>
<td>mana di refusal-my</td>
</tr>
<tr>
<td>38</td>
<td>'snap, crack, break'</td>
<td>tu di breaking</td>
</tr>
<tr>
<td>39</td>
<td>'break'</td>
<td>pawa di</td>
</tr>
<tr>
<td>40</td>
<td>'snore'</td>
<td>gu gora di snore shaking</td>
</tr>
<tr>
<td>41</td>
<td>'indicate'</td>
<td>omine di indication</td>
</tr>
<tr>
<td>42</td>
<td>'bark'</td>
<td>gau di (cf. Enga gáu bark lengé)</td>
</tr>
<tr>
<td>43</td>
<td>'sing, go to parties'</td>
<td>gai kage di man songs</td>
</tr>
</tbody>
</table>

II Inner State

<table>
<thead>
<tr>
<th>No.</th>
<th>English Word</th>
<th>Sinasina Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>44</td>
<td>'be blind'</td>
<td>gi di closed</td>
</tr>
</tbody>
</table>
45 'be hot, have a fever' niga di hot
46 'be straight, fit' kuno di fits
47 'be soft' ura di (cf. Enga támbó lengé) soft
48 'be angry' ka ure di work angry
49 'be beautiful' min di good
50 'be full' gi di blocked
51 'be at rest' yu di just
52 'be' di there-is
53 'be careful' mono di easy

III Misc.
54 'break' bil di break

'do/make' el (pp.130-2)

I Basic Meaning
55 'do correctly, successfully' min one el good true
56 'succeed, win' yobilage el strong
57 'do incorrectly' ki el bad
58 'work' kogenan el work
59 'labor in vain' yumore el in-vain
60 'work continuously' morone el manner=true manner=true
61 'paint' mine gol el designs red
62 'do good/honor' akun dal tere el holding-good calling having-given

II Inner State
63 'be fit, equal, same' kune el fit
64 'be happy' argan el happy
65 'be sick'       nibil el
             sickness
66 'be industrious'  nima pire el
            straight having-gone
67 'thank'          min el
            good

III Misc.
68 'hold pig festival'       bona igin el (cf. Enga pig ritual pingi 'do')
69 'stir, mix, churn'          auna mauna el
            push pull
70 'play (cards)'             kat el
            cards
71 'have intercourse (sexual)'  unan unan el
            around around
72 'have intercourse'        tal ki el
            thing bad

'effect, consume' de (pp.124-5)

I Inner State
73 'be heavy'              ibin de
            weight
74 'be decayed/rotten'    dugil de
            decay

II Motion
75 'send a message'       ka di deiwa
            word saying
76 'spill, empty'         tule de
            empty
77 'fall, pull down'      gure maunil de
            shaking down

III Misc.
78 'burn'                 gana de
            skin-my
79 'shine (of moon)'      ba de
            moon
80 'shine (of sun)'       are de
            sun burns

'know, hear' pil (pp.141-3)
81 'suffer'               gi ul pil
            bound pain
82 'smell'                kumine pil
            scent
83 'understand' ka pil word
84 'believe' one pil true
85 'fear' kuril pil fear
86 'feel bad/sad' pril si pil bad striking
87 'pity, mercy' mile pil sorrow
BenaBena 205

F BenaBena

Young (1964) states that

the periphrastic [verb] complex constitutes more than 50 per cent of all verb constructions in text. It is defined as a verb complex consisting of a free-form word of specific verbal implication in close knit sequence with a fully inflected nuclear verb, which together have a unique semantic content (78).

The form of the periphrastic verb complex consists of the free-form word, which is lateral to the nuclear verbs, is termed the peripheral since it behaves as an auxiliary to the verb within the complex. It is non-inflectional. The nuclear verb, with obligatory affixes of tense, person and number, and mood (as well as optional suffixes), occurs as the nucleus of the complex.

In this complex, the nuclear verb, losing its basic meaning in almost every instance, becomes the nucleus for a great range of peripherals, the peripheral bearing the main semantic load for the complex and the verb a mainly functional one (78f.).

In stating the criteria for identifying the components as two separate words, Young mentions that whereas "prefixal morphemes are not limited to any one verb class, each peripheral is limited to one specific nuclear verb, and therefore class" (79). Restated, what Young is saying is that what he calls the 'nuclear verb' of the periphrastic verb complex acts as a classificatory verb. "A peripheral occurs only with one specific verb,..." (79).

[Note: Young essentially says that he has no intersection of the kind shown above in the Enga data 4.2.3, and demonstrated for Karam by Pawley (p.105 above) when showing that the 'nuclear verb' does in fact carry some semantic load.]

Young presents his predications with typical examples:

attention has been drawn to a specific nuclear verb, with its class, in each set of examples. Each verb selected is a typical example of those nuclear verbs which have high frequency count in periphrastic constructions (80).

'hit' ho-

1 Loka ho9 ohube.
   I asked [him]
2 Igofa ho9 ohube.
   I broke/bent [it]
3 Kota ho9 ohube.
   I fell down
'do' i-

4 Kehe i'ohube.
   I called

5 Lisepa i'ohube.
   I dried

6 Iya i'ohube.
   I speared

'take' li-

7 Foya lilube.
   I will work

8 Kele li'ohune.
   we [pl] wiped [it]

9 Agumina nolibe.
   he is actually stealing now

'be' hu-

10 Laga hu'ohube.
   I cut

11 Okala hu'ohube.
   I washed

12 Laita hu'ohube.
   I cooked

'pierce' fi-

13 Mina fi'ohube.
   I bought

14 Litulu filube.
   I will break [it] up

15 Te nolibe.
   he is tearing [it] out now
Verb phrases of the idiom type have "restricted co-occurrence potential of constituent words and a limited degree of productivity" (Bee 1965:117). "... only a few verbs are potential fillers of the verb slot. The following examples give the more common ones which account for about two-thirds of the verbal idioms" (1965:125).

'do, make' 0

1 'be angry, pout' komá
   pout
2 'shout, bark, etc.' wáága
   noise
3 'initiate a boy' maabumá
   young man
4 'be bashful' agayemá
   shame
5 'sniff, smell' ákubitaa
   fragrance
6 'laugh, be happy' wiráá
   laugh, smile
7 'search' abáá (cf. Enga ålo pingí)
   lost
8 'admire' aayoq
   gaze
9 'shiver' agtéqtí
10 'wash, scrub, cut wood finely'
11 'shake something' apibi
12 'kiss' amóqña moqña
   kiss
13 'burp' kamu gamáá
   a burp
14 'be messy' turi táári
   messy
15 'be crazy' nagí naagi
   crazy

Of especial interest to our comparison of Enga kaengé 'be (of inner states)', is the data Bee presents for the verb 'do'.

The verb to do, ..., is an auxiliary verb which occurs only in verbal phrases and equational clauses. In many of its functions it is like the English verb to be. As a verbal auxiliary it may be used to form tense, voice or mood contrasts instead of the usual
suffixation. In this case the appropriate suffixes occur on the verb to do and the main verb precedes it without suffixation. In equational clauses and descriptive or state of being phrases it functions as a copula (1965:133).

Of the five categories of phrases with this verb, the 'state of being' phrases are of most interest to the previous discussion; some examples of these are

'do'
16 'be emaciated'  
17 'be displeased'  
18 'be obedient'  
19 'be easy, light'  
20 'be warm, dry'  
21 'be bad'  
22 'be big'  
23 'be found'  

'say'
24 'hiccoughs'  
25 'an itching foot indicating someone is thinking of you'  
26 'hurry someone'  
27 'be crackly dry'  
28 'be firmly planted'  
29 'fit tightly together'  
30 'suck'  
31 'stutter'  
32 'mimic'  
33 'cough'  
34 'hum'  
35 'urinate'
<table>
<thead>
<tr>
<th>'burn'</th>
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<tbody>
<tr>
<td>36 'fade'</td>
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<tr>
<td>37 'shine'</td>
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<table>
<thead>
<tr>
<th>'dance'</th>
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<tbody>
<tr>
<td>38 'play'</td>
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<td>39 'be beside oneself with anger'</td>
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<table>
<thead>
<tr>
<th>'go'</th>
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<tr>
<td>40 'fly'</td>
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<table>
<thead>
<tr>
<th>'move'</th>
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<tbody>
<tr>
<td>41 'move a stubborn child'</td>
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<td>42 'sand'</td>
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<table>
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<tr>
<th>'get, take'</th>
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<tr>
<td>43 'buy'</td>
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<td>44 'steal'</td>
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<tr>
<th>'come'</th>
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<tr>
<td>45 'bemoan'</td>
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<td>46 'visit'</td>
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<tr>
<th>'pour over'</th>
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<tr>
<td>47 'bathe'</td>
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<td>48 'paint'</td>
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<thead>
<tr>
<th>Misc.</th>
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<tbody>
<tr>
<td>49 'attend school'</td>
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<td>50 'cry'</td>
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<td>51 'smell'</td>
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<td>No.</td>
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<td>21</td>
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</tbody>
</table>
'be hungry, thirsty' ywan g- hunger
'feel pain' ywt g- pain

III Motion/Activity
'feint, sham attacking movement' amñeb g-
'joke, pretend, deceive (by action)' esek g-
'pump, push in and out of an opening' jl g-
'wince, shudder (on hearing harsh grating noise)' kaj knm g-
'smack the lips' lk g-
'shoot, of plants appearing above the ground' lm g-
'open something hinged, as a book' mkal g-
'duck, crouch' ñk g-
'leave footprints' tob g-
'cross the legs' tob mogm g-
'screw' ibm oyt ib tik g-fitting
'turn around and around by hand' twg cckby g-
'open something hinged' twg mkal g-

IV Misc.
'whine, pull a sad face' joqbb tmey g-
'have a head cold' jlken g-
'spit' kwñk g-
'recline' leb g-
'show off, boast' mlwk bëñbeñ g-
'stop sulking, abate (of anger)' mlwk sayn g-
'whisper, bribe' mmwg g-
'hiccough' ñekñek g-
'comb, make a comb' ñwtem g-
'die (ritual lg.)' plam g-
'ease, abate' sayn g-
'weep (ritual lg.)' sm g- (why not 'utter'?)
'lie' tom g-, (why not 'utter'?)

mng tom g-
'become, turn into, come into being, set, put, place' \( ay-\)

I Bodily Process (?)

50 'have an infected sore/pimple' bok ay-

51 'have a birth-mark' kh\(\text{ñ}\)ow\(\text{ñ}\) ay-

52 'have dandruff' jwn bo\(\text{b}\)om ay-

53 'have a scratch, blood blister' lka\(\text{ñ}\) ay-

54 'have warts' mablep ay-

55 'have a scar' magy wt ay-

56 'have a scab' sla\(\text{ñ}\) ay-

57 'have tinea' slk ay-

58 'have boils' s\(\text{n}\)l ay-

59 'have sores' soy ay-

60 'have wax in the ears' tmwd sb ay-

61 'regain good health' sw\(\text{o}\) ay-

II Misc.

62 'draw breath, recover wind' a\(\text{n}\)\(\text{ñ}\) ay-

63 'swallow' kal ay-

64 'avoid by dodging' kan ay-

65 'jump onto' pteq\(\text{d}\) ay-

66 'be/become crazy, deaf' saky ay-

67 'to be mute, stupid' to\(\text{p}\)top ay-

'perceive' \( *\text{nq} -\)

I Basic Meaning

68 'study, read' bwk n\(\text{q}\)-

69 'thing, be tame/civilized' gos n\(\text{q}\)-

70 'smell' kwy n\(\text{q}\)-

71 'know a language' mnm n\(\text{q}\)-

72 'be learned, educated' skwl n\(\text{q}\)-

73 'worry' gos ko\(\text{ñ}\)ay n\(\text{q}\)-

74 'dislike, hate' gos tep n\(\text{q}\)-mind good perceive

75 'know magic' kwj n\(\text{q}\)-

76 'feel sympathy' mapn n\(\text{q}\)-liver

77 'glare at, feel angry' mlwk n\(\text{q}\)-nose, face
78 'listen to a whisper, think over a bribe' mmwg nŋ-bribe
79 'spy on, watch from hiding' peg nŋ-
80 'feel sorry for' sb nŋ-intestines

'utter' *ag-
81 'cadge, ask for gifts' asb ag-cadging
82 'explode' bw ag-explosion
83 'lie, be untruthful' esek ag-deceiving
84 'knock' gygw ag-sharp sound
85 'snore, rumble' gwgwlm ag-rumbling
86 'resound, as bell ringing, plane roaring' gw ag-resounding
87 'squeak, as a rat or a bird' jwp ag-squeak
88 'cough' jlkenn ag-cough
89 'mimic' kl ag-mimicking'
90 'cry out, esp. of women calling warning or alarm' kwbw ag-call
91 'shout or yodel to someone at a distance' kwbw ag-big
92 'sing' kmap ag- or kmep ag-song, singing
93 'make a noise which breaks silence' ml ag-sudden noise
94 'speak, talk, make the characteristic of animal or thing' mnm ag-speech, utterance
95 'talk a lot' mnm koŋay ag-speech many
96 'be longwinded, talk a lot' mnm pwg ag-speech blow
97 'talk nonsense, talk freely' monmon ag-
98 'belch' mwkbel ag-belch
99 'tell the truth' nŋd ag-truth
100 'glitter'  nñakol ag-glittering
101 'chorus'  ñwgl ñagl ag-evening bush chorus
102 'sing and dance'  saŋ ag-women's festival
103 'weep'  sy ag-weeping
104 'laugh, shout'  swk ag-laugh, shout
105 'shout or laugh in derision'  swk swk ag-laugh, shout
106 'smile, chuckle'  swk tep ag-laugh good
107 'thunder'  tmwk ag-thunder
108 'cry out in amazement, pain, fear, to squeal of pigs'  wal ag-call of amazement
109 'chant'  wol ag-chant
I Suena

Wilson says perhaps the contribution which Suena can make to an understanding of all the Binandere languages is in the area of 'Compound Verbs'. In Binandere itself it would appear that all verbs are formed with the Auxiliary verb ari 'to do'. In Zia, Mailander set up five classes of verbs, four of them based on the fact that they took different Auxiliary verbs. This can be done for Suena, too, though this would be establishing the classes on the basis of form rather than function. The Auxiliary verbs, with their primary meaning, are:

<table>
<thead>
<tr>
<th>SUENA</th>
<th>ZIA</th>
<th>BINANDERE</th>
<th>OROKAIVA</th>
<th>ENGLISH</th>
</tr>
</thead>
<tbody>
<tr>
<td>wai</td>
<td>yari</td>
<td>ari</td>
<td>e/ari</td>
<td>to do</td>
</tr>
<tr>
<td>sai</td>
<td>sari</td>
<td>ari</td>
<td>e/ari</td>
<td>say</td>
</tr>
<tr>
<td>mai</td>
<td>mari</td>
<td>ari</td>
<td>e/ari</td>
<td>come</td>
</tr>
<tr>
<td>gai</td>
<td>gari</td>
<td>ari</td>
<td>e/ari</td>
<td>see</td>
</tr>
<tr>
<td>awai</td>
<td>gari</td>
<td>ari</td>
<td>e/ari</td>
<td>rest</td>
</tr>
<tr>
<td>nai</td>
<td></td>
<td></td>
<td></td>
<td>arrive</td>
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</table>

Suena compound verbs formed from the Auxiliary verbs listed above [are]

1 'sleep'   gitawa wai
2 'sneeze'  asio sai
3 'help'    sore mai
4 'burp'    oni awai
5 'yell'    are nai

(Wilson 1969:104)
The Noun-Verb expression is a very common one in Kapau. It consists of a noun plus a verb centre...[it] is not a close-knit expression structurally as the noun can be separated from the verb by object, adverb and other things... But it is close-knit semantically (Oates and Oates 1968: 38f.).

An example given of this type of Vphrase is:

1 ni wamnga qiya
   I garden am-doing-I
   I am working.

In the discussion of the verb stems which occur in such Vphrases, the Oates state that the 'do' stem is by far the most common... Many of these forms expressed Kapau idiom (and it is wise to learn the phrase as entity) [sic]. For example, many physical needs and attributes and the forces of nature are expressed in a N-i-Vx: hunger, hearing, water in flood, wind all 'do' (39).

'do' i-

2 'be lightning' inavä
   lightning

3 'be windy' ymngä
   wind

4 'ooze pus' quymngä
   pus

5 'be drying' yea
   dry

6 'ripen' mqa
   ripe

'speak, utter' t-, ti-

occurs with nouns which deal with uttering or making a noise and with nouns dealing with natural phenomena, or the emotions (40).

7 'speak, talk' pane'a
   talk

8 'whistle' wipa
   whistle

9 'sing' äpa
   song

10 'thunder' hinko
   thunder
'think' OR 'utter from within' \textit{mt-}, \textit{mti-}

occurs with nouns dealing with that which proceeds from inside a person (40).

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<tbody>
<tr>
<td>11</td>
<td>'think'</td>
<td>quno&lt;br&gt;thought</td>
</tr>
<tr>
<td>12</td>
<td>'vomit'</td>
<td>quotā</td>
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<tr>
<td>13</td>
<td>'remember'</td>
<td>quno&lt;br&gt;thoughts</td>
</tr>
<tr>
<td></td>
<td></td>
<td>'hit, strike' \textit{gi-}, \textit{i-}</td>
</tr>
<tr>
<td>14</td>
<td>'hit'</td>
<td>ipka&lt;br&gt;stick for hitting</td>
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<tr>
<td>15</td>
<td>'write'</td>
<td>tuwāmnga&lt;br&gt;mark, charcoal</td>
</tr>
<tr>
<td>16</td>
<td>'rain'</td>
<td>piya&lt;br&gt;rain</td>
</tr>
<tr>
<td></td>
<td></td>
<td>'throw away' \textit{mau}, \textit{mo-}</td>
</tr>
<tr>
<td>17</td>
<td>'breathe'</td>
<td>mtnga&lt;br&gt;breath, steam</td>
</tr>
<tr>
<td>18</td>
<td>'throw a stone'</td>
<td>hawa&lt;br&gt;stone</td>
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<td>'go' \textit{u-}</td>
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<tr>
<td>19</td>
<td>'walk'</td>
<td>qānga&lt;br&gt;door, walk</td>
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<tr>
<td>20</td>
<td>'be sorrowful'</td>
<td>ha'va&lt;br&gt;sorrow, heart</td>
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<td></td>
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<td>'make' \textit{yamak-}</td>
</tr>
<tr>
<td>21</td>
<td>'build house'</td>
<td>ānga&lt;br&gt;house</td>
</tr>
<tr>
<td>22</td>
<td>'beat eggs'</td>
<td>mnga&lt;br&gt;eggs</td>
</tr>
<tr>
<td></td>
<td></td>
<td>'eat, devour' \textit{n-}</td>
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<tr>
<td>23</td>
<td>'eat'</td>
<td>ita&lt;br&gt;food</td>
</tr>
<tr>
<td>24</td>
<td>'burn'</td>
<td>ta&lt;br&gt;fire</td>
</tr>
<tr>
<td></td>
<td></td>
<td>'go down' \textit{o-}, \textit{we}</td>
</tr>
<tr>
<td>25</td>
<td>'sleep'</td>
<td>sā'ā&lt;br&gt;sleep</td>
</tr>
</tbody>
</table>
Das Käte hat eine verhältnismäßig geringe Zahl von primären Verben, wie z. B. la gehen, lo nehmen, mu sagen, hone sehen, mana hören usw. Die meisten Verba dagegen sind mit ke zusammengesetzt... intransitive Verba, die auf ke auslauten [sind], z.B. mateŋ-ke kühl sein, ʒaŋ-ke morsch sein, duŋ-ke sich niederbeugen.

Mit Hilfe von ke werden auch aus anderen Wortarten Verba gebildet, z. B. wokec-ke jemand auf dem Boot fahren, von woke das Kanu; fuŋ-ke etwas anfangen, von funne das dicke Ende eines langen Gegenstandes; upec-ke etwas um den Hals tragen, von upec der Hals; biaŋ-ke gut sein, von biaŋne gut; selec-ke etwas gemeinsam tun, von selec miteinander. Der k-Laut in ke ist schwer zu erklären, und es erhebt sich die Frage, ob ke gleich dem Verbum e (sein, tun) ist, so dass k nur Lautkonservierung unter bestimmten Bedingungen wäre. Für letztere Auffassung spricht der Umstand, dass dem k-Laut stets der harte Stimmabsatz c oder ein q vorausgeht (vgl. § 118, c und 119a). Doch steht dem die andere Tatsache gegenüber, dass es Verba gibt, die auf e und ke zugleich auslauten, z. B. eatu-e intr. täuschen, eatuc-ke tr. jemand täuschen; äs u-e intr. riechen, äsuc-ke tr. etwas beriechen, beschupern.

Andere Endbestandteile von Verben sind: e, ne, le, we, z. B. filu-e loslösen, lisı-e umkehren, kisöŋ-ne zwischen den Zähnen loslösen, lälaŋ-ne verschwinden, gäpå-le schwarz sein, hesi-le krumm sein, joŋ-ta-we schäbig aussehen, loka-we schwach sein. E wird auch viel als selbständiges Verbum "tun, machen" gebraucht. Bei den Konsonanten der letzten drei handelt es sich wohl nur um Lautassimilation. Etliche Verba lauten sowohl auf ne als auch auf ke aus, ohne dass ein Bedeutungswandel damit verbunden wäre, z. B. ʒaŋ-ne und ʒaŋ-ke zerfallen, bänden-ne und bänden-ke festbinden.

Zur Bildung verbaler Ausdrücke kommen auch vielfach Zusammenstellungen von Substantiven und Verben vor, z. B. guŋ mana träumen, dāŋ mu reden, fifia ba schwimmen, kiŋaŋ qa dienen, málo he keuchen, guŋ he donnern, sasec e lüstern sein usw. (Pilhofer 1933:24-5).
P. Healey's article on Telefol Verb Phrases (1965) contains much material on what she terms auxiliary verbs (used with an adjunct) (pp.30-42) and verb periphrases (pp.42-7). This being the case, we will deal here only with a portion of the Telefol data and refer the reader to her article for the complete description. Healey originally states:

There is a small group of Verbs which commonly occur with verbal Adjuncts. These Verbs may have virtually no semantic significance when they occur with an Adjunct, though they normally have distinctive meanings when they occur alone in a Verb Phrase. Their function is as carrier of aspect, tense, subject person-number, and other suffixes. Most Adjuncts occur with only one of these Auxiliary Verbs. When these Verbs occur alone as Simple Verbs, they belong to various syntactic classes (Transitive, Intransitive, Motion, Complementary, Quotative). The Complex Verbs in which they occur as Auxiliary may be Transitive, Intransitive, or Motion, depending on the Adjunct, not on the syntactic class of the Auxiliary. A Complex Verb involving an inseparable Adjunct is made benefactive by modification of the Auxiliary Verb (1965:30).

A wide variety of different forms occur as Adjunct before the Verb keemin 'do', be' to form Complex Verbs (34). In Telefol keemin 'do' can be used to form Complex Verbs in various ways:

The Verb keemin provides a mechanism whereby a Complex Verb may be formed from a Noun Phrase Nucleus, from the classes manifesting such Noun Phrase Laterals as Pre-Direction (D1), Post-Direction (D2), and Person (Pr), from an Adverb, from an Adjunct, from a loan word, and from a Verb (35).

In the case of Loan Words, the "forms borrowed, usually from Neo-Melanesian or English, may be either Nouns or Verbs in the source language."

Loan Words
1 'settle a debt' béékkim keemin
2 '(water) boils' bóólbol keemin
3 'not let him go' faasim keemin
4 'weigh, measure' sékel keemin
5 'be sick' síksik keemin
6 'attend school' súkul keemin
'do' keemin

I
7 'be disappointed'
bát kéemin
8 'be unattended, abandoned'
faán kéemin
9 'be lost'
maakáló keemin
10 'be thankful'
mísám kéemin, súkuul keemin
11 'be kind, friendly'
bal bal keemin

II Motion/Activity
12 'part (grass to look or go through)'
bikek bikek keemin
13 'kick around (of legs of dying pig)'
biteng biteng keemin, also: bitíng biteng keemin
14 'mix, stir it'
fákálik fákálaak keemin
15 'stagger, walk erratically'
kabi kabi keemin
16 'flap wings, flutter, hover'
kafi kafi keemin
17 'tickle; sprinkle down'
kali kali keemin
18 'shiver'
muk muk keemin

III Misc.
19 'make booming sound, clatter (of tin)'
kálíng kálung keemin
20 'growl'
nilílii nilílii keemin
21 'hiss'
seek seek keemin
22 'ring, clang (e.g. bell)'
tangaang tangaang keemin
'say, see that, want to' akan'kalin

I Basic Meaning
23 'ring the bell'
béélo akan'kalin, tangaang akan'kalin

II Inner State
24 'be taut, tighten'
biing akan'kalin
25 'be self-disciplined'
ditang akan'kalin
26 '(weather) becomes dark'
mitik akan'kalin
27 'be stiff'
niil (kub) akan'kalin
28 'relax, be satisfied'
bilili akan'kalin

III Misc.
29 'blow away (dust, ashes, insect)'
füü akan'kalin
M Asmat - Ajam dialect

As in most Papuan languages, many actions and situations are expressed not by a verb, but by a verbal expression of which the first part is nominal and the second verbal. In some cases both parts are entirely alike or similar to each other (Drabbe 1959:25).

The cognate object verbs are:

1 'invite'
2 'weep'
3 'bathe'
4 'dance'
5 'wrap in a palm leaf'
6 'violate'
7 'adorn oneself'
8 'laugh'
9 'work black magic'
10 'step'
11 'play'
12 'rot'
13 'distribute'
14 'be afraid'
15 'steal'
16 'deny falsely'
17 'be in need of'
18 'undulate'
19 'make figures'
20 'hear'
21 'cry and whine'
22 'leave behind'

'do' e- (also means 'say')

9 'work black magic'
10 'step'
11 'play'
12 'rot'
13 'distribute'
14 'be afraid'
15 'steal'
16 'deny falsely'
17 'be in need of'
18 'undulate'
19 'make figures'

'say' ji (also means 'do')

20 'hear'
21 'cry and whine'
22 'leave behind'
<table>
<thead>
<tr>
<th></th>
<th>English</th>
<th>Asmat-A 222</th>
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</thead>
<tbody>
<tr>
<td>23</td>
<td>'spit'</td>
<td>mbese ji-</td>
</tr>
<tr>
<td>24</td>
<td>'be fond of'</td>
<td>ndamos ji-</td>
</tr>
<tr>
<td>25</td>
<td>'paddle'</td>
<td>po ji-</td>
</tr>
<tr>
<td>26</td>
<td>'rot'</td>
<td>of ji- (cf. 12 above)</td>
</tr>
<tr>
<td>27</td>
<td>'hit' af</td>
<td>jaki af</td>
</tr>
<tr>
<td>28</td>
<td>'sneeze'</td>
<td>ndamir af-</td>
</tr>
<tr>
<td>29</td>
<td>'beat'</td>
<td>omop af-</td>
</tr>
<tr>
<td>30</td>
<td>'be in love (said of a woman)'</td>
<td>mbanam af-</td>
</tr>
</tbody>
</table>
### Asmat-FB 223

**N Asmat - Flamingo Bay dialect**

<table>
<thead>
<tr>
<th>No.</th>
<th>Word</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>'work up the inner part of the pith of the sago palm'</td>
<td>anam inner part of sago</td>
</tr>
<tr>
<td>2</td>
<td>'be known'</td>
<td>ajpama known</td>
</tr>
<tr>
<td>3</td>
<td>'play'</td>
<td>atow play</td>
</tr>
<tr>
<td>4</td>
<td>'intend, think of'</td>
<td>caj plan</td>
</tr>
<tr>
<td>5</td>
<td>'have sexual intercourse'</td>
<td>caj sexual intercourse</td>
</tr>
<tr>
<td>6</td>
<td>'hear'</td>
<td>jan sound/ear</td>
</tr>
<tr>
<td>7</td>
<td>'carry a heavy load'</td>
<td>jec</td>
</tr>
<tr>
<td>8</td>
<td>'be very busy with'</td>
<td>jimamuc engrossed</td>
</tr>
<tr>
<td>9</td>
<td>'dart to and fro (of fish)'</td>
<td>jipis darting to and fro</td>
</tr>
<tr>
<td>10</td>
<td>'surround'</td>
<td>jiwa</td>
</tr>
<tr>
<td>11</td>
<td>'shout, yell'</td>
<td>ju yell, raise a war cry</td>
</tr>
<tr>
<td>12</td>
<td>'cause someone to be quiet'</td>
<td>karem</td>
</tr>
<tr>
<td>13</td>
<td>'leave behind'</td>
<td>makan</td>
</tr>
<tr>
<td>14</td>
<td>'screech (of ghosts)'</td>
<td>njonjonjo</td>
</tr>
<tr>
<td>15</td>
<td>'devour (of maggots)'</td>
<td>njernjer</td>
</tr>
<tr>
<td>16</td>
<td>'make a gift in return'</td>
<td>tosow give made in return</td>
</tr>
<tr>
<td>17</td>
<td>'rustle (of leaves)'</td>
<td>wu rustle</td>
</tr>
</tbody>
</table>

**'say' ji (also means 'do')**

<table>
<thead>
<tr>
<th>No.</th>
<th>Word</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>18</td>
<td>'squeeze out sago pulp'</td>
<td>apim</td>
</tr>
<tr>
<td>19</td>
<td>'hear, listen'</td>
<td>jen</td>
</tr>
<tr>
<td>20</td>
<td>'leave behind'</td>
<td>makan</td>
</tr>
<tr>
<td>21</td>
<td>'row'</td>
<td>po rowing</td>
</tr>
<tr>
<td>22</td>
<td>'sing dirges'</td>
<td>purumuc dirge, lament</td>
</tr>
</tbody>
</table>

**'hit, strike' af-**

<table>
<thead>
<tr>
<th>No.</th>
<th>Word</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>23</td>
<td>'like, love'</td>
<td>mànam</td>
</tr>
<tr>
<td>24</td>
<td>'throw lime'</td>
<td>mi lime</td>
</tr>
</tbody>
</table>
25 'die' namir
dead
26 'beat' omop
a blow
27 'abuse' cemew
28 'move on (of walking, rowing)' ja
29 'watch carefully' masin
30 'have as a wife' per
31 'work up with a chopping knife' sejpa

'do, work' em
32 'play football' mar atow
33 'catch crabs' mer
34 'fish with a net' jim

'chop, scoop up, strip off along a curved surface' ak
35 'chop growth off a tree' anuk
36 'make a canoe' ci
37 'shave' okon fin
38 'catch crabs' pe

'chop' am
39 'fasten the headband to a carrying bag' com
40 'waste' nani in
41 'cover (a house) with thatch' onow

'eat' an
42 'have sexual intercourse cemen ([of a man] = cen)
(of a woman)' cemen ([of a man] = cen)
43 'drink' mu
44 'take a rest' sis

'see, look at, hear, smell, know (perceive)' por
45 'plan a murder, massacre' so porjbit
46 'plan to kill, bring disaster upon' porj jursum
47 'practise magic against' aruw porom

The cognate object verbs are:
48 'sleep' is es-
sleep sleep
<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>49</td>
<td>'weep'</td>
<td>moc moc- (cf. M-2) weep weep</td>
</tr>
<tr>
<td>50</td>
<td>'bathe'</td>
<td>mu mu- (cf. M-3) bath bathe</td>
</tr>
<tr>
<td>51</td>
<td>'dance'</td>
<td>ni ni- (cf. M-4) dance dance</td>
</tr>
<tr>
<td>52</td>
<td>'violate'</td>
<td>okore okor (same as M-6) rape rape</td>
</tr>
<tr>
<td>53</td>
<td>'wrap in a palm leaf'</td>
<td>wu wu- (same as M-5) bundle bundle</td>
</tr>
<tr>
<td>54</td>
<td>'adorn oneself'</td>
<td>tsjosou asou- (same as M-7)</td>
</tr>
<tr>
<td>55</td>
<td>'laugh'</td>
<td>uc oc- (cf. M-8) laugh laugh</td>
</tr>
</tbody>
</table>

Examples (1-47) are from Voorhoeve 1965; (48-55) are from personal communication by C.L. Voorhoeve.