THE SELEPET LANGUAGE WITHIN THE
FINISTERRE-HUON PHYLUM (NEW GUINEA)

by

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Except where otherwise acknowledged in the text, this thesis represents the original research of the author.

K. A. McELHANON
PREFACE

My study of the Selepet language began in September, 1964, when my wife and I took up residence among the people of Indum village located in the Southern Selepet dialect area. From 1964 until June, 1967, field work was carried out under the auspices of the Summer Institute of Linguistics. After six months of study as a research scholar at the Australian National University, I resumed field work under the auspices of both the A.N.U. and the S.I.L. The study was expanded to include the other non-Austronesian languages of the Huon Peninsula and more generally the languages of the Finisterre ranges.

When one carries out field work over such an extensive area as that encompassed by this present study, one accumulates much indebtedness. Without the financial aid of the Australian National University, the co-operation of the Lutheran Mission New Guinea and assistance from other S.I.L. personnel, this study would have been impossible. Members of the Lutheran mission often over-extended themselves in keeping the field work progressing smoothly. Of particular assistance in the field were the Al Flathmann family at Kalasa, the Brenton Atze family at Butaweng and the Ron Schardt family at Boana. Of more general assistance were Dr John Kuder, Reverend M. Heist and other mission and government personnel in the Lae, Finschhafen, Kabwum, Boana and Sialum areas. Informants have been too numerous to list exhaustively but of those who have helped teach my wife and me what we know of the Selepet language, five men from Indum village warrant particular mention: Gotten, Pawi, Geunao, Kawinu and Tumang.
I am also indebted, perhaps more indirectly, to those members of the S.I.L. whose teaching of linguistics has provided the theoretical model upon which this study is based, in particular Benjamin F. Elson, Robert E. Longacre and Richard S. Pittman.

Of those on the staff at the Department of Linguistics (Research School of Pacific Studies, A.N.U.), I am most indebted to Professor S. A. Wurm for his interest, guidance and counsel through the duration of the research programme. Dr C. L. Voorhoeve's comments on chapters 4, 5 and 6 have been most helpful as also have been Dr D. C. Laycock's comments, especially on chapter 1. I have also benefitted from discussions with fellow scholars at the A.N.U., in particular T. E. Dutton, K. J. Franklin, R. Lang, A. J. Taylor and J. A. Z'graggen. A number of colleagues in the S.I.L. have commented on various portions of this thesis, notably Alan Healey on chapter 2 and Dorothy James on chapter 3. Moreover, Donald R. Davis, Oren R. Claassen and Tom Webb have not only made data available for chapter 10 but have also discussed various possible analyses suggested for their data.

My wife, Noreen, in addition to providing clerical and typing assistance, has contributed encouragement, help and perceptive comments on all phases of this study.

The thesis can be divided into three parts: the first which presents a history of linguistic research carried out in the languages encompassed by this thesis (chapter 1); the second which discusses lexical and grammatical similarities among these languages (chapters 2 and 10 respectively); and the third which presents
a sketch of the Selepet language (chapters 3-9). Chapter 3 was published as a monograph in Pacific Linguistics and so differs slightly in format and spelling.
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Chapter 1

Introduction

1.1 General

This section presents a survey of the literature concerning the languages and peoples of a portion of Northeast New Guinea and attempts to unravel the confusion over language names and variant classifications of the languages found there. The area concerned encompasses the Rai Coast eastward from Biliau and Saidor, the Finisterre and Saruwaged mountain ranges, the Huon Peninsula and Umboi (Rook) Island lying between the Huon Peninsula and New Britain (see Map I).

The discovery of the Huon Gulf is credited to A. J. R. D'Entrecasteaux when he visited the area in 1793 with the ships *Recherche* and *Esperance* (Rossel, 1808). The gulf is named after Huonde Kermades who was the captain of the *Esperance*. Nearly a century lapsed before the next visit to the area by Europeans was recorded, and that was by John Moresby in the ship *Basilisk* in 1874 (Moresby, 1876). Moresby named the Markham River after the secretary of the Royal Geographical Society and named the Rawlinson mountain range north of the Huon Gulf after the society's president. Shortly thereafter, O. Finsch passed along the shores in the ship *Samoa* and contacted the inhabitants at various points, notably one which is named Finschhafen (Finsch, 1888).

Significant European contact began with the arrival of the German New Guinea Company which began work at Finschhafen on October 5, 1885. Although the German administration's policy was to establish firm control
over an area before missionaries were allowed to enter, repeated petitions to Berlin by the Neuendettelsau mission persuaded the government to allow missionaries into New Guinea. The first missionary, J. Flierl, landed at Finschhafen on July 12, 1886, and he was followed by K. Treml in September. On October 8th they moved to the Jabêm village of Simbang.

With this break from the presence of the New Guinea Company personnel, the missionaries were consistently the first Europeans to make significant contact with the neighbouring tribes. Thus scientific knowledge about the area expanded with the mission work. Once a mission station was established, expeditions were made into the surrounding countryside with a view to opening new stations.

In 1891 the European population at Finschhafen was nearly wiped out by an epidemic, and as a result the New Guinea Company and the German administration shifted the center of colonization to the Astrolabe Bay. In order to facilitate administration the German government delegated authority to the missionaries. Visits by government officials were infrequent and by the time of the Australian take-over in 1914 large areas were under mission influence. The predominance of the mission's control and influence over that of the German administration, and later the Australian administration, persisted in many areas until after World War II and in the more remote areas until the last decade.¹

From Simbang village the missionaries made expeditions along the coast and on November 9, 1889 G. Bamler opened a station in the Tami Islands. Rev. Flierl made several trips into the immediate hinterland with other
missionaries, and these trips resulted in the founding of the Sattelberg station among the Kai [Káte] people on November 8, 1892. From Sattelberg the missionaries moved north across the Busim River to establish a station at Wareo on the Wamorâ range.

For a number of years the explorations were confined of necessity to the coastal areas and ranges. The peoples of the inland areas were cannibals and greatly feared by the more coastal peoples. Flierl and Hoh made an early attempt to cross the Cromwell range to the north in March, 1892, but their carriers deserted them at the border of the cannibalistic Poom tribe (probably the Dedua people). C. Keysser (1911) reported that the Kai people around Sattelberg regarded the inland Hube people as being one-eyed and having tails—a sign that contact between the two peoples must have been minimal.

As a result of the failure to penetrate inland, the missionaries proceeded westward along the Huon Gulf, and in 1906 they opened a mission station at Cape Arkona among the Bukaua people and at Malalo in 1907 among the Busama people. Meanwhile Flierl opened a station at Heldsbach between Sattelberg and the coast in 1904, and from there missionaries contacted the coastal-dwelling Papuan peoples as far north as Sialum. In 1907 M. Stolz opened the Sialum station and later in 1910 proceeded northward to open a station on Sio Island (Dorf-Insel).

Most of the knowledge of the linguistic situation until the 1960's comes either directly or indirectly from the missionaries. In many cases the missionaries undoubtedly related what they knew about the area and its peoples to the occasional visitors: adventurers and
tourists as well as naturalists, anthropologists and other professional scholars. Often these visitors and transient field workers published the results of their brief visits and studies well in advance of any publications by the missionaries and thereby presented observations which were not altogether accurate. 3

The first statements about the Finschhafen area and its people are from the expeditions reported by F. Hellwig (1889a, 1889b, 1890). The first doctor of the New Guinea Company, O. Schellong, provided some kinship terms from Jabim (Schellong, 1889a), mentioned the three Papuan tribes of Jabim, Bukaua and Poum (Schellong, 1889b), published a treatise on the Jabim language with word lists from neighbouring languages (Schellong, 1890) and gave a survey of the peoples at the eastern tip of the Huon Peninsula (Schellong, 1891). In his survey Schellong (1891: 169) correctly stated that the Kai people were the older and original inhabitants and completely different from the Jabim people. He was incorrect, however, in stating that the Poum dialect (spoken near Cape King William) constituted a link between the Jabim and Kai dialects. This latter observation, which was based upon a report from G. Gabelentz who compared word lists collected by Schellong, was made before the distinction between Papuan and Melanesian languages was widely recognized. 4

The first extensive diachronic linguistic study involving languages from the area appeared in the writings of the German journalist H. Zöller who toured the stations of the German New Guinea Company. Zöller argued against the notion commonly held by people of
the New Guinea company and many missionaries that several hundred completely different languages existed in German New Guinea. He published two compilations of word lists from New Guinea and the neighbouring islands. The first list (Zöller, 1890) included fifty words from twenty-four languages and the second list (Zöller, 1891) included three hundred words from forty-six languages. In comparing the vocabularies of the twenty-four languages with those of the Malayo-Polynesian group, Zöller tried to establish percentages of cognate vocabulary and found that the range of percentages was quite wide. He (Zöller, 1890: 122-8) gave the following percentages of cognate vocabulary between New Guinea area languages and Malayo-Polynesian: Kelana [Austronesian (AN) - Gitua] 26.75%, Rook Island [AN - Tuam] 29.5%, Jabim [AN - Jabêm] 18.5%, Bukaua [AN] 25.75%, Simbang-Kei [non-Austronesian (NAN) - Kate, Wanac dialect] 13%, Saleng-Kei [NAN - Kate, Wanac dialect] 10.75%, Kelana-Kei [NAN - Ono] 8.5%. His erroneous conclusion, which is understandable in the context of the times, was that there was a common origin for all the Oceanic languages from Madagascar to Hawaii. The significant contribution of Zöller was his recognition of the Kei (Kai) dialects as constituting a single group of related languages which showed closer relations to one another than to the recognized Malayo-Polynesian languages.

The first grammatical description of one of the Kai dialects was that of the Kate-dong the forest language near Sattelberg station by J. Flierl (Grube, 1895). This treatise included a lengthy word list with a few listings of cognate words found in other languages of the South.
Paci f ic. Flierl (Grube, 1895: 83) contradicted the existence of the three dialects of Kai, viz., Simbang-Kei, Saleng-Kei and Busum-Kei, as given by Zöller (1891: 443) and stated that the apparent differences were the result of error and that these three represented the single dialect Kate-dong which stretched from the Bubui (Mape) River in the south to the Busim River in the north. Moreover, Flierl reported that related Kai dialects lay to the north, west and south of the Kate-dong dialect. Pöch (1907c: 154), on the other hand, apparently taking his lead from Flierl, claimed that all the people covered by his journeys constituted a large unitary people with one language. Pöch erred in his claim since his explorations obviously included trips through the area inhabited by Mape speakers.

Flierl was perhaps too harsh in his criticism of Zöller since the two men probably had simply different ideas of what constituted dialect differences. Zöller's lists included two dialects of Kâte about 95% lexicostatistically related, viz., Wemo and Wanac, but Flierl probably considered these differences negligible when compared with differences between the Kate-dong (Wemo) dialect and the other dialects, Wamorâ, Mâgobineng, Naga and Mape (see Pilhofer 1927-8, 1928-9) which are from 73-87% lexicostatistically related. Keysser (1929a: 11) stated that "near the vicinity of the station [Sattelberg] were two highly divergent dialects [Wemo and Wamorâ] so that the missionary who only had learned one was scarcely able to understand a word of the other".

Many of the reports of adventurers and tourists who passed through the area contained brief comments on the
linguistic situation. Preuss (1897: 100-1), after giving the supposed locations of several languages about Finschhafen, goes on to say that Schellong (following Gabelentz) grouped the Jabim and Bukaua languages together in one group, the Tami, Rook Island and New Britain languages in another, and Poum and the Kaz dialects in another. The first published classifications of the Kate-dong (Kai) language as Papuan are found in Schmidt (1900-2: 356, 38ff.) and in Ray (1902: 189). Schmidt, who based much of his study on the earlier studies of Schellong and Zöller, published word lists for a number of Papuan languages, viz., Kai [Káte], Poom [Momare], Kamoka [a mixture of Ono and Migabac] and Kelana Kai [Ono], as well as a number of Melanesian languages, viz., Tami, Bukaua, Jabim, Kelana [Gituca] and Rook Island [Tuam]. Later Dempwolff (1905: 243-5) published word lists from Pon [Sialum], Keseraua [Ono] and Ago [Migabac].

Subsequent confusion resulted over the use of the term Kei or Kai. Zöller, in using the term in a generic sense, stated that the Kei dialects were found inland from the Jabim-speaking coastal people as well as from other coastal peoples. The term was also used in a generic sense in Grube (1895).

In 1911 R. Neuhauss published a three volume work Deutsch Neuguinea which contains important contributions about the peoples from the southern border near Morobe around the coast to Sialum on the northeast coast of the Huon Peninsula. 5

In providing a survey of all the known groups of peoples, Neuhauss (1911, I: 118-30) used the term Kai
to refer to all the inland Papuan peoples (as distinct from the Melanesian peoples) from the southern border around the Huon Gulf to the area north of Finschhafen. (In a brief note Neuhauss (1909: 752) had referred to the peninsula north of the Huon Gulf as the Kai peninsula.) He noted the presence of the Papuan Kai living inland behind the Ka-iwa who live between the Francisco and Nassau rivers south of the Markham River, the bearded Kai of the Rawlinson range and the Kai living west of Finschhafen. Neuhauss, not being ignorant of the diversity among the Kai peoples, distinguished the Hupe [Kube] west of Finschhafen as well as the Kodero [Nomu?] inland from Cape King William. He stated that the term Kai was a term used in New Guinea to refer to inland people which belong to different tribes (1911, I: 125). Keysser (1911) provided an ethnographic description of the Kai people about Sattelberg and attributed to them the term Kai forest or inland in contrast to the seacoast people who spoke the Jabim language. He stated that the term had come generally to represent the dwellers of the forested and mountainous hinterland. He also mentioned the Poum as one of the Kai family and noted that the languages of the Kai, Poum and other inland peoples were related in construction. Dempwolff (1919-20) was the first to cease using the term Kai to refer to the Sattelberg people and stated that the Europeans call them the Kai people using the term of the Jabim but that they call themselves the Kâte-ñi (Kâte ñic) forest people and their language the Kâte-dañ (Kâte dâñ) forest language. Keysser (1925: III) provided a dictionary of the Wena (Wemo) dialect of the
Kâte language and stated in a footnote that the Europeans often refer to the people as the Kai people using a term from the Jabêm language. Loukotka (1957: 38) separated the Kai from the Kâte and placed them north of the Kâte. Salzner (1960: 41-2) also separated the Kai from the Kâte but he placed them west of Rawlinson ranges and in the headwaters of the Busu river. Schmitz (1960c) mentioned the Kai and appears to have equated them with the Kâte. Capell (1954, 1962), however, assigned the name to a Melanesian group said to be living inland near the Kaiwa (cf. Neuhauss' Papuan Kai living behind the Ka-iwa) and this was followed by Klieneberger (1957), Hollyman (1960) and Hooley (1964) all of whom listed the Melanesian Kai as a distinct group, although Hooley, following Schmitz (1960c), listed publications of the Kai and Kâte together. 7

Neuhauss (1911, I: 125 ff.) listed the following peoples of the Huon Gulf area and the Huon Peninsula: the Bukaua and in the interior the Kai; the Labo at the mouth of the Markham River; the Lae-Womba; the Mumang-Lae-Womba (left bank of the Markham); the Melanesian Waing farther to the east [Guwot or Sirak]; the Wandjan-Lae-Womba to the northwest; the Marapuman, Karamban, Garaman and Karamburi at the watersheds of the Markham and Ramu rivers (probably Azera villages); the Papuan inland Kai who are not a uniform group; the Taimi [Tami]; the Jabim [Jabêm]; the Sialum; three languages near the Tewae River, Poum [Momare], Depe [Dedua] and Girogat [Ono]; Kelana [Gitua]; Papuan Kodero [Nomu?], Sigaba [Sio] and the Papuan Mula [Komba]. Neuhauss (1911, I: 128) also noted that the inland people of Rook (Umboi) Island were Papuans. 8
Neuhauss (1911, I: 127) noted that the people of Sialum no longer could be regarded as belonging to the tribe of the Poum, thus indicating that the earlier writers probably were using the term Poum in a broad sense. Note that Flierl (1932a: 110-1) spoke of the Poum coast, the Poum district and the Poum hinterland (the area of Zagaheme among the Dedua). The first references to the Poum tribe, viz., Hellwig 1890, Zöller 1891, Schmidt 1900-02 and Dempwolff 1905, probably were to any of the peoples living north of the Kai people, and only after extensive contact were the various Poum groups identified. After the various Poum groups were identified the term ceased to be used just as the term Kai fell into disuse after the Kai groups were identified. The group of cannibalistic Poum tribes probably included the small group of Sene people on the right bank of the mouth of the Masaweng River, the Migabac, the Momare, and perhaps even the Dedua who are also known to have been cannibals. The Kai group probably ended at the Masaweng River for although Wamorâ and Mâgobineng were generally regarded as different languages by Europeans, they were in fact closely related to the Kai [Wemo] dialect at Sattelberg and should be regarded with the Sattelberg Kai as dialects of a single language.\(^9\) The missionaries were undoubtedly aware that the differences between the Poum group (Momare, Migabac and Sene) and the Kai group (Wemo, Wamorâ, Mâgobineng and Wanac) were much greater than any internal differences between the member languages of the two groups.
Concerning the problem of dialects, Neuhauss reported that in the inland area of the Kai the dialects changed in a short distance and that this splitting of dialects found its counterpart in Norway. The Neuendettelsau mission was striving to simplify the linguistic confusion of the area by introducing area languages. For the Melanesian coastal people they chose Jabém which was easily learned by the Bukaua and the Tami peoples. For the Papuan languages they chose the Sattelberg dialect, but it was too early at that time to evaluate its success (Neuhauss, 1911, I: 120-1). The decision of the missionaries to concentrate their linguistic efforts mainly in these two languages probably contributed to the general neglect of the other languages within the area under the mission's influence.\textsuperscript{10} As the mission work expanded into the hinterland, various substations staffed by mission helpers from Sattelberg were established.

By 1911 the missionaries were crossing the Cromwell range to the north. In the following year expeditions were made westward from Finschhafen across the basin of the Bulesom (Mongi or Sopa) River, over the Rawlinson range and along the southern slopes of the Saruwaged range to the Markham valley. The publications recounting these journeys paid more attention to the physical features of the land than to differences among the peoples. Furthermore, the missionaries used the terms 'tribes' and 'people' quite freely for any number of social or political groups, so that one cannot conclude whether a particular 'tribe' or 'people' represented a separate linguistic group or not. These expeditions were
apparently made to check on established mission stations as well as to make further explorations so that the first legs of each journey were nearly identical. Once the stations of Kulungtufu in the Kube area, Tobou in the Kua valley and Ogeramnang in the Burum valley were visited, the missionaries would either turn north and cross the Cromwell range as did Pilhofer (1911) and Meier (1911) or proceed west across the Rawlinson range as did Pilhofer (1912) and Keysser (1912, 1913). As a result of the publication of the accounts of these trips a number of new names became known. The Hube [Kube] people were early regarded as speaking a distinct language. 11 Keysser (1913: 179) stated that a young mission helper (probably from near Sattelberg) stationed at the Tobou station did not understand the Bulung [Burum] language. 12 Keysser (1912: 560) noted the Avenggu people [Tobo] but stated nothing about their linguistic status. His only remark which indicated probable dialect complexity was that the tribes of the interior held the Sattelberg workers in high respect (Keysser, 1912: 560). Keysser also made frequent trips to the Kombe [Komba] north of the Cromwell range. 13

The trail out of the Bulung valley and across the Rawlinson range descended into the area of the Samukeb (Sankwep River), and Pilhofer (1912: 144) stated that this small tribe could be mistaken for Melanesians except for the linguistic evidence. Keysser (1912: 572, 578) mentioned that both the Samukeb and Tuap men were bearded, which fact leads one to equate them with the "bearded Kai" of the Rawlinson range in Neuhauss (1911, I: 125). More precisely, the inhabitants of the Sankwep
valley speak the Momolili language. To the west of the Samukeb the missionaries found the Ogao people in the Nimba and Tuembing valleys. These people can now be identified as speakers of the Nabak language. Further to the west were a number of groups living in the headwaters of the Busu (Adler) River. In describing the population of the Busu area, Pilhofer stated that with the possible exception of the Samukeb people they were all Kai (Pilhofer, 1912: 146). Keysser (1912: 579) mentioned that the people on the Bondjog (Busip) River were called Waing (Wain) and were supposedly related to the Lae-Womba. Pilhofer was undoubtely referring to the Papuan people of the Erap Family of languages and Keysser was probably referring to either the Sirak or the Guwot people (two small Melanesian groups on the lower reaches of the Busu River), since these are the only Melanesian peoples within the area which is commonly referred to as Wain. Along the Markham River to the west of the Waing, the missionaries found the Djiffesen people, a Lae-Womba tribe, and further upstream the Adjera [Azera] (Keysser, 1912: 582).

Except for the studies of Pilhofer on the dialects of Kâte and related neighbouring languages (Pilhofer, 1927-8, 1928-9) and the study of Wacke on the Ono (Wacke, 1930-1), later publications on the languages of the Huon Peninsula and the Finisterre ranges had to draw from what was already known in 1913. Because these later publications were not based on original field work, many inaccuracies contained in the early publications became firmly entrenched in the literature about the area. Moreover, some writers, notably Loukotka, 1957,
apparently misinterpreted the information contained in the early publications or gave them only a cursory reading and thus introduced false information. Thus Haddon (1917: 347) drew on Keysser (1911) for his comment that "the Kai are a people of mixed Pygmy and Papuan descent, who speak a Papuan language and inhabit the Rawlinson and Sattelberg ranges, north of the Huon Gulf". To the present writer's knowledge, however, Keysser nowhere spoke of a single linguistic group stretching from the Sattelberg to the Rawlinson ranges, a distance of forty miles. Chinnery (1925a: 8) quoted from Haddon and so perpetuated Haddon's error. Salzner (1960, map 52) apparently followed Pilhofer (1912) and indicated erroneously that the Kai language stretches from the Rawlinson ranges through the Busu headwaters to the west.

Ray (1919), drawing from the works of others, classified the known languages of the Huon Peninsula and neighbouring islands into the following groups: (1) the Tami Group; Tami, Bukaua, Yabim [Jabêm] and Suam [Jabêm]; (2) the Kelana Group; Kelana [Gitua], Rook Island [Tuam], Kaimanga in the mountain district of Rook Island (Qaimanga, Iangla, Mangaw) [Maŋap], Mantok [Mandok], and Sigap: (3) the Kai Group; Kai or Katedong [Kâte], Poom [Momare], Kamoka [a mixture of Ono and Migabac], Pong [Sialum], Keseraua [Sialum], Ago [Migabac] and Kelana Kei [Ono]. The seventy-two word lists published by Ray contained maximally 20 words each, although few actually contained the full number and some contained as few as four to six words.
Schmidt (1926: 151), in summarizing the work to 1925, stated that the Kai or Katedong language was related to the Busim and Bile languages (both Wamorâ) but that the Kamoka [a mixture of Ono and Migabac] was unrelated to Kai. The Poom [Momare] and the Kelana-Kei [Ono] were said to be interrelated. Schmidt's data were limited in many cases to short word lists so that some of his observations were understandably weak. He was wrong in stating that the Kamoka dialect was unrelated to Kai, but he apparently based his statement regarding its relationship upon eleven vocabulary items, hardly enough for a suitable classification.

Pilhofer (1927-8) made a significant contribution toward the knowledge of the hinterland peoples when he published extensive paradigmatic lists for ten dialects and languages neighbouring the Wemo dialect of Kâte, viz., Naga, Mape, Wamolâ, Mâgobineng, Sene, Momale, Migabac, Deduae, Hube [Kube] and Bulum [Burum]. Pilhofer (1928-9) published word lists from the same ten dialects plus three others, Kâte (Wemo), Ono (near Kalasa) and Zia (near Morobe). In addition to giving the locations of these languages he noted dialects and interrelationships. He grouped together the Deduae, Hube and Bulum languages and stated that Bulum was related to Komba as well as to languages in the Adler (Busu) River area to the west (Pilhofer 1927-8: 196-7). Pilhofer, however, did not relate his studies to those of earlier scholars with the result that some languages and peoples were referred to by more than one name and subsequently confusion resulted. Wacke (1930-1) published a study of the Ono language and styled the format after that of Pilhofer's study of Kâte
(Pilhofer, 1926-27a). Following Pilhofer's and Wacke's studies there were no linguistic publications based on original research for twenty years until that of Capell (1950, 1954 and 1962), although an administration officer, L. G. Vial, noted the different peoples contacted during his hinterland patrols and gave his impressions of possible language groups (Vial, 1938, 1943). Vial (1938) grouped the languages of the Timbe, Uruwa, Yupna, Nankina, Ufim, Awara, Upper Ramu (Baiuweng) and Wantoat areas into the following groups: (1) Galena dialects [Timbe] which were spoken by about 10,000 natives of the Timbe River and its tributaries and in some villages on the coastal side of the range near Ulap mission station; (2) Nukna, Notna or Nut dialects [some languages of the Wantoat, Yupna, Gusap-Mot families and the Komutu language of the Uruwa Family]; and (3) the Arukna dialects [the Uruwa Family excluding the Komutu language] which Vial stated may in fact belong to the Nukna group. The fact that Vial thought the Arukna dialects could be grouped together with the Nukna dialects indicates that he was aware of the great differences between these two groups on the one hand and the Galena dialects [Timbe] on the other. These differences are reflected in the current classification (Hooley and McElhanon, 1970) which separates Timbe from Vial's Arukna and Nukna dialects and assigns it to a different stock.

Capell (1954) carried out a survey of the languages of the Southwestern Pacific by means of a linguistic sampling process and library research. His survey left
large areas about which there was little or no linguistic knowledge. The following names, however, were added to those within the area encompassed by the present study: Momolili, Napa [Nabak], Wain [Sirak and Guwot], Boana [Erap Family], Amari [Azera], Yupna, Uruwa, Timbe, Selepet, Raua (Erawa in Capell, 1962) [Rawa], Barim, Iangla [Mangap].

Schmitz (1955) published a survey of the area preparatory to doing field work and added the following names: Buhem-Kai [Momolili]—an offshoot of the Bulung people (from Lehner, 1920); Ngain-Aschon which is not classified (from Schnable, 1925); and Gamak [Nankina] spoken in the headwaters of the Nankina River. Schmitz also noted that the name of a language spoken in the Wombiok and Tewiok (iok means river) valleys was not yet known. Information available to the present writer indicates that this unknown language is probably a dialect of Nankina. Schmitz also noted the Poum (from Stolz, 1911) and the dialects mentioned by Vial (1938), viz., Galena, Arukna and Nukna.

Loukotka (1957) surveyed the available materials and provided a classification of some of the NAN languages. A comparison of Loukotka's classification with earlier publications about the languages of the area indicates that Loukotka must have only cursorily read the earlier publications and not attempted to compare them. Loukotka lists three groups of languages. The Kâte group in turn is divided into three subgroups.

Kombe [Komba]: Kombe, Bulum, Zia, Selepa [Selepet].
Ono: Ono, Keseraua, Pong, Mula or Kelana Kei, Kamoka.
Kâte: (1) Hube: Hube, Deduæ, Migabac
(2) Poom: Poom, Mape, Wamola, Magobinen; Sene, Momale, Ago, Busim, Bila
(3) Kâte: Kâte, Kai or Kei, Simbang, Saleñ, Naga.

Unclassified: Timbe, Momolili, Naba, Kaidemoe, Erap, Arukna.

Regarding the Kombe group it may be noted that Zia is found near Morobe in the southern Morobe District and does not belong to any of the groups within the larger Finisterre-Huon group of languages. Rather it belongs to the Binandere family (see Wilson, 1969) and is only distantly related to the Finisterre-Huon languages. Pilhofer (1927-28) published paradigmatic lists for ten dialects and languages neighbouring Kâte and later (Pilhofer, 1928-29) published word lists for these same ten. In the latter article, however, Pilhofer included word lists from Zia and Ono but he did not include these languages in any particular group of languages.

Loukotka's Ono and Kâte groups represent a somewhat confused collection of names. Note in the Ono group that the Kelana-Kei (see Zöller, 1890) are erroneously equated with the Mula (see Neuhauss, 1911, I: 125 ff.), a village of people who speak the Komba language of Loukotka's Kombe group. Also Loukotka has omitted the Sialum language (Stolz, 1911; Neuhauss, 1911, I: 127) from any of his groups. He lists the Poom as a member of the Kâte group but lists the alternate spelling Pong as a member of the Ono group. His statement (based upon Zöller, 1890, 1891) that the Kai represent a group living north of the Kâte shows a lack of investigation into the
use of these two terms. Furthermore, his use of the name Simbang for a NAN language is confusing because the people of Simbang village speak Jabém (see Schellong, 1890; Schmidt, 1901; Zöller, 1890: 122). By the names Simbang and Saleñ he must have meant the Simbang-Kei and Saleng-Kei (Zöller, 1890: 128). Moreover, Loukotka erroneously lists all of Umboi Island and much of the headwaters of the Busu River as areas occupied by speakers of AN languages.

Salzner (1960: 28, 40-2) locates some of the languages within the area under consideration on a map (no. 52) and classifies the languages into the following groups (groups I-III are NAN and groups IV-VII are AN):

I. Kâte group: (a) Kâte: (1) Kâte, (2) Naga, (3) Mape; (b) Wamolâ; (c) Magobineng; (d) Sene; (e) Momale; (f) Migabac.

II. Kai group: (a) Deduaë; (b) Hube; (c) Bulum; (d) Komba; (e) Selebet; (f) Kai; (g) Timbe; (h) Orowa; (i) Erap; (j) Leron; (k) Yaros.

III. Qaimana: (a) Qaimana; (b) Umbai; (c) Aronai.

IV. Jabém: (a) Jabém; (b) Tami; (c) Bukawac group (1) Bukawac, (2) Taminugedu, (3) Jao, (4) Abo, (5) Laë, (6) Yalo; (d) Musom: (1) Musom, (2) Sangkwep, (3) Nabak.

V. Laëwomba: (a) Laëwomba; (b) Irumu; (c) Wampit; (d) Baboaf.

VI. Waing.

VII. Kelana group: (a) Sialum; (b) Kelana; (c) Sigabac; (f) Siassi: (1) Tuom, (2) Malawaia, (3) Mantok, (4) Aramot.
Salzner's method of listing groups, languages and dialects is somewhat confusing, so it is not clear whether a particular entry represents a dialect or a distinct language. Moreover, his location of these languages on his map is in general only approximate and his sub-classification of the languages within the divisions of Melanesian (AN) and Papuan (NAN) is often inaccurate. He does not state his criteria upon which the classification is based, but in general it appears to be simply geographical distribution.

A number of languages have been incorrectly identified as either Papuan or Melanesian. Yaros of the Kai group is not NAN but rather an AN language closely related to Azera. Aronai [Barim] and Qaimana [Mangap] of the Qaimana group are not NAN but rather AN languages of the Siassi Family. Sangkwep (see Pilhofer, 1912: 144) and Nabak of the Musom group are not AN, but rather they are the NAN Momolili and Nabak languages respectively. Irumu of the Laëwomba group is not an AN language but rather a NAN language of the Wantoat Family. The Sialum language of the Kelana group is a NAN language of the Western Huon Family. That Sialum is NAN rather than AN can be determined by a study of a text provided by Stolz (1911: 282-6).

Schmitz's later work (1960c), completed after his anthropological field work of 1955-6, gives a linguistic survey of the area from Madang through the Astrolabe Bay, Rai Coast, Finisterre range, Markham valley and Huon Peninsula to Rook (Umboi) Island. His classification is unreliable and must be tested at every point. For example, he listed twenty-eight different linguistic groups (Schmitz 1960c: 34--nos. 25-53) which D. Davis
(personal communication) identified as speaking a single language, Wantoat, and he listed one linguistic group (p. 33, no. 12) which in reality represents three languages, Kube, Tobo and Mindik. Schmitz did, however, correctly identify Nabac [Nabak] as Papuan but incorrectly identified as Melanesian the Sialum (also listed as Melanesian in Schmitz 1959a) and Momolili languages. He also erred in assigning all of Umboi Island to a Melanesian language although Neuhauss (1911, I: 128) and Flierl (1931: 72) remarked that the interior people of the island were Papuan. Bodrogi (1961) quoted Schmitz on the classification of the Papuan languages and lists Momolili and Sialum as Melanesian.

Capell (1962) revised his earlier survey (1954) and added a number of names: Nahu, Ngaing (Maipang), Gira, Neko, Ndau (the latter four from P. Lawrence) and Umboi. The Umboi language was classified by Capell as Melanesian (following Schmitz?) but his placement of the language on the map coincides with the extent of the Papuan Kovai language. Capell, by including all of Schmitz's relevant entries into his own list, introduced a considerable core of unreliable information and so his list must be used with caution.

Hooley (1964), in summarizing research done in the Morobe District, correctly reclassified the Momolili and Nabak languages as NAN but followed Capell (1962) in classifying the Kai (south of the Markham River) as Melanesian. Moreover, Hooley's identification of Awara (a dialect of the NAN Wantoat language according to Davis, 1969) as Melanesian is inaccurate as also is his
identification of Sio as Papuan (see Hooley, 1964: map). Hooley lists Wain as Papuan although previous writers followed Keysser's identification of the Wain as Melanesian. The majority of languages within the area known as Wain, however, are Papuan.

A preliminary study of the Huon Peninsula NAN languages provided by the present writer (McElhanon, 1967a) added the names Kosorong, Mindik and Tobo to the list of NAN languages and confirmed the classification of the Momolili and Nabak languages as NAN.

More recently the present writer (Hooley and McElhanon, 1970) surveyed the languages from Umboi Island westward to the Madang District border and classified the NAN languages of the area as constituting a single micro-phylum, the Finisterre-Huon micro-phylum, consisting of two stocks, the Finisterre Stock and the Huon Stock. In order to determine the western border of the Finisterre Stock, O. R. Claassen surveyed the southeastern Madang District and the results of this survey are included in Claassen and McElhanon (1970).

1.2 Theoretical

According to recent comments by Chomsky and others within what has become known as the transformational generative (TG) school of grammarians, linguists would link closely together (if not equate) such ideas as the form of a grammar, the theory of a grammar and the goal of a grammar.

In his first major linguistic work, Chomsky (1957: 49) stated that the correct grammar of the language represented the correct theory of the language. It was the linguist's problem to develop and clarify the
criteria for selecting the correct grammar/theory for each language.

In his attempt to discover the creative aspect of language, Chomsky made the premise that "a fully adequate grammar must assign to each of an infinite range of sentences a structural description indicating how this sentence is understood by the ideal speaker-hearer" (Chomsky, 1965: 5).

To explain the 'how' of language Chomsky deduced that a particular type of grammar was necessary and for this grammar he made some startling claims as in the following.

"It seems plain that language acquisition is based on the child's discovery of what from a formal point of view is a deep and abstract theory—a generative grammar of his language—many of the concepts and principles of which are only remotely related to experience by long and intricate chains of unconscious quasi-inferential steps.... On the basis of the best information now available, it seems reasonable to suppose that a child cannot help constructing a particular sort of transformational grammar to account for the data presented to him.... Thus it may well be that the general features of language structure reflect, not so much the course of one's experience, but rather the general character of one's capacity to acquire knowledge—in the traditional sense, one's innate ideas and innate principles" (Chomsky, 1965: 58-59).21

Moreover, Katz (1965: 105) states that "a linguistic description [namely, a TG description] is a scientific theory in a quite straightforward sense". Its subject matter is internalized rules which are formalized in a particular linguistic description, the treatment of which is expressed in a formalized, deductive theory
whose aim is to give an exhaustive, systematic account of the language.

If TG theory is deductive, then what is the basis for the deduction? The basis for the deduction must be particularly vague because in Chomsky's own words "the concepts and principles of [the deep and abstract theory—a generative grammar] are only remotely related to experience by long and intricate chains of unconscious quasi-inferential steps". If such is the case, then how can one claim that it seems "plain that language acquisition is based on the child's discovery" of this theory, or that "a child cannot help constructing a particular sort of transformational grammar".

If the concepts and principles are indeed remotely related to experience, then Hockett is correct in asking the question, "Is it possible that the brains of speakers and hearers coin and understand on the basis of 'abstract patterns' of some sort, extracted over the months and years of language-learning and language-use from actual utterances of similar shapes?" (Hockett, 1968: 95—cf. Longacre, 1964: 12ff.). Both Hockett (ibid.) and Chomsky (1965: 19) acknowledge that no procedures are available for determining the method by which a speaker encodes or a hearer decodes a message. In Longacre's (1964: 13) words, "We can observe behavior; we can only affirm intuition". Hockett and Longacre, in fairness, set forth their positions as hypotheses, and it is perhaps better to regard Katz's "scientific theory in a straightforward sense" as also a hypothesis, for as Hockett (1963: 8) has stated, "Hypotheses, about language
universals or anything else, are by definition proposals to be knocked down, not beliefs to be defended". Yet some TG grammarians have set forth their theory as the only theory worthy of consideration, and a recent notice about a book based on the TG theory speaks of those linguists who are committed to the conception of language and grammar implicit in the TG theory.

If a theory of grammar is not to be accepted by faith and if one is not required to commit oneself to a particular theory, then the form of a grammar loses some of its importance. It no longer is required to choose between alternative theories, to defend the one and denounce the other. Debate over which is the 'correct' theory or grammar is only necessary when one theory is asserted to be the correct theory. Nor is it always required to choose between two grammers based upon the same theory. Some of the excitement generated over the criteria for evaluating a grammar, e.g., brevity, simplicity, "the one O.K.'d by Chomsky or Halle" (Householder, 1965: 16), would probably not have been necessary if the notion had not been current that a grammar is to be equated with the theory behind it and that there is only one correct theory.

Nor would it have been necessary for Chomsky to posit an ad hoc level of explanatory adequacy as he did in Chomsky, 1964 (and later dates). A clear summary of these levels is found in Chomsky and Halle (1965: 100).

"A linguistic description meets the level of observational adequacy if it gives a correct account of the input to AM [acquisition model] and meets the level of descriptive adequacy if it gives a correct account of the output of AM. A linguistic theory meets the level of explanatory adequacy in so far as it succeeds in
describing the internal structure of AM and thus shows how the descriptively adequate grammar arises from the primary linguistic data. Such a linguistic theory is explanatory in that it accounts for the linguistic intuition (the underlying competence, tacit knowledge, LANGUE) of the speaker on the basis of a certain assumption about the form of the language (i.e., about the internal structure of AM) and about the data that was available to the speaker. Clearly the assumption about the form of language embodied in an explanatory theory of this sort must be universal.... Consequently a strong assumption about the device AM is easily falsifiable if incorrect (and thus is an interesting claim) by a demonstration that it fails to give a descriptively adequate grammar for some new language.

There is no need to comment much further on the acquisition model because it has been asserted to be simply a hypothesis, a premise if you please, and as such is not to be defended. It may be termed a premise because it cannot be adequately tested; a hypothesis may be tested, a premise may not. Because the acquisition model and linguistic intuition cannot be verified, the level of explanatory adequacy which accounts for these is also nothing but a premise and as such an ad hoc device useful for dismissing all non-TG approaches to language description as not worthy of serious consideration.

By distinguishing between input and output, Chomsky apparently implies that the observationally adequate grammar is based upon a closed corpus but that the descriptively adequate grammar is based upon an unlimited corpus. If this is the case, then the distinction is vacuous. As stated by Longacre (1964: 10), "Statements
about languages are inevitably based on an examination of a corpus of some sort—whether a recorded and transcribed corpus or a corpus assembled by the speaker-analyst who describes whatever comes to his mind (and who may curiously fail to call to mind expressions used daily by himself and others). As a protest against certain sterilities in former American structuralism, generative grammar reminds us that the grammatical patterns which we describe must be capable of extrapolation beyond the corpus."

The fact that any statements about languages are inevitably based upon an examination of a corpus explains why Chomsky curiously forgot such examples as 'the last Frenchman' \( \neq \) 'the Frenchman is last' and 'criminal court' \( \neq \) 'the court is criminal' in formulating his adjective transform from a kernel sentence. As Winter concluded, "It makes criticism very easy, and a little cheap, if all a reader has to do is to out-introspect the author [i.e., expand the closed corpus]" (Winter, 1965: 489). A corpus which serves as the basis for analysis is always closed, and the only difference between Chomsky's observationally adequate and descriptively adequate grammars is that in some cases it is easier to expand the corpus. Winter obviously expanded the corpus for Chomsky and as a result the adjective transform rule needed to be modified in some way, even if only in itemizing what could be an interminable list of exceptions (cf. Chomsky, 1964: 79). Whenever a corpus of data is expanded and then an analysis performed, at the point of analysis the corpus is closed. Therefore
both native speakers as analysts and foreign researchers as analysts of necessity base their analyses upon closed corpora of data. The only difference is that in one case it is easier to do field work because data to add to the corpus are more readily at hand. The native speaker as analyst still must make certain guesses and then check his analysis against further data. His guesses may perhaps be more accurate than those of the foreign researcher as analyst but nevertheless they are still guesses.

Since a grammar is of necessity based upon a closed corpus of data, the only level of adequacy which remains is that of observational-descriptive adequacy. Chomsky is correct in a sense when he equates the former with input and the latter with output, because observation must precede description just as closing a corpus must precede analysis.

What then may be expected of an adequate grammar? The adequacy of a grammar may be measured in terms of the extent to which it conforms to the data of the corpus and to the extent it must be modified should new data be added to the corpus. It may be taken for granted that the greater the variety of kinds of data in the corpus, the more valuable will be the resulting grammar. A stage is reached, however, when the addition of more data will not cause any significant modification or revision of the grammar. When this stage is reached one may say that the grammar is generative or is capable of extrapolation beyond the corpus, although it must be kept in mind that because every living language is in a state of flux, no grammar of a living language will be complete and not need later modification.
The Se lepet data forming the basis for this description include a concordance of 25,000 words of text in the Southern Se lepet dialect made on the IBM 1410 computer at the University of Oklahoma by the Linguistic Information Retrieval Project of the Summer Institute of Linguistics and the University of Oklahoma Research Institute, and sponsored by Grant GS-934 of the National Science Foundation. In addition to the text and concordance, a sizeable corpus of data was accumulated while the writer and his family lived in Indum village of the Southern dialect or worked with informants at other centres in the Territory of New Guinea.

The goal of this grammar is to provide a description of the Southern dialect of Se lepet which is consistent with the corpus and which contains patterns and rules which will not be significantly modified should the corpus be enlarged. Because open ended constructions and maximally expanded formula may be grammatically correct but not necessarily natural language, some attention is given to style and to a statistical representation of the varieties of a construction type as they occur in the text material.

This present description of Se lepet is based upon the theory of tagmemics as it has been developed by K. L. Pike (see Pike, 1966 and 1967 for bibliographies) and R. E. Longacre. Terminology is based largely on Elson and Pickett (1962) and Longacre (1964).

No attempt has been made, however, to give the description a flavour which might make it more palatable to non-tagmemic grammarians, so to some readers the symbolization and terminology may be outdated. TG
grammarians may find solace, however, in the following quotations from Katz (1965: 102-04):

"Communication can take place because a speaker encodes a message using the same linguistic rules that his hearer uses to decode it. This becomes clearer when we think of how we learn a foreign language in the classroom.... Our task is to learn them [a more or less accurate approximation of the internalized rules] well enough for us to produce utterances that can be decoded by speakers of that foreign language and to understand utterances of those speakers themselves. This sort of example brings out the fact that our competence in a foreign language depends on whether, and to what extent, the rules we have been taught are equivalent to those that speakers of the foreign language acquired naturally. But it also shows that each speaker of the foreign language must use essentially the same system of rules, i.e., systems used by different speakers cannot differ significantly from each other, since this is a precondition for our being able to communicate with an arbitrary speaker of the foreign language on the basis of the rules we learned in the classroom."

Suppose there are two Asians wishing to learn English. Individual A learns English according to Owen Thomas (1965) and other TG oriented courses while Individual B learns English according to Gleason (1965) and other taxonomically oriented courses. When, at some future date, both individuals are fluent and A meets B and carries on a conversation, which system of rules does B encode with and which does A decode with and vice versa. Katz's point of view insists that both must encode and decode by the transformational-generative model. Therefore, it matters not which systems of rules are used to formalize the input, because the output will in the end always be transformational-generative.
Should an individual gain a suitable degree of fluency in Selepet from this tagmemic grammar and a Selepet-English dictionary, he may be assured that according to Katz he will be able to communicate with natural speakers of Selepet because his output will of necessity conform to TG linguistic rules.

1.3 **Abbreviations**

The abbreviations which occur frequently in this thesis are presented below. Other abbreviations are given in the text with the terms they represent.

- **ld** first person, dual number
- **lp** first person, plural number
- **ls** first person, singular number
- **2-3d** second or third person, dual number
- **2-3p** second or third person, plural number
- **2s** second person, singular number
- **3s** third person, singular number
- **Acc.** Accompaniment tagmeme
- **acc.** accompaniment enclitic
- **Act.** Actor tagmeme of the Intransitive Clause
- **aj.** adjective class
- **ajct.** adjunct class
- **ajH.** Head tagmeme of the Adjectival Phrase
- **ajzer.** adjectivizer
- **ante.** antecedent action
- **Att.** Attributive tagmeme
- **auxH.** Head tagmeme of the Auxiliary Verb Phrase
- **av.** adverb class
- **AVP.** Auxiliary Verb Phrase
- **avzer.** adverbalizer
- **Ax.** Axis tagmeme of axis-relator phrases
- **Bene.** Benefaction allotagma
- **Bene./Cau.** Benefaction/Cause tagmeme
- **bene./cau.** benefactive/causal enclitic
- **Bene./Cau.Ph.** Benefactive/Causal Axis-relator Phrase
- **b.pr.** verbal benefactive-marking suffixes
- **Cau.** Cause allotagma
ccH. Head tagmeme of the Closed Co-ordinate Noun Phrase
C-CoNP. Closed Co-ordinate Noun Phrase
Com. Complement tagmeme of the AVP.
ctf. contrary-to-fact mode
Dem. Demonstrative tagmeme
dem. demonstrative pronoun class
dIVP. Delayed Intensive Verb Phrase
dp.cl. dependent clause
DVP. Desiderative Verb Phrase
EHF. Eastern Huon Family
ERA. Erap Family
FHP. Finisterre-Huon Phylum
GNP. General Noun Phrase
GUS. Gusap-Mot Family
H. Head tagmeme of the GNP.
hab. habituative mode
hbt. future tense, habituative mode
hetero. subject of following verb is heteropersonal (different)
homo. subject of following verb is homopersonal (same)
icft. inceptive future tense
ICl. Intransitive Clause
ift. immediate future tense
iIVP. Immediate Intensive Verb Phrase
inch. inchoative future tense
Ind. Indefinite tagmeme of the GNP.
indp.cl. independent clause
Inst. Instrument tagmeme
inst. instrument enclitic
Inst.Ph. Instrument Axis-relator Phrase
Intens. Intensifier tagmeme
interpt. intermediate past tense
iP. Predicate tagmeme of the Intransitive Clause
ipt. immediate past tense
KOV. Kovai language isolate
lit. literally
Loc. Location tagmeme
loc. locative enclitic
Loc.Ph. Locative Axis-relator Phrase
M. Manner tagmeme
man. manner enclitic
Man.Ph. Manner Axis-relator Phrase
nomzer. nominalizer
num. numeral class
O. Object tagmeme
O₁. Object₁ tagmeme where distinguished from Object₂ tagmeme
O₂. Object₂ tagmeme
oH. Head tagmeme of the Open Co-ordinate Noun Phrase
O-CoNP. Open Co-ordinate Noun Phrase
oH. Head tagmeme of the ONP.
ONP. Origin Noun Phrase
o.pr. verbal object-marking affix
past. past tense
per. person
perm. permissive mode
p.m. nominal possession-marking suffix
Poss. Possession tagmeme
poss. possessive enclitic
Poss.Ph. Possessive Axis-relator Phrase
pres. present tense
proh. prohibitive mode
punct. punctiliar mode
Qual. Qualifier tagmeme
Quant. Quantifier tagmeme
r. root
Rel. Relator tagmeme
rft. remote future tense
rpt. remote past tense
rinch. remote inchoative tense
S. Subject tagmeme of the Transitive Clause
s. stem
simul. simultaneous action
s.m. verbal subject-marking suffix
s.o. someone
s.th. something
sub. subject enclitic
Sub.Ph. Subject Axis-relator Phrase
T. Time tagmeme
t. time (temporal) class
TCl. Transitive Clause
temp. temporal suffix
tP. Predicate tagmeme of the Transitive Clause
tv. transitive verb class
tv.I transitive verb root, subclass I
tv.II transitive verb root, subclass II
tv.III transitive verb root, subclass III
URU. Uruwa Family
vbzer. verbalizer
WAN. Wantoat Family
WAR. Warup Family
WHF. Western Huon Family
YUP. Yupna Family

{} Braces enclose a morphème with allomorphic variants other than those based upon morphophonemic processes.

: A colon in the formula means "is manifested by; is expounded by".
Notes

1. For a thorough treatise on the changeover from German to Australian administration see Rowley (1958). After the Australian government assumed administration of German New Guinea in 1914, it was slow in establishing contact with the interior peoples. The result was that the initial government patrols into the hinterland areas in the 1930's often found that the people had been under mission influence for two or three decades. Thus in the Sialum and Kalasa area the mission opened the Sialum station in 1907 and moved it to Kalasa shortly thereafter, but the government didn't open a station in the area until the Sialum station in 1961. In 1910 the mission opened a station at Sio and in 1928 another at Ulap overlooking the Sio coast, but the first permanent government station was opened at Wasu in 1949 and moved to Kalalo (near Ulap) in the 1950's. The first government patrol into the Sio hinterland was not until 1934, although the missionaries made an initial patrol in 1911 and had maintained regular contact with the inhabitants from 1919 onward by stationing New Guinea evangelists and making periodic patrols. Mission influence was very strong in most areas, and Vial (1938: 146) noted in the report of the first government patrol through the Uruwa, Yupna and Ufim areas that a Kâte interpreter was essential.

2. Languages names given in brackets are used in Hooley and McElhanon (1970) and chapter two of this thesis; names given in parentheses are alternative names.
3. Many of these visitors simply listed their itinerary with a few observations and contributed little to the advancement of knowledge: e.g., Bennigsen (1901), Hahl (1904), Pöch (1907a, 1907b) and Vogel (1911).

4. Although Müller (1876-88) is often erroneously credited with separating the Papuan and Melanesian languages (see Laycock and Voorhoeve, 1970), it was S. H. Ray (1895) who first outlined the differences.

5. See Bamler (1911), Keysser (1911), Lehner (1911), Stolz (1911) and Zahn (1911). Much of what was stated in Neuhauss' work served as the basis for remarks by more current writers, both in the field of linguistics as well as anthropology.

6. Keysser stated that those belonging to the Jabim group occupied the whole Huon Gulf north to the rocky coast and probably included the Bukaua, Laewomba and Tami languages. Schellong (1891: 169) stated that the term Kai meant forest in the Tami language. Probably the term had cognates throughout the Melanesian languages of the Huon Gulf as implied by Chinnery who stated that "Kai is a name given to the bush people by the coastal natives whether related to one another or not" (Chinnery 1925b: 32). The term Kai in the Jabêm language apparently consists of the noun ka tree (Koschade, 1969: 299) plus the distributive suffix -i (Dempwolff, 1939: 24) giving the sense of those (several) in the trees, i.e., the forest dwellers.
7. Although Neuhauss placed the Papuan Kai near the Ka-iwa, the exact location of these Kai has been difficult to determine. If Neuhauss was correctly referring to a Papuan group he must have had in mind the present inhabitants of the upper Bulolo River, viz., the Biangai or the Weri. The fact that all of the hinterland groups to the north of the Ka-iwa are Melanesian peoples may have led Capell to identify the Kai as Melanesian. Note that Hogbin (1963: 3-12), in giving the Bukawa names for the peoples of the Huon Gulf, lists the Gaiwa (Ka-iwa) [Kaiwa], the Gai [Hote], and the Gaidemoe [Manga], all languages currently recognized as Melanesian.

8. Chinnery (1928: 24) stated that a Papuan language was reported to be spoken in the northern part of Rook Island. Although he saw some mountain people who were shorter than the coastal people, he did not collect any linguistic data from them to check the report. The language of the interior group was first identified as Cubai by Reina (1858), but Harding (1967: 123) was the first to associate the name (Kovai) with the NAN language found in the interior. A list of Kovai kin terms collected by F. Speiser is found in Bodrogi (1969: 195).

9. See Pilhofer (1927-8, 1928-9) for data from these two dialects which he lists as separate languages.

10. The mission also chose Graged as an area language for the southern Madang district, but it was not used in the area encompassed by the present study.
11. The term Hube means *forest* in a western dialect of Kàte (Keysser 1925: 163) and was used for all the inhabitants of the Mongi River basin irrespective of language differences. The people around Kulungtufu and Yoangen, in distinguishing themselves, use the cognate term for Hube, viz., Kube.

12. The term Tobou means *in the forest* in the Kube language and is used to refer to the Kua River valley. The inhabitants of the Kua valley have accepted the term to refer to themselves but have omitted the locative clitic -u in and thus say simply Tobo. The term Bulung is the Kàte speakers' corruption of Burum since Kàte has no distinction between /l/ and /r/ and all nasals are neutralized to [ŋ] in word final position.

13. The term kombà means *wild sugar cane* in the Dedua language, and because of the heavy growth of the cane in the eastern Kwama basin, it was applied to the inhabitants of that area by Dedua evangelists who probably accompanied Keysser on his expeditions.

14. The names Momolili and Naba [Nabak] first appear with reference to peoples in Costelloe (1940). Although the Momolili people have accepted the name Momolili, they prefer the local name Mesem. The term nabak means *with bark cloth* and was used by outsiders to refer to the people because of their extensive use of the cloth.

15. The language on the south side of Umboi Island is also spoken on Sakar Island and is known as Mangap (see Chinnery, 1928; Harding, 1967; Hooley and McElhanon, 1970).
16. Ray's lists for Pong and Keseraua are definitely from the Sialum language although the latter list was probably identified with the present Ono-speaking village of Kandzarua.

17. Capell incorrectly listed a number of groups as Melanesian, viz., Momolili, Napa and the Kai (south of the Markham near the Ka-iwa)---see note 7. Although the names Momolili and Napa were first mentioned by Costelloe (1940) without any linguistic classification, they could have been equated with the bearded Papuan Kai of the Rawlinson range mentioned by Neuhaus (1911, I: 125), Keysser (1912: 572) and Pilhofer (1912: 144).

18. Schmitz's placement of these people on the upper reaches of the Erap, Solab, and Ilap rivers would indicate that they speak languages of the Erap Family. The Ilap River (see Pilhofer, 1912, map) is an earlier name for the Erap River but the writer cannot identify the Solab River.

19. Note that the Ok Family (Healey, 1964) is named after the common word for water in the member languages, viz., ok. Dr. C. L. Voorhoeve and the writer are preparing lexical evidence which links the languages of the Central and South New Guinea Phylum (Voorhoeve, 1968) with those of the Finisterre-Huon Phylum.

20. A comparison of Salzner's language names and Capell's (1962) language names with those of the writer is found in Hooley and McElhanon (1970). Note, for example, that Salzner's Kai language includes two languages of the Southern Huon Family
and four languages of the Erap Family. His Erap language includes six languages of the Erap Family. It must be remembered, however, that Salzner's study did not involve field work and so adequate data for a classification must not have been available to him.

21. Note that Postal (1964: 146) claims that natural languages require transformational grammars.
Chapter 2
Lexicostatistics and the Establishment of Language Groups

2.0 Introduction

In McElhanon (1967a) the writer attempted a classification of fourteen non-Austronesian (NAN) languages of the Huon Peninsula according to the lexicostatistical method. In applying the method several problems were encountered and the resulting classification was not satisfying. It was noted that the boundaries between the postulated families were not clearly defined and that the placement of certain languages within the posited families was contrary to structural indications. A closing suggestion was that future studies might do well to make use of structure statistics as well as lexicostatistics in presenting a clearer picture of the language relationships.

When the writer resumed field work in 1967 under the auspices of the Australian National University there was still considerable interest in undertaking language surveys in order to fill in the gaps in the New Guinea linguistic picture. One of the major gaps in this picture stretched from the port of Lae near the western border of the then proposed Huon Peninsula Phylum westward along the slopes of the Finisterre ranges into the Madang District.
Although the anthropologist C. A. Schmitz (1960c) had published a list of languages keyed to a map, his classification of these languages had not been adequately tested. In one case in which a linguist had studied one language for some years, Schmitz's identification of languages was asserted to be grossly inaccurate (Voegelin and Voegelin, 1965: 47). Moreover, the languages of the Huon Peninsula Phylum were only imperfectly documented.

In order to clarify the picture the writer surveyed the area and collected 180 'basic' vocabulary items from over two hundred fifty villages, many of which were either visited on foot or by helicopter. Careful elicitation, the collection of the list in a large number of villages, and later checking has produced word lists with a high degree of accuracy. The final list used for comparing the languages consisted of 139 items selected from Swadesh's 100 or 215 item basic vocabulary lists. Each list of vernacular terms for a particular item were compared by the inspection method (Gudschinsky, 1956) and scored as cognate or non-cognate according to the method presented in McElhanon (1967a). The cognate/non-cognate items were then counted by an IBM 360/50 computer and the resulting percentages of shared basic vocabulary are presented in two tables: Table A for the languages of the Rai Coast and Finisterre Stocks and Table B for the languages of the Huon Peninsula Stock and Kovai (a language isolate).
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PERCENTAGES OF SHARED VOCABULARY

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Table B: Percentages of shared vocabulary

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### Language key for Table A


### Language key for Table B

(c.= central, n.= north, s.= south, e.= east, w.= west)

2. Kâte (Bamotâ) 13. Kube (Kulunghtufu) 24. Komba (w.)
5. Mape (Naga) 16. Mindik 27. Selepet (n.)
7. Momare 18. Ono (Amugen) 29. Timbe (s.)
8. Migabac (s.) 19. Ono (Ziwe) 30. Nabak (n.)
10. Dedua (n.) 21. Nomu 32. Momolili (e.)
11. Dedua (s.) 22. Kinalakna 33. Momolili (w.)
As a result of the word list being adapted and refined and the writer having gained more experience in the languages, the lexicostatistical percentages of relationship for the languages of the Huon Peninsula Stock are higher than those in the preliminary classification of 1967. The lowest degree of relationship in the preliminary classification was given at 4.3% whereas in the present comparison it is 13%. This percentage of 13% suggests that the Huon Peninsula group constitutes a stock rather than a micro-phylum.

2.1 Problems in classifying the Huon Peninsula Group

The Huon Peninsula group of NAN languages includes 21 languages. In order to simplify the discussion which follows, each language is identified by one of the letters A-U: Kâte-A, Mape-B, Sene-C, Momare-D, Migabac-E, Dedua-F, Kube-G, Kosorong-H, Tobo-I, Mindik-J, Burum-K, Ono-L, Sialum-M, Nomu-N, Kinalakna-O, Kumukio-P, Komba-Q, Selepet-R, Timbe-S, Nabak-T and Momolili-U. In referring to geographical areas the following terms are used: *Eastern* for the eastern coast and the mountain ranges from Finschhafen to the Tewae River; *Northern* for the Kalasa area; *Western* for the Timbe and Kwama River basins; *Central* for the Mongi River basin, and *Southern* for the southern slopes of the Rawlinson and Saruwaged mountain ranges east of Lae (see Map II).

A characteristic of linguistic relationships throughout the NAN languages of the Huon Peninsula, and much of New Guinea, is the occurrence of cognate chains and
thus language and dialect chains. These chains complicate the classification of dialects and languages according to lexicostatistical methods. In addition to true cognate chains (true in the sense of non-borrowed), there are undoubtedly chains which have developed through contact and linguistic borrowings. Often these latter chains are difficult to distinguish from the former, especially if no phonological reconstruction has been attempted.

Cutting across the Huon Peninsula are various major trade routes and due to the extremely mountainous nature of the terrain these routes are probably the same as the early routes by which the Peninsula was settled. The complication this factor adds to the total picture is difficult to ascertain but one may surmise that the lexicostatistical percentages are higher along these routes.

These major trade routes connect the languages into the following groups: trade route A begins in the Northern area, passes south through the Western area and terminates in the Southern area. The affected languages are M, L, N, O, P, Q, R and T. Trade route B begins at the same point and proceeds south into the Central area affecting languages M, L, F, G, I, J, K and probably H. Trade between these areas is minimal in comparison to the trade along each route but it should be noted that trade apparently existed between the people of language Q of trade route A and the people of language I of trade route B.
The corollaries of cognate chains are communalect chains in which neighbouring communalects are to varying degrees mutually intelligible. These chains are often quite lengthy involving scores of villages where a chain of communalects $a-b-c-d-e-f-\ldots z$ occurs, in which $a$ is mutually intelligible with $b-c$ but not $d$, $b$ is mutually intelligible with $a-c-d$ but not with $e$, and so on.¹⁴ The area of mutual intelligibility may be pictured as a chain of beads on a string. As a new bead is added to the front, one is lost at the back, so that the area of mutual intelligibility is progressively shifting along the string. The problem in treating such chains is twofold. Firstly, does one in fact posit a language boundary between any two communalects in a chain if the chain is sufficiently long to include widely divergent unintelligible communalects at the extremes of the chain? Secondly, if one posits a boundary, where does one posit the boundary, and depending upon the length of the chain and the degree of relationship between communalects, how many boundaries does one posit?

In the Huon Peninsula, there is a chain of dialects which includes more than 70 villages with a lexicostatistical relationship of 43% between the most diverse communalects. This chain includes the following languages and relationships: K-73%-J-66%-I-79%-G-64%-F.⁵

In determining language and dialect boundaries the writer accepted boundaries recognized by the majority of the local inhabitants. Generally these boundaries coincided with the lowest lexicostatistical relationship in that portion of the chain of communalects and
frequently reflected structural differences as well. Thus the two dialects of language G, Yoangen and Kurungtufu, which are 92% related show phonological correspondences; Yoangen phonemes $f$ and $gl$ correspond to phonemes $h$ and $r$ in Kurungtufu. Language I, although 79% lexicostatistically related to the dialects of language G, has the phonological characteristics of languages J and K.

In attempting to determine a lexicostatistical percentage of relationship between the different communalects, the writer chose for cognition purposes the basic vocabulary items which represented villages centrally located or more distant from the language borders. This was done on the assumption that contact between border communalects undoubtedly obscured borders which may have been distinct at an earlier date. 6 Thus languages I and K are represented by villages at the upper ends of the valleys where the communalects are less likely to be influenced by the closely related languages J and G. Language J, however, is geographically central and at the economic focal point of the western Mongi basin. Consequently, the representative vocabulary items come from the more centrally located villages. Such a method of choosing basic vocabulary for lexicostatistical purposes produces the lowest possible percentages but, in the writer's opinion, more accurately reflects the linguistic position before European contact.

Over the years a certain amount of confusion has arisen over which lexicostatistical percentages are to be accepted as dividing dialect from language and
language family from stock. In New Guinea studies it has been often stated that the figure of 81% proposed by Swadesh (1954, 1955a, 1955b), as the lower limits for classifying dialects within a single language is too high and that the actual level is about 70%.\(^7\)

Swadesh originally determined the lower limits for classifying languages within a single family to be 36%, basing this upon a retention rate of 81% and a time depth of 25 centuries (Swadesh, 1954: 326). He later increased the time depth to 30 centuries and decreased the percentage to 28% (Swadesh, 1955a: 2). At this level, of course, the difference between 28% and 36% becomes very critical. It will be seen that in the Huon Peninsula group of languages many posited inter-family relationships average from 29% to 33%.

In determining family boundaries in the Huon Peninsula group the same sort of chain effect that often occurs between dialects and languages was found to occur between language families. Thus according to the usual lexico-statistical methods it seemed arbitrary where one placed the family boundary and determined the membership of each family.

In the preliminary classifications the problem of chaining was treated by positing 'linking' languages which connected families of languages. Although such a linking language was given provisional status in the particular family with which it had the closest lexical relationship, it had to be remembered that the language had close lexical affinities with more than one family.
As a result of current research the lexicostatistical percentages stated in the preliminary classification (McElhanon, 1967a) have been increased and the problem of chaining has become more evident. Consider the following chain of languages and their lexicostatistical percentages: 8 U-58%-T-34%-S-65%-R-61%-Q-43%-P-76%-O-63%-N-51%-L-60%-M-42%-F-47%-E-77%-D-61%-C-64%-A-69%-B.

This chain includes the languages of the Eastern, (A, B, C, D, E, F), Northern (L, M, N, O, P), Western (Q, R, S) and Southern (T, U) areas. The languages of the Northern area, moreover, are also linked to the Western languages by a chain which passes through the Central (G, H, I, J, K) area: S-65%-R-61%-Q-38%-K-73%-J-66%-I-79%-G-61%-F-42%-M. Each language could be said to be in the same family as the languages bordering upon it. Yet, in fact, language B of the Eastern area is only 14% related to language T of the Southern area and only 17% related to language S of the Western area.

In Hooley and McElhanon (1970: 4) the writer stated that language F served as a link between the Eastern, Central and Northern languages. The more recent figures indicate that languages F and G have lexicostatistical percentages which unite them in a single family with every other NAN language on the Peninsula except T and U. These percentages are given in Table C.
In classifying these languages one may apply the principle often used for the lexicostatistical classification of dialects within a single language; i.e., of communalects $a$, $b$ and $c$, $b$ may have a dialect relationship with $a$ and $c$ whereas the latter two are related to each other as distinct languages. In such an instance the three communalects are regarded as divergent dialects of a single language. Applying this principle to the current problem produces a classification which includes all the languages as members of a single family. According to such a classification, however, languages with a relationship as low as 13% would be included in the same family in spite of the fact that percentages as low as 13% generally indicate relationships at the stock level. If it is accepted that these languages constitute a stock, then the problem of classification is in determining how many families are contained in this stock and which languages are included in each family.

In the following pages the writer suggests various classifications of the languages into families and the advantages and disadvantages of each classification. Because the occurrence of chaining cannot be totally

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avoided in any particular classification, the writer has determined an average degree of lexicostatistical relationship between different families. For example, in one classification the chain S-R-Q-K-J-I-H was split into two families: S-R-Q and K-J-I-H. To determine the average degree of relationship between the families, each member of S-R-Q was compared with each member of K-J-I-H; the percentages were then added (391) and divided by the number of comparisons (12) which yielded an average relationship of 33%.

2.2 Classifications by usual methods

In the first classification the languages are grouped into families solely according to the usual lexicostatistical method. This yields a classification essentially the same as the preliminary classification except that language F is in the Central Family.11

families
Southern Western Northern Central Eastern
languages

The average degrees of relationship are given in Figure 1.

Figure 1

It is immediately apparent that the corrected degrees or relationship -- i.e., figures reduced by approximately three percent -- closely approximate the 28% boundary between family and stock as posited by Swadesh (1955a: 2) and are substantially lower than
Swadesh's 36% figure (1954: 326). On this basis, therefore, one might be tempted to accept this lexicostatistical classification as correctly indicating sub-groupings and presumably reflecting the historical development of these languages from a common proto-language.

The writer, however, rejects this classification on the grounds that it overvalues the use of lexicostatistical criteria as a classificatory tool by allowing structural features minimal status and only chance correspondence with the lexical features. Thus the Western Family is said to include languages Q, R and S. Languages R and S, however, are distinct from the other languages on the Peninsula in that they lack a series of labiovelar stops. Moreover, language Q shares a number of typological features common to languages P, T and U.

In testing the validity of this lexicostatistical classification and in particular the principle of stating inter-family relationships by an average percentage, varying rearrangements of the languages into families were attempted on the basis of typological criteria. The first rearrangement involved moving language F from the Central Family to the Eastern Family because of the presence of an inclusive/exclusive distinction in the personal pronouns, a characteristic peculiar to the other members of the Eastern Family. This classification is the same as that given in Hooley and McElhanon (1970). The resultant average degrees of relationship are presented in Figure 2.
The average degrees of relationship are not significantly different from those presented in Figure 1. The corrected degrees of relationship again approximate the 28% figure and are substantially below the 36% figure.

In a further rearrangement, language F was left in the Eastern Family and language Q was moved from the Western Family to the Central Family because it has a series of labiovelar stops. The resultant average degrees of relationship are presented in Figure 3.

The only significant change in the average degrees of relationship involves the Western and Central families. The resulting higher degree of relationship, of course, is due to the fact that language Q, now in the Central Family, has a high lexicostatistical relationship with languages R (63%) and S (56%) in the Western Family. This percentage may be regarded as unrealistically high due to the fact that languages Q, R and S are in the same geographical area separated from the rest of the Peninsula, and trade route A winds through the villages
representing languages Q and R. It may be surmised that proto-language R-S diverged from the rest of the languages and had independent development before the western basin was settled by the peoples of proto-language R-S and the peoples of language Q. Subsequent contact and mutual isolation from the rest of the Peninsula could account for the high degree of lexical similarity.

Further minor rearrangements of the languages into different family groupings produce no significant differences in the degrees of average relationship between families. This reflects the fact that language and dialect chains complicate the classification of languages according to lexicostatistical methods. The complexity of the dialect and language chaining appears to be directly proportional to the inability of the lexicostatistical methods to produce acceptable sub-groupings.

2.3 Classification by omitting a level (rank)

Lamb (1959: 41ff.) recognized the problem of chain relationships in lexicostatistical classifications and the need for handling them. One of his rules for arriving at a taxonomic classification of languages is:

"When the members of a taxon are in a chain relationship with no clear divisions and have the second lower rank, no taxon is to be recognized at the intermediate rank."

This rule was applicable to the Dutch-German dialect area where there exists a "complex chain of dialects with gradual differences from dialect to dialect, but no language boundary"(p. 42). Because the area as a whole
has a higher rank than that of language, Lamb suggested that the dialects were not groupable into languages but constituted a genus (sub-family in Swadesh's terms). Similarly in the case of Hokan, Lamb states that there exists a chain of families not groupable into stocks. If one were to handle the Huon Peninsula group of NAN languages in this manner, the intermediate level of family would be omitted and the Huon Peninsula group would represent a stock not groupable into families.\(^{14}\)

Lamb also suspected "that the method based on lexicostatistics unduly predisposes the results in the direction of a chain relationship"(1959: 42). Rather than predisposing the results, the lexicostatistical method, in the present writer's opinion, reflects the operation of the wave principle as well as the presence of shared innovations and undetected borrowings. In principle the lexicostatistical method should be applied after borrowings have been identified and eliminated. It is possible to identify the more obvious borrowings--e.g., Austronesian loans in a non-Austronesian language--by the 'inspection method', but the identification of less obvious borrowings, as a matter of course, follows reconstruction.

In recent years the lexicostatistical method has been widely used as a survey tool in order to provide preliminary classifications of languages for which the data are limited in many cases to short vocabulary lists. The presence of many loan words remains undetected and the results are often skewed in the direction of a chain relationship.\(^{15}\) The fact that dialect and language chains are so often associated with lexicostatistical
classifications, particularly in the New Guinea area, provides considerable circumstantial evidence for concluding that the lexicostatistical method as usually applied is incapable of handling the phenomena caused by the wave principle and unable in many cases, if not in most cases, of providing an accurate sub-classification. That the lexicostatistical method can indicate genetic relationship, on the other hand, may scarcely be doubted. As a survey tool, however, the method can hardly, with any degree of accuracy, provide the sort of genetic trees usually associated with its results.

With regard to the Huon Peninsula group of languages the lexicostatistical method indicates the existence of a single group of closely related languages. Whether this group constitutes a family or a stock of languages is not evident from the lexicostatistical data. Should one regard the group as constituting a single family, then the lower limits (28% or 36%) usually associated with a family group are severely violated. Diverse communalects within a single family would have only an 11% (adjusted) lexicostatistical relationship. Should one regard the group as a stock, however, the sub-classification of the stock into families is found to be arbitrary.

2.4 Typological features and mixed languages

In testing the validity of the first lexicostatistical classification, a number of rearrangements of the languages into families were made on the basis of typological features. Many classifiers of languages, when confronted by the phenomenon of language chaining,
resort to typological features in making further sub-groupings.

The most obvious structural division in the Huon Peninsula group is the separation of the languages into two groups on the basis of the phonological characteristics of the syllable. Languages I, J, K, L, M, N, O, P, Q, R, S, T and U contain syllables which are closed by a series of voiceless unreleased stops, $p$, $t$, $k$, or nasals $m$, $n$, $ŋ$. The stops are replaced by fricative phonemes $w$, $r$, or $h$ respectively when a vowel initial suffix is added. The remaining languages, A, B, C, D, E, F, G and H, evidence a neutralization of this series of voiceless unreleased stops and nasals in the syllable final position to glottal stop (written as $o$) and velar nasal respectively. That the glottal stop represents a neutralization of voiceless final stops is evident in the persistance of the phenomenon of the series of fricative phonemes replacing the glottal when a vowel initial suffix is added. Thus in language F the following roots occur: sac- blood, kpac- name and kerec- fat. When the third person singular possession-marking suffix, -a his, her, its, is added the forms become sawa its blood, kpara its name, and kereha its fat. These forms in language F of the Eastern group have cognates in many of the languages now classified in the Western group: e.g., in language K; sep- blood, kpēt- name and keŋak- fat. In the examples given, the evidence indicates that the final glottal stop in language F of the Eastern group is a correspondence of final unreleased stops $p$, $t$, or $k$ in the language K of the Western group.
A division of the languages according to this feature produces two families with an average degree of relationship of 26%. The lexicostatistical percentages become largely irrelevant since both families include member languages with lexicostatistical relationships substantially below the family level while excluding languages with much closer lexicostatistical relationships. Thus the Western Family includes Nabak and Sialum with a 16% (adjusted) lexicostatistical relationship but excludes languages F, G and H which have no adjusted lexicostatistical relationships with the languages of the Western Family as low as 16% and which have high (adjusted) average relationships with the Western Family: language F -- 37%, language G -- 33%, and language H -- 32%. The Eastern Family includes languages H and A which are 24% (adjusted) related but excludes languages I and J which show average (adjusted) relationships of 42% and 36% respectively with the languages of the Eastern Family.

Typological and structural criteria are particularly useful when a number of structural features form a set or block which is associated with a group of languages having a relatively stable membership. Thus in comparing languages A, B, C, D and E with languages R and S there are a number of distinctive points of difference. Languages R and S lack the labiovelar series of stops, and the inclusive/exclusive distinction in the regular personal pronouns which are characteristic of languages A, B, C, D and E. Moreover, there are significant differences in both independent and dependent...
verb morphology in terms of tenses and modes as well as the linear ordering of affixal tagmemes. The formatives in the pronoun series are also different. When such a large number of typological features are found to co-occur, it becomes a simple matter to posit a division of the group into two sub-groups.

These two sub-groups of languages, of course, include only the most geographically distant languages. The use of typological criteria is found to be a much weaker classificatory tool when mixed languages such as languages F and G are involved. It has been noted that languages F and G share a lexicostatistical relationship at the family level with nearly every other NAN language on the Huon Peninsula. Just as languages F and G share lexical items with languages which show low lexicostatistical relationship, so do they share typological features with languages which are typologically contrastive.

Although language R shares the inclusive/exclusive distinction in regular personal pronouns with the Eastern area languages, it has pronominal formatives which correspond to those found in the Western, Central and Southern languages. The phonological system has the phenomenon of neutralization of syllable final stops and nasals which is characteristic of the Eastern languages. The vowel system, however, lacks the sixth vowel which is common in the Eastern languages and so is parallel to the five vowel systems of the Northern languages. As among the Eastern languages there is no phonemic distinction between l and r. Language G shares in the same typological features as language F except that it lacks
the inclusive/exclusive distinction in the regular personal pronouns and has a phonemic distinction between Ɂ and r. This sharing or mixing of typological features makes the inclusion of languages F and G with either group A-E or group R-S tenuous. Granting the presence of mixed languages F and G, the writer suggests that the Huon Peninsula group of languages be tentatively assigned the status of a stock (on lexicostatistical grounds) consisting of Eastern and Western families (on typological grounds) with the position of the mixed languages left indeterminate. Since grammatical and phonological reconstruction appears possible, the Huon Peninsula group of NAN languages may prove to be of value in examining the phenomenon of mixed languages and their place in the historical development of a closely related group of languages.

2.5 Classifications of other New Guinea language groups

The difficulties which attend the lexicostatistical classification of the Huon Peninsula languages raise the question of whether or not similar difficulties have been encountered in the classifications of other New Guinea language groups and how these difficulties were treated by the different researchers. A comparison of the numerous lexicostatistical classifications of New Guinea languages reveals that the lexicostatistical method has been applied with such variation that it loses its value as a classificatory tool. A chronological listing of lexicostatistical classifications follows: Crétien (1956); Salisbury (1956); Cowan (1957b); Wurm (1960); Goodenough (1961); Bunn and Scott (1962); Allen and Hurd (1963); Deibler and Trefry (1963);
Scott (1963); Glasgow and Loving (1964); Healey (1964); Loving and Bass (1964); McKaughan (1964); Steinkraus and Pence (1964); Allen and Hurd (1965); Dyen (1965); Laycock (1965); Lithgow and Staalsen (1965); Bromley (1966); McElhanon (1967a); Dye, Townsend and Townsend (1968); Franklin (1968a); Laycock (1968); Lithgow and Claassen (1968); Voorhoeve (1968); Chowning (1969); Dutton (1969); Wilson (1969); Z'graggen (1969) and Hooley and McElhanon (1970). 19

To date, there have been only two detailed reconstructions of families of New Guinea languages, viz., Healey (1964) and Wurm (1951). Bee (1965) presents a number of tentative reconstructions of morphemes of the Gadsup-Auyana-Awa-Taírora Family in illustrating some problems in the comparative and historical study of Highlands languages.

When such a large number of investigators work largely independently of one another, there are bound to be variables in their methods of classification and these variables will cause the resultant classifications to be at variance with one another if they cover the same languages. In the lexicostatistical classifications of New Guinea languages the following variables have been noted in the application of the lexicostatistical method (the numbers refer to following sections of this chapter):

(2.5.1) There are different tests lists.
(2.5.2) There are different languages used in eliciting the basic vocabulary list and these languages have differing degrees of clarity and involve different shortcomings. In different vernaculars, furthermore, items with the same English gloss may have quite divergent semantic domains.
(2.5.3) As to be expected, there are differing opinions on what criteria should be used in determining whether two or more vernacular terms with the same gloss are cognate or non-cognate.

(2.5.4) There are different methods of weighing cognate and non-cognate items and different methods of tabulating the results.

(2.5.5) From three to six taxonomic levels have been posited between the level of dialect and family.

(2.5.6) The percentages postulated as representing the borders between the levels of dialect-language and family-stock show a considerable range.

(2.5.7) Different investigators have handled the problem of dialect and language chains in different ways.

2.5.1 Test lists

The idea of a basic vocabulary useful for purposes of language classification involves some basic assumptions about vocabulary. The first, that the basic vocabulary are those which are most stable, has been generally accepted. The second, that the basic vocabulary are less subject to borrowing, has also been generally accepted, but perhaps not as widely as the former. Reservations about the first assumption led to a general rejection of the glottochronological aspect of lexicostatistic theory.

The distinguishing of loan words, as a matter of course, follows reconstruction since only the more obvious loans, e.g., Austronesian to non-Austronesian, are recognizable by using the inspection method. Even when such obvious loans have been recognized, however, a number of scholars have not removed them from the
test list because it has often been hoped that their presence in the list will not significantly skew the results or perhaps there might be a cancelling effect of the loans. Others feel that these loans still reflect a common history peculiar to the group of languages which contain the loans.

Wurm and Laycock (1961: 134) mention the occurrence of 'multiple cognates' the presence of which was discovered when comparing languages. "Multiple cognates are said to be present in a situation in which speakers of one form of speech use only one of a pair of items with the same meaning but recognize the other member of the pair when it is used by speakers of another form of speech, and thus intercommunication between speakers of the two forms of speech is not impaired.... This phenomenon causes cognate counts based on single items to result in percentage figures of shared cognates which are too low, and to suggest greater lexical differences between languages than actually exist."

The presence of 'multiple cognates' probably occurs throughout the New Guinea area. The present writer has noticed what might be considered to be the phenomenon of 'multiple cognates' in comparing the Huon Peninsula languages. Given the notion of 'multiple cognates', one is immediately faced with some disturbing questions. Firstly, how may one be satisfied that he has discovered all of the cases of multiple cognates in the test list upon which he bases his classification? May not the resultant skewing effect be large enough to give misleading results?
The second question concerns the recognition of loan words. In investigating what might be called the problem of multiple cognates in the Huon Peninsula languages, the writer found that many such multiple cognates were really dialectal variants. In some cases the intermingling of the forms apparently occurred as the result of European influence and contact, because informants could occasionally identify the areas from which the forms originated. An illustration may be taken from the Selepet language. There are two words for woman or wife: *apet* and *ibi*. Some informants, particularly the younger men, use these words interchangeably and do not know for certain whether the words are dialectal forms. The words do in fact represent two dialects; *apet* is used in the larger northern dialect and *ibi* in the smaller southern dialect. *Ibi*, however, is obviously cognate with words meaning woman in languages to the south and southeast. A lexicostatistical count would indicate that the southern dialect is more closely related to these other languages than is the northern dialect.

There are four words which mean cassowary: *hohat*, *gasam*, *sukam*, and *kelâ*. All four words are well known throughout the area inhabited by Selepet-speaking people, although at times an informant will respond to elicitation with only one form and usually at the most two. No vernacular speaker has been able to identify the origins of these words, although it might be possible for the field worker to do so by spending long periods of time living in various villages and doing a statistical study of word usage. Most field workers, however, usually do not have time available for such study.
Because these words have nearly identical distribution, is one to conclude that they are 'multiple cognates' simply because their original dialectal nature can no longer be traced? In time, due to intermarriage and contact, the words meaning *woman* may become intermingled to such a degree that the dialectal nature of them is lost. They may attain equal distribution throughout the language area and no amount of inquiry would be able to ascertain their areas of origin. Would one say that what is now treated as dialect borrowing or intermingling will become a case of 'multiple cognates'? Might not the notion of 'multiple cognates' be simply an admission that the dialectal nature of separate forms with the same meaning has been lost through contact and subsequent borrowing?

In addition to the problem of 'multiple cognates' or loans, one is also faced with a decision regarding which items to include in the test list and which language to use in elicitation.

The test list as compiled by Swadesh has to be considerably modified for use in the New Guinea area. Some investigators (Chowning, 1969; McElhanon, 1967a; Dye, et al, 1968) have simply omitted those items from the list which were either not in the New Guinea cultures, were limited in their distribution in New Guinea, which involved repetitions of the same vernacular term, or were particularly difficult to elicit. The writer found that of Swadesh's 100 item list only 87 were usable in the Huon Peninsula NAN languages and that of Swadesh's 215 item list the maximum which might be usable would be 150-160. Bromley (1966: 290) found 89
of Swadesh's 100 item list usable in classifying the Dani languages (West Irian). When shortened versions of Swadesh's lists resulted, some investigators adjusted the percentages (e.g., Hooley and McElhanon, 1970; McElhanon, 1967a; and Voorhoeve, 1968) while others supplemented the list (Bromley, 1966; Lithgow and Staalsen, 1965; Wilson, 1969; and Z'graggen, 1969).23

2.5.2 Differing semantic domains

Most classifiers of New Guinea languages have had to elicit or use basic vocabulary lists elicited through a trade language or bilingual informants.24 The trade languages commonly used in New Guinea are Neo-Melanesian (Pidgin or Melanesian English) and Police Motu. Generally in attempting to elicit vernacular equivalents to the English glosses by use of one of the trade languages, one finds that obtaining a suitably precise expression is difficult. Wurm (1960: 126) commenting on his modification of the Swadesh test list states, "Other modifications were unavoidable because of the shortcomings of the lingue franche used for interrogation purposes, especially of Pidgin. Native equivalents of several items of the TRIPP list, such as wipe, squeeze, worm, smooth, for instance, could only be obtained with greatest difficulty because of these shortcomings, and there was a very grave danger that the equivalents eventually recorded would be incorrect."25

Allen and Hurd (1965: 41) noted that Melanesian Pidgin is neither as concise nor as comprehensive in vocabulary as the vernacular languages. Because the vocabulary of Pidgin English generally has a much wider semantic range than the vocabulary of the vernaculars,
any number of vernacular terms may be given for a particular Pidgin term. For example, the Pidgin term karim carry covers six terms in Selepet: lœum carrying over the shoulder as a rifle, gâmœ carrying suspended from the shoulder, hikâm carrying suspended from the head, sokom carrying pick-a-back, kukum carrying on top of the shoulders, hahangum or asahangum carrying under the arm and mem carrying in the hands. In many languages the Pidgin word smok smoke may have a number of equivalents including cloud, steam, vapour, mountain haze, thunderhead, as well as smoke. Such examples could be doubtlessly multiplied. In addition there are phonemic distinctions in Pidgin which are not always found in a vernacular. For example, Ann Chowning (personal communication) reports that in a New Britain language, Sengseng, there is no distinction between r, d or t with the result that Pidgin kârim cut and karim carry are heard the same by those speakers. This lack of contrast may even affect sentences. Thus the Pidgin em i kârim tok he takes a message may also be understood as he interrupts someone's conversation, he cuts, castrates the dog, or he carries the dog.

The fact that the semantic domains of the trade languages are broader than those of the vernaculars raises the question whether forms elicited in a number of vernaculars equally represent the referent as identified by the English gloss. Unfortunately, classifications will not be delayed until detailed comparative dictionaries with precisely outlined areas of meaning are available. Considering the large number of languages in New Guinea and the small number of field
workers studying them and the amount of work that would go into compiling accurate dictionaries, this is an unrealistic and idealistic requirement. To date, the available word lists representing New Guinea languages have been collected by a vast number of field workers with varying degrees of ability and qualification and sometimes under adverse field conditions. Before the vocabularies available can be safely compared to arrive at broader classifications of New Guinea languages, one needs to be reasonably certain that the items on the lists represent the same semantic range or indeed represent the same referent. One classifier of New Guinea languages who has published a description of the precise areas of meaning covered by his items is Bromley (1966: 288-90). A comparison of the semantic domains of some of Bromley's test items with those found by the present writer in Huon Peninsula languages reveals the need for co-operation among field workers in the collection and comparison of vocabulary items from New Guinea languages as well as the positing of more distant language relationships and broader classifications. Bromley's lists represent languages spoken by people living in the central highlands whereas McElhanon's lists represent languages spoken by mountain dwellers who usually see the coast.

(a.) cloud: Bromley: "misty fog that rises in the morning...distinct from rain clouds, and in some cases from other high clouds"; McElhanon: the cloud which daily blows in from the sea and gathers on the mountain ridges, distinct from cumulo-nimbus clouds which build up over the sea before moving inland.
(b.) dry: Bromley: "dried up vegetation or foliage...distinguished from sheltered from rain"; McElhanon: dry as opposed to wet or having been wet.

(c.) neck: Bromley: "the throat or front of the neck"; McElhanon: the nape of the neck.

(d.) rain: Bromley: "heavy afternoon rain... distinct from morning drizzle"; McElhanon: simply rain; drizzle is cloud water or little rain.

(e.) see: Bromley: "to perceive, not including... the noun meaning eye..."; McElhanon: the verb to see usually involves a zero morpheme so that in cognating, either the zero morpheme or the bound object markers had to be counted. The latter were counted.

(f.) seed: Bromley: "what is planted, whether seed, cutting or root"; McElhanon: seed, cutting and root involve distinct terms. The Huon Peninsula languages designate seed as opposed to fruit but also including the meanings of nut or egg.

(g.) warm: Bromley: "pleasant warmth of the interior of a house, as distinguished from unpleasant interior warmth and from the heat of the sun"; McElhanon: warm as opposed to either hot or cold.

2.5.3 The determination of cognates

Another problem which arises when several investigators make independent classifications of languages is the diversity of opinion over the basis for considering items to be cognate. In actual reconstruction, differences of opinion have arisen either over how many correspondences are necessary to establish cognition or how one decides whether to accept or reject a given correspondence. 26 Hymes (1960: 18) noted, "In principle,
glottochronology [lexicostatistics] should be applied only after the comparative method has prepared the way. In practice a number of scholars have not hesitated to proceed without this safeguard. This introduces a variable factor of judgment, when there is an imperfect fit of sound correspondences.... Reliability requires that judgments of cognation be made independently by more than one scholar whenever possible." In New Guinea languages, however, attempts at reconstruction have been few, and the tool of lexicostatistics has been widely used to provide classifications of newly discovered languages. In those few areas where different investigators have done independent lexicostatistical classifications, the results have usually been at variance. This variance undoubtedly reflects the different backgrounds and experience of the investigators as well as the fact that two investigators using the same data will inevitably have different conclusions simply because the decision of cognate or non-cognate calls for personal judgment.

Hymes (1960: 11) states, "Since most languages are not of the 'isolating' type...morphological control of a language is prerequisite to the use of glottochronology [lexicostatistics] in any case". Concerning New Guinea Highlands' languages, Bee (1965: 2-3) states that these languages "...have characteristics which make such [comparative and historical] analysis particularly difficult"; they are "characterized by systems of morphophonemic change which tend to mask the true nature of historical change and which make the recognition of cognates difficult. A thorough study of the morphophonemics of each language should be undertaken as part
of the comparative and historical analysis of each family of languages."

In general the investigators of New Guinea languages have used the 'inspection method' of determining cognates as outlined by Gudschinsky (1956: 181-85). In most cases the writers did not state their principles for identifying probable cognates, except perhaps that they looked for sound correspondences before applying the inspection method. Some investigators have chosen a minimum of 50% similarity necessary to posit a probable cognate. Some have weighed classes of phonemes and syllables in differing word positions quite differently. Some stated that they were conservative while others said they were liberal.

As a result of different investigators doing independent classifications based on differing word lists, one may note the following discrepancies over lexicostatistical percentages:

(a) In comparing Laycock (1965: 181) with Glasgow and Loving (1964: 8) it was found that percentages of relationship below 20% given by Laycock are generally 2-5% higher than those given by Glasgow and Loving, except between Urim and Torriceli where Laycock's percentage is 3% lower. The only percentages comparable within the range attributed to the level of family is Maprik-Boikin stated to be 55-56% by Laycock but 38% by Glasgow and Loving.

(b) Z'graggen (1969: 200-01) states that his Madang, Adelbert Range and Ramu phyla were classified as a single phylum, the Bogia phylum, by Wurm (1970a) and that perhaps Wurm was very generous in cognate
identification because Wurms percentages were much higher than Z'graggen's. Since neither Z'graggen's nor Wurms percentages have been made available, no detailed comparison is possible.

(c) A comparison of Wurm (1961) with Bunn and Scott (1962) shows the following discrepancies in the percentages for shared vocabulary among the languages of the Hagen-Waghi-Jimi Family. The language names are taken from Wurms classification. Bunn and Scott considered Wurms Narak and Kandawo languages to be dialects of one language, Gandja. Percentages other than Wurms in the following comparisons are shown in parentheses.27

<table>
<thead>
<tr>
<th>Hagen</th>
<th>Maring</th>
<th>Narak</th>
<th>Waghi</th>
<th>Kandawo</th>
</tr>
</thead>
<tbody>
<tr>
<td>30 (12)</td>
<td>57 (30)</td>
<td>40-55 (19)</td>
<td>40-55 (18)</td>
<td>53 (18)</td>
</tr>
<tr>
<td>48 (36)</td>
<td>40-55 (16)</td>
<td>40-55 (18)</td>
<td>61 (x)</td>
<td></td>
</tr>
<tr>
<td>41 (19)</td>
<td>44 (30)</td>
<td>61 (x)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(d) A comparison of Wurm (1961) with Deibler and Trefry (1963) produces the following discrepancies. It must be noted, however, that the comparison may have shortcomings because of difficulty in equating Deibler and Trefry's clan names with Wurms language names.

<table>
<thead>
<tr>
<th>Wurm</th>
<th>D. &amp; T.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chimbu-Dom</td>
<td>74 (41)</td>
</tr>
<tr>
<td>Chimbu-Sinasina</td>
<td>69 (45)</td>
</tr>
<tr>
<td>Chuave-Elimbari</td>
<td>68 (59)</td>
</tr>
<tr>
<td>Chimbu-Waghi</td>
<td>55 (33)</td>
</tr>
</tbody>
</table>

(e) Franklin (1968b: 39) gives the percentage of cognates between Kewa (South)--Wurms Pole--and the other two major dialects of Kewa as 75% and 80% whereas Wurm
has 77%. Franklin's Kewa language includes the Pole language, the Kewa-Pi language and part of the Mendi language as they were posited by Wurm (1961). Franklin (1968b: 3(fn. 4) ) also differs with Wurm's alternate classification (Wurm and Laycock 1961: 141) of Mendi, Kewapi, Augu, Pole and Sau as a single language.

(f) Salisbury (1956), in providing the first lexicostatistical classification of any Australian New Guinea Highlands' languages, used word lists published by other authors. Wurm, using his own data, has provided quite a different classification.

<table>
<thead>
<tr>
<th>Siane</th>
<th>Gahuku</th>
<th>Gende</th>
<th>Kuman</th>
</tr>
</thead>
<tbody>
<tr>
<td>53 (86)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>40-55 (76)</td>
<td>35 (68)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15-25 (52)</td>
<td>23 (41)</td>
<td>23 (58)</td>
<td></td>
</tr>
</tbody>
</table>

(g) Rule (1965: 98) apparently differs with Wurm (1961) in saying, "Augu... has up to now been regarded as a separate member of the Mendi-Pole sub-family. However, our work...indicates that Augu is a dialect of the Wela language." Rule then goes on to discuss "that Mendi and Wela are closely related languages, which further investigations may establish as dialects of a single language" (p. 99). More recently, Alan Healey (personal communication) reports that other missionaries in the area state that Mendi and Wela are distinct languages and that Augu is a close dialect of Wela, not requiring separate vernacular literature. Rule's and Healey's comments seem to indicate that a chain of dialects, Mendi, Wela and Augu, occurs. Wurm apparently compared the dialects of Mendi and Augu and arrived with a classification of two distinct languages, whereas Rule
approached the three dialects from the central dialect, Wela, and noting the chaining effect was inclined to consider them as dialects of a single language.

2.5.4 Calculating percentages

Whereas most investigators simply scored items as cognate or non-cognate, others (Deibler and Trefry, 1963; Allen and Hurd, 1963, 1965; Scott, 1963; Steinkraus and Pence, 1964) used a scale for assigning values to the items. The usual system (Deibler and Trefry, 1963: 1) "consisted of comparing the same word in each dialect or language with the corresponding word in each of the other dialects and languages. This comparison was made letter for letter, word for word; and the amount of difference between every pair of words was recorded in the following manner: exact equivalent, 4 points; one phoneme difference, 3 points; two phonemes different, 2 points; three or more phonemes different (but still a cognate), 1 point; non-cognates, 0 points." In addition to this system, Steinkraus and Pence (1964: 3) subtracted only one-half point if "the difference was slight, such as between voiced and voiceless phonemes".

Scott (1963: 280) illustrates how a scale for assigning values to cognate items gives results differing from a straight cognate vs. non-cognate count. He used a graded system of 5 points for identical utterances, four points for utterances four-fifths alike, and so on, with zero points for non-cognates. His 100 item list contained 72 of Swadesh's 100 item list and a number of verb and verb sequences applicable to variations within Fore. The results of the two lists are given in Table D.
Another variation of applying a scale of values to cognate identification is provided by Chowning (1969: 18) who identified items as certain cognates, probable cognates, or non-cognate and then in calculating the percentages "counted two probable cognates as the equivalent of one certain one".

### Table D

<table>
<thead>
<tr>
<th>Dialects compared</th>
<th>Cognate/non-cognate count</th>
<th>Graded Count</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Scott</td>
<td>Swadesh</td>
</tr>
<tr>
<td>North Fore-Central Fore</td>
<td>97.6%</td>
<td>100.0%</td>
</tr>
<tr>
<td>Central Fore-South Fore</td>
<td>91.6%</td>
<td>90.3%</td>
</tr>
<tr>
<td>South Fore-North Fore</td>
<td>87.2%</td>
<td>90.3%</td>
</tr>
</tbody>
</table>

2.5.5 Levels

Another development in the classification of New Guinea languages which reflects the differing opinions of the investigators is the varying number of levels posited as existing between family and dialect. Deibler and Trefry (1963: 10) posit seven: family, group, sub-group, division, sub-division, language and dialect. Bromley (1966: 296-300) posits six: family, sub-family, language, cluster, hesion and dialect. Wurm (1961: 18) posits five: family, sub-family, division, language and dialect. Allen and Hurd (1965: 3) posit four: family, language, sub-language and dialect, while most other investigators posit three: family, language and dialect.

2.5.6 Dialect-language, family-stock

In classifying New Guinea dialects and languages, various investigators have used quite different percentages for separating languages from dialects and for classifying languages into families. In one of the
earliest applications of the lexicostatistical method to the classification of New Guinea languages, S. A. Wurm (1960) followed the percentages proposed by Swadesh (1955a):

- 81-100% differing dialects of the same language
- 28-81% differing languages of the same family
- 12-28% differing families of the same stock
- 4-12% differing stocks of the same micro-phylum.

In the following year, however, Wurm and Laycock (1961) suggested that the figure of 81% shared basic vocabulary cognates used for separating language from dialect was too high. They found that speakers of New Guinea languages having as low as 70% shared basic vocabulary cognates could usually communicate to a very considerable extent, and that when languages had no great phonological or morphological differences, this figure might be as low as 60% (Wurm and Laycock 1961: 134). Dyen (1965: 18) assigned dialects to the same language if they were 70% or more lexicostatistically related.

As other investigators began to classify New Guinea languages, quite differing percentages were used, ranging from a high of 86% to a low of 54% for determining the boundary between language and dialect, and a high of 36% to a low of 15% for determining the boundary between family and stock. Moreover, some investigators adjusted these percentages according to the length of their test list. Table E presents the percentages used by the different investigators, the number of items in their diagnostic lists and the language used in elicitation.
<table>
<thead>
<tr>
<th>Investigators</th>
<th>Language-dialect</th>
<th>Family-stock</th>
<th>Items</th>
<th>Language of Elicitation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allen and Hurd (1963) (81%)</td>
<td>65%</td>
<td>28%</td>
<td>170</td>
<td>Pidgin</td>
</tr>
<tr>
<td>Allen and Hurd (1965) (81%)</td>
<td>65%</td>
<td>28%</td>
<td>190</td>
<td>Pidgin</td>
</tr>
<tr>
<td>Bromley (1966)</td>
<td>75-80%</td>
<td>---</td>
<td>100</td>
<td>varied</td>
</tr>
<tr>
<td>Bunn and Scott (1962)</td>
<td>85%</td>
<td>28%</td>
<td>190</td>
<td>Pidgin</td>
</tr>
<tr>
<td>Chowning (1969)</td>
<td>78%</td>
<td>25% differing</td>
<td>Pidgin</td>
<td></td>
</tr>
<tr>
<td>Deibler and Trefry (1963)</td>
<td>60%</td>
<td>---</td>
<td>200</td>
<td>Pidgin</td>
</tr>
<tr>
<td>Dutton (1969)</td>
<td>70%</td>
<td>15%(8%)</td>
<td>215-240</td>
<td>Pol.Motu</td>
</tr>
<tr>
<td>Dye, et al. (1968)</td>
<td>70%</td>
<td>15%</td>
<td>120</td>
<td>Pidgin</td>
</tr>
<tr>
<td>Franklin (1968a)</td>
<td>75%</td>
<td>20% differing</td>
<td>collection</td>
<td></td>
</tr>
<tr>
<td>Glasgow and Loving (1964)</td>
<td>85%</td>
<td>28%</td>
<td>105</td>
<td>Pidgin</td>
</tr>
<tr>
<td>Healey (1964)</td>
<td>77%/83%</td>
<td>19%/27%</td>
<td>120/150</td>
<td>varied</td>
</tr>
<tr>
<td>Hooley and McElhanon (1970)</td>
<td>c.75%</td>
<td>c.28%</td>
<td>190/140</td>
<td>Pidgin/Kâte</td>
</tr>
<tr>
<td>Laycock (1965)</td>
<td>(81%)62%</td>
<td>36%</td>
<td>190</td>
<td>Pidgin</td>
</tr>
<tr>
<td>Laycock (1968)</td>
<td>81%</td>
<td>28% differing</td>
<td>Pidgin</td>
<td></td>
</tr>
<tr>
<td>Lithgow and Claassen (1968)</td>
<td>75%</td>
<td>28%</td>
<td>60/120</td>
<td>Pidgin</td>
</tr>
<tr>
<td>Lithgow and Staalsen (1965)</td>
<td>(81%)75%</td>
<td>28%</td>
<td>100</td>
<td>Dobu</td>
</tr>
<tr>
<td>Loving and Bass (1964)</td>
<td>81%</td>
<td>28%</td>
<td>180</td>
<td>Pidgin</td>
</tr>
<tr>
<td>McElhanon (1967a)</td>
<td>c.75%</td>
<td>28%</td>
<td>140</td>
<td>Pidgin/Kâte</td>
</tr>
<tr>
<td>Mckauhan (1964)</td>
<td>74%</td>
<td>---</td>
<td>100</td>
<td>collection</td>
</tr>
<tr>
<td>Salisbury (1956)</td>
<td>91%</td>
<td>---</td>
<td>55</td>
<td>collection</td>
</tr>
<tr>
<td>Steinkraus and Pence (1964)</td>
<td>(85%)54%</td>
<td>28%</td>
<td>125</td>
<td>Pol.Motu/ Pidgin</td>
</tr>
<tr>
<td>Voorhoeve (1968)</td>
<td>c.81%</td>
<td>28%</td>
<td>---</td>
<td>Pol.Motu</td>
</tr>
<tr>
<td>Wilson (1969)</td>
<td>86%</td>
<td>---</td>
<td>100</td>
<td>Pidgin</td>
</tr>
<tr>
<td>Wurm (1960)</td>
<td>81%</td>
<td>28%</td>
<td>215</td>
<td>Pidgin</td>
</tr>
<tr>
<td>Z'graggen (1969)</td>
<td>81%</td>
<td>28%</td>
<td>64-67</td>
<td>Pidgin</td>
</tr>
</tbody>
</table>
Note the wide range of opinion concerning which percentage should represent the boundary between dialect and language, 54% (Steinkraus and Pence) on a 120 item list, and 86% (Wilson, 1969) on a 100 item list.33 Percentages used to separate the levels of family and stock range from 36% (Laycock, 1965) to 15% (Dutton, 1969 and Dye, et al., 1968).34 This diversity of opinion over percentages can only highlight the fact that different investigators would produce quite different classifications given the same corpus of data. This fact, of course, is well recognized by most linguists; e.g., see Hymes (1960: 18) and McKaughan (1964: 102). Whereas some investigators have held fairly rigidly to the standard percentages (Voorhoeve, 1968; Wilson, 1969; and Wurm, 1960;--but see Wurm and Laycock, 1961), others have taken an appraisal of the amount of mutual intelligibility between two communales and then adopted an approximate percentage of shared vocabulary which coincided with separate languages as determined by their appraisal. For this latter group the distinguishing of dialects from languages is largely subjective.35

2.5.7 Dialect and language chaining

One of the most common problems which classifiers of New Guinea languages have faced is the problem of dialect chains. The problem in treating chains is two-fold. Firstly, does one in fact posit a language boundary between any two communales in a chain if the chain is sufficiently long to include widely divergent unintelligible communales at the extremes of the chain? Secondly, if one posits a boundary, where does one posit the boundary; and depending upon the length of the chain
and the degree of relationship between communaliaets, how many boundaries should one posit?

Deibler and Trefry (1963: 3) have noted the problem in the Highlands area.

"The problem [of marking language boundaries] in this area was caused because there were not distinct language breaks but rather dialectical differences between each clan or group. Because of this two adjacent groups may only show slight variation but, by the time there are several clans between, the differences have become such that for practical purposes the groups can no longer be considered as belonging to the one language. This means that it is possible to divide up the languages in different ways."

As can be expected, different classifiers have handled the problem of dialect and language chaining in different ways. In the New Guinea scene these classifiers may be generally divided into two groups: the groupers and the splitters. Between these two groups, however, is a middle ground where some of the groupers hesitate to unite a very long chain of dialects into a single language and the splitters are reluctant to make too many divisions in the chain. Moreover, a grouper or splitter does not consistently group or split. 36

Most investigators handle the problem with a combination of linguistic criteria and sociolinguistic inferences. Thus Deibler and Trefry (1963: 3) "decided on the boundaries by choosing clans for the centre of a language which had the widest range of dialects before the differences became too great for the outlying clans to be included in the same language". Bunn and Scott
(1962: 3) "separated both [Gawigl and Medlpa communales] on the basis of the lower percentage obtained between representative data lists [from areas distant from the proposed border] and the fact there is no mutual understanding between the extremities of the two groups". Franklin (1968b: 3) used mutual intelligibility and tested his own assumptions as a "speaker of the Eastern dialect [of Kewa]."

The determination of mutual intelligibility, however, is no simple matter. The investigation of the problem is still in its early stages and there is no general agreement on the best testing methods, what sort of scale should be used, what point, if any, is the cut off between comprehension or lack of comprehension, or, for that matter, whether the lack of intelligibility determines the difference between dialect and language.

Voegelin and Harris (1951: 322-29) suggest four methods for determining mutual intelligibility: (1) 'ask the informant' method, (2) 'count the samenesses' method, (3) 'structural status' method, and (4) 'test the informant' method. Although the 'ask the informant' method has been generally regarded as the least reliable, it is the most used because the 'test the informant' method, although the most reliable, is a very difficult and complex undertaking and involves considerable time. One classifier of New Guinea languages, however, assigns a high value to the 'ask the informant' method.

Cook (1966: 443) states, "There are many potential faults with the 'ask the informant' method.... However, whatever features the native speakers (sic!) may be
recognizing when he makes a distinction between two speech communities, he is ultimately referring to the transfer of information, i.e. mutual intelligibility." Moreover, "emic analyses [which Cook says includes the 'ask the informant' and 'test the informant' methods] represent an attempt to discover categories meaningful to the native speaker.... Further, the emic approach is essential when considering the problem of language chains. In studying the relation of one speech community to another, as seen from the viewpoint of the native speakers, we may be able to intelligently perceive the organization of dialects into languages and thus bring to a close endless quibbling over 10 or 20 percentage points."

By applying the 'ask the informant' method Cook sought to resolve a problem of dialect chaining in the Western Highlands District where there are three communalects, Maring, Narak and Gandja (Wurm's Kandawo). Wurm (1961: 18-21), on the basis of 81% shared vocabulary separating dialect and language, classified them as three separate languages. Elsewhere (Wurm and Laycock, 1961: 141) Wurm suggested an alternative classification combining Narak and Gandja into one language on the basis of a lower percentage figure, probably 60%. Bunn and Scott (1962) agree with Wurm's alternative classification.

Cook, seeking to resolve the differences in the classifications and thus end the "quibbling over 10 or 20 percentage points", applied the 'ask the informant' method. His application of the method, rather than resolving the issue, simply highlights some of the
potential faults in the method, viz. that the status of the informants in the society has to be determined and social factors (e.g., marital ties, trading partnerships, etc.) have to be accounted for; secondly, a sufficient number of informants have to be included in the survey; and thirdly, the questioner has to be sure that his question is understood.

A comparison of Bunn and Scott's and Cook's maps reveals that the Catholic Mission station at Monggum is included in Bunn and Scott's Gandja language area but in Cook's Chimbu language area. Cook (p. 443) states that "the Reverend Father Joseph McDermott, S.V.D. (stationed at Ambulla...[in the Chimbu area]) speaks Chimbu (Bunn and Scott's 'Kuman') and states that he has no trouble either in communicating or understanding the native language around Monggum..." On this basis, apparently, Cook includes Monggum within the Chimbu area. Note, however, that Bunn and Scott (1962: 5) state, "Worthy of note is the fact that the language spoken at Monggum is a mixture of the Yawarmon dialect [of Gandja] and Kuman of the Chimbu Sub-District largely because most of the wives here [at Monggum] are purchased from the Kerowagi [western Chimbu] area".

Furthermore, Cook divides the middle Waghi language, which M. Reay calls 'Yoowi', into two languages 'Yu' and 'Wi' on the basis of the 'ask the informant' method. Yet Wurm (1961) and Bunn and Scott (1962) classified this as a single language on linguistic criteria while Reay (personal communication) classified it as a single language by the 'ask the informant' method. Cook does not suggest what one should do if informants have
differing opinions. The literature on New Guinea languages contains many examples of intelligibility being unidirectional, i.e., people of communalecct A understand those of B, but those of B do not understand those of A. Franklin (1968b: 1) states that "many speakers from separate dialects [of Kewa] will deny that they speak the same language. This, of course, means that what we define linguistically as the same speech community, and what a native speaker would intuitively define, are not always the same."

Assuming that the degree of mutual intelligibility is adequately determined, there still will exist differing opinions over whether mutual intelligibility is an adequate criterion for separating dialect from language. Capell (1962a: 140) speaks of Vailala, Orokolo, Kerema and Toaripi as "branches of one language, though not mutually intelligible". Deibler and Trefry (1963: 6) state that "mutual intelligibility cannot be used as an adequate criterion for distinguishing between languages" because speakers of one language often have a passive understanding of one or more neighbouring closely related languages. The occurrence of such passive understanding, in the present writer's opinion, does not invalidate the criterion of mutual intelligibility but rather simply indicates that the testing techniques necessarily have to include socio-linguistic factors.

It appears, however, that the test of mutual intelligibility when it is refined will only be useful in determining whether a particular communalecct is a distinct language or a dialect of another language.
The criterion will probably not resolve the problems associated with dialect chains, particularly if the area of mutual intelligibility progressively shifts along the chain. Nor does it appear likely that a scale indicating percentages of information transfer and degrees of intelligibility will prove useful as a classificatory tool for other levels of the taxonomic hierarchy. Perhaps the borderline between comprehension and lack of comprehension will be adequately defined, but a statistical method for measuring degrees of incomplete comprehension will in the end be arbitrary.

A number of investigators have used lexicostatistics to arrive at a preliminary classification and then applied structural criteria to determine with which of two groups a lexically mixed language should be placed. Wurm (1961: 21) used this method with regard to the highlands languages and placed Yabiyufa, which shows a lexicostatistical relationship of 51% with Siane but 58% with Gahuku, in the Siane Sub-family rather than in the Gahuku-Benabena Sub-family on the basis of structural similarity with Siane. Similarly, Benabena, although exhibiting a closer lexicostatistical relationship with Keigana (60%) of the Kamano-Yagaria-Keigana Sub-family than with Gahuku (57%), was included with Gahuku in a single sub-family. Structural similarity also caused Wurm not to split Kamano off from the Kamano-Yagaria-Keigana Sub-family although lexical relationships supported such a split.

Earlier in this chapter (2.4) it was shown that the presence of typologically mixed languages rendered futile the attempt to use structural criteria to sub-divide the Huon Peninsula group of languages. Without
resorting to an arbitrary selection of features, the status of the mixed languages can not be determined. Thus the 'count the samenesses' and the 'structural status' methods both introduce an element of judgment in the selection of the items to be counted, and the latter method adds an arbitrary weighing of the different items counted as well. One would expect, therefore, disagreement among scholars over the application of such methods. 37

2.6 Conclusion

In view of the difficulties associated with the application of the lexicostatistical method to the classification of New Guinea languages and the variation with which the method has been applied, one may question whether or not the method has any value. A quotation from Hymes (1960: 19) seems appropriate: "In sum, approximations are interesting and often useful, both for their results and for their methodological implications, but it is safest for glottochronology and for historical anthropology when the method is applied to languages the correspondences of which have been thoroughly studied by the comparative method. Such a case affords maximum control over all the factors that introduce variation into the divergence times."

In the writer's opinion the lexicostatistical method can produce results which are only approximate, and any significant resemblance of the lexicostatistical family tree with the actual historical development of the languages may be regarded as coincidental. As Hymes has stated, however, approximations are often useful, and in the view of the large number of languages
(65) in the proposed Finisterre-Huon group, a lexicostatistical classification does provide a point of reference. Therefore the following classification is set forth as simply a point for reference. The family abbreviations and language identifications by letter are keyed to Map III.

In classifying the languages the following percentages of shared vocabulary were generally followed in separating levels: c. 75-100%, dialects of the same language; 28-75%, languages within the same family; 12-28%, families within the same stock; 4-12%, stocks within the same micro-phylum.

Although the percentages of Table A indicate that the languages of the proposed Rai Coast Stock are generally 4-8% related to the languages of the Finisterre Stock, the two groups are classified in different micro-phyla for a number of reasons. The lexicostatistical relationship is slight and within the range which could be attributed to chance or to the presence of unrecognized loans. The pronominal system differs as also do a number of vocabulary items which are generally stable throughout the Finisterre-Huon Micro-phylum. These vocabulary items are: burn, eat, earthquake, eye, fire, say and sleep.

2.6.1 The Finisterre Stock

Yupna Family (YUP):  a. Kewieng, b. Nokopo,  
c. Domung, d. Nankina, e. Bonkiman  
Wantoat Family (WAN):  a. Awara, b. Leron,  
c. Wantoat, d. Saseng, e. Bam, f. Yagawak,  
g. Irumu  
Erap Family (ERA):  a. Mamaa, b. Uri, e. Finungwan,  
f. Sauk, g. Numanggang, h. Nakama, i. Nek,  
j. Nuk, k. Munkip

2.6.2 The Huon Peninsula Stock

Western Huon Family (WHF):  a. Ono (Kip), b. Ono  
(Zankoa), c. Ono (Karako), d. Sialum, e. Nomu,  
f. Kinalakna, g. Kumukio, h. Komba, i. Burum,  
j. Mindik, k. Tobo, l. Kube, m. Timbe,  
n. Selepet, o. Nabak, p. Momolili  
Eastern Huon Family (EHF):  a. Dedua, b. Migabac,  
c. Momare, d. Sene, e. Kâte (Mâgobineng,  
Bamotâ), f. Kate (Wamorâ), g. Kâte (Wemo),  
h. Mape (Naga), i. Mape (Mape west),  
j. Mape (Mape east), k. Kosorong

2.6.3 Kovai language isolate (Umboi Island)

2.6.4 The Rai Coast Stock (RCS.—Madang Phylum)

The languages are:  a) Yabong, b) Saep, c) Ganglau,  
d) Kolom, e) Suroi, f) Lemio, g) Gurumbu, h) Watiwa,  
i) Usino, j) Sinsauru, k) Koropa, l) Taga, m) Kaikovu and  
n) Bagasin.
Notes

1. Word lists from the languages of the Rai Coast Stock, the Warup Family and the Gusap-Mot Family (except Ufim) were collected by O. R. Claassen. He also performed the cognition of the vocabulary items of these languages.

2. For a description of the trading system of the Vitiaz Strait see Harding (1967).

3. The people living in the upper villages of languages K and Q have considerable contact and intermarriage. An origin tale collected in language R tells of the pig being brought from the region of language K on trade route B rather than along the main north-south trade route A. The words for pig in languages H, J, K, Q, R, S, T and U are similar to the form bau whereas in the other NAN languages the words are similar to the form berec.

4. The determination of mutual intelligibility is extremely complex involving extensive testing of informants as well as consideration of sociolinguis-
tic factors. The writer, however, used the 'ask the informant' method. Whatever method is used, however, does not affect the argument here. The word chain is here used to refer to a chain of dialects in which neighbouring dialects are generally over 70% lexicostatistically related or to a chain of languages in which neighbouring languages are more than 28% lexicostatistically related.

5. Language G has two dialects 92% related and language F has three dialects with interrelationships of 87%, 91% and 93%. Percentages given in
this study are based on only 132-139 words and so may be adjusted by reducing them by approximately 3 percent to arrive at a figure comparable to that used for classification when the full 215 item basic vocabulary list is used (see Thomas and Healey, 1962: 29).

6. Social mobility brought about largely through European contact and pacification has obscured many dialect differences by diffusing the distinctive vocabulary.


8. In determining the membership of these chains, links were posited between languages which have the closest lexicostatistical percentage. Thus the chain goes from language S to language R with 65% relationship rather than to language Q with 56% relationship.

9. Wurm and Laycock (1961: 137) suggest that degrees of mutual intelligibility must be considered. Capell (1962a: 139-40), however, speaks of branches [dialects?] of a single language being not mutually intelligible. Of course, since the problem considered here involves the classification of languages within families rather than dialects within languages, the criterion of mutual intelligibility is largely irrelevant.

10. There is, however, some precedent for doing this. Dutton (1969: 23) based his classification of the Koiarian Family largely on structural features and includes communalects with a lexicostatistical
relationship as low as 8% within the Koiarian Family. Dye, et al. (1968: 150) include languages as low as 15% related within the Sepik Hill Family.

11. In the preliminary classification language F was included in the Eastern Family because of typological similarities with the member languages of that family.

12. It has been noted that languages F and G have strong lexical affinities with most of the other languages. If languages F and G are omitted in the calculations the average percentage between the Central and Northern Families and between the Central and Eastern families drops by 2% and 3% respectively.

13. One could of course argue that the principle of using an average degree of relationship between families—and languages when several dialects are being compared—is weak. No alternative statistical method known to the writer provides any significant improvements.

14. This is the approach used by Voegelins, et al. (1963: 24ff.). Because of extensive dialect and language chaining the writers were apparently reluctant to posit language boundaries when chains of dialects showed mutual intelligibility between adjacent dialects but linked together mutually unintelligible dialects. When the most divergent dialects so linked in a chain shared 45% of their basic vocabulary the chain was called a 'family-like language'. When the shared vocabulary was as low as 8% the group was called a 'phylic language family'.
15. Some writers, moreover, make no attempt to eliminate loans, even the more obvious loans which are recognizable by the inspection method.

16. For a description of stops and fricatives in language R (Selepet), see McElhanon (1968b).

17. The phone [ŋ] which represents the neutralization of [m], [n] and [ŋ] in syllable final position is analyzed as an allophone of phoneme γ. On the basis of phonetic symmetry, the glottal stop may be considered to be a variant of phoneme k although in actual fact it is in mutually exclusive distribution with all stop phonemes.

18. A detailed investigation of the mixed character of these languages is beyond the scope of this study. A preliminary assessment of the data indicates that these languages probably represent developments from a proto-language which had a number of structurally diverse dialects. Many isoglosses drawn from the more geographically remote NAN languages of the Peninsula converge with these two languages and indicate that the Peninsula was settled with migrations beginning along the coast from Sialum to the Tewae River.

19. Crétien's (1956) study is mentioned here although the technique he used was substantially different from the lexicostatistical technique of Lees and Swadesh. Dyen's (1965) classification of 245 Austronesian languages (which first appeared in a 1963 processed edition from Yale University) included only a small number of New Guinea languages. Goodenough (1961) used the TRIPP list in arriving
at some tentative reconstructions for the three Williaumez languages of New Britain. A lexicostatistical classification was only incidental to his main study. Lexicostatistics was secondary in Healey's (1964) study which mainly concerned reconstruction of the Ok family and in McKaughan's (1964) study which classified the Gadsup-Auyana-Awa-Tairora family according to phonostatistical means. There have been a number of publications which were derived in part from the listed classifications and so warrant mentioning: Wurm (1961, and later dates), Wurm and Laycock (1961) and the Voegelins (1965). In addition there are numerous publications on related subjects which refer to these classifications.

20. The word apet may also be cognate, but its possible cognate status does not affect the argument.

21. Accepted lexicostatistical procedure is to use the most common form but as Hymes (1960: 16) has pointed out, one cannot be certain that the first equivalent offered by an informant is the most common form.

22. Generally those items not found in New Guinea cultures are: ice, freeze, snow, horn; those limited in their distribution are: fish, sea, salt, swim; those involving repetitions are: dirty-black, far-long, near-short, leaf-feather-hair, fog-cloud, narrow-thin-little, wide-thick-big, river-water, bark-skin, sharp-tooth, here-this, there-that, wife-woman, husband-man, drink-eat, blood-red, lie-sleep, hit-kill; and those difficult to elicit are: wipe, rub, wash and squeeze.
23. See Hymes (1960: 15ff.) on the need for adapting the test list. Bromley (1966: 290) cited his criteria for supplementing the list and added, "these terms were selected specifically because they were useful diagnostic items for sub-grouping". The present writer, in contrast, did not supplement his 1967 list because the classification of the languages into families could be changed according to which supplementary items were used. This possible influence upon the word list and classification is particularly important when extensive dialect and language chaining is involved as it is in most of New Guinea. Swadesh's method was to omit problematic items (Swadesh, 1955b: 125).

24. The exceptions are Bromley (1966), McKaughan (1964) and Scott (1963). Bromley's (1966: 287) data included material which came from a number of sources and had a wide range of reliability. The reliability factor was given in a 1-5 scale with the highest being an "extended study and good command of the language" and the lowest being "based on check out of the area, rough" and perhaps done either monolingually or through interpreters. McKaughan's lists were taken from languages which were studied in depth by members of the S.I.L. Scott's study of the Fore dialects was based upon several years study. Lithgow and Staalsen (1965) collected their data through the use of a Dobu-speaking interpreter. McElhanon (1967a) used a church language, Kâte, and avoided many of the
shortcomings of Pidgin English although others inherent with the use of Kâte appeared. In any case, the shortcomings of using another New Guinea vernacular or bilingual informants in elicitation appear to be considerably less than those of using trade languages, particularly Pidgin English.

25. It may be noted that Pidgin English has not been widely known in the New Guinea highlands until just recently. Bunn and Scott (1962: 5) state that Melanesian Pidgin was quite limited in the Hagen Sub-district and Deibler and Trefry (1963: 5) note that "no estimate of the number of natives understanding or using Pidgin in any area was above five percent". Referring to field work done in 1967, Franklin (1968b: 46) wrote, "Initially, Pidgin English was tried as a vehicle of elicitation. However, so little Pidgin is spoken well in the area that this approach was abandoned...."

26. For example see the discussions on Amuzgo, Oto-Manguean, Macro-Mixtecan, etc., as cited in Longacre (1967a).

27. When Wurm did not provide a particular percentage, the percentage range relevant for the particular level of classification is shown. Thus the figures 40-55 are indicated because Wurm classified the languages within the same sub-family. The symbol $\varnothing$ indicates that no percentage is available because Bunn and Scott considered Narak and Kandawo to be dialects of a single language.

28. Dyen (1965: 19), from whom Bromley borrowed his terminology, states, "In effect then wherever the
terms cluster, hesion, or linkage are used the
discreteness of the membership of that group is
highly uncertain. The probability that the true
membership of a group is exactly as indicated is
greatest if the group is a cluster and least if it
is a linkage, but in no case can it be said to be
high."

29. Swadesh proposed a retention rate of 81% on his 215
item list (1954, 1955a) but changed the rate to
86% on his 100 item list (1955b). Most field
workers in New Guinea languages have had to omit
a number of items in Swadesh's lists, and so some
have adjusted the percentages correspondingly. For
problems in using the Swadesh lists in New Guinea
see Bromley (1966: 287-89), McElhanon (1967a: 6-7)
lowering the percentages by a maximum of 1% for
every 10 items omitted from Swadesh's 215 item
list. McElhanon (1967a) and Voorhoeve (1968)
used adjusted percentages in making their proposed
classifications rather than changing the criterion
percentage.

30. When the investigator(s) did not state a percentage,
the writer chose the lowest percentage used by the
investigator(s). If a percentage was stated but
the investigator(s) went on to use a different
percentage, then the stated percentage is given in
parentheses. The notation 'Pidgin' indicates that
Pidgin English was the main language used in
elicitation. 'Collection' indicates that vocabulary
lists from various sources were used. 'Differing' indicates that the lists used in the classification varied greatly in length.

31. The lists used by Bromley (1966), Lithgow and Staalsen (1965) and Wilson (1969) included various items to supplement a shortened Swadesh list. Bromley included 89 from Swadesh's 100 item list; Lithgow and Staalsen included 62; Wilson included 57 and Z'graggen included 41. Deibler and Trefry (1963), although collecting a lengthy list, based their percentages on a count of 27 nouns.

32. Note that Bunn and Scott (1962), Glasgow and Loving (1964) and Steinkraus and Pence (1964) all follow a typographical error in the mimeograph summary of Wurm (1959: 3). The summary states 85% as the border between dialect and language but in all of his publications Wurm uses 81%. This error, however, makes no difference in the resulting classifications.

33. Wilson (1969: 76) indicated an 86% relationship between Mawai and Zia. In describing the Binandere Family, he generally treated these as separate languages but also called them dialects of a single language (p. 66). Voorhoeve (1968: 6) separated the Samo language from the Kubo and the Bido languages on the basis of an adjusted percentage of 80%. Wurm (1961: 20), who cited 81%, separated Keigana from Yate on the basis of 78%. Not all of Wurm's percentages of relationship have been published, so that he may in fact have used a percentage higher than 78% to separate language from dialect in his 1960 classification.
34. Whereas Dye, et al. (1968: 154) allowed a percentage as low as 15% between languages in the Sepik Hill Family, they were reluctant to decide whether the Walio/Pai/Yabio/Tuwari group constituted a family or a stock although the lowest percentage between member languages was 23%. Dutton (1969: 23) included within a single family communalects with a relationship of only 8%. This unusually low figure represents the most geographically distant communalects in the family, whereas in fact the lowest average relationship between dialects of these languages would approximate 14-15% (Dutton, personal communication).

35. The conclusion that their technique is subjective is derived from the fact that most investigators have largely used the 'ask the informant' technique or made their own appraisal of apparent mutual intelligibility by participating in or observing conversations between groups of indigenes. The 'ask the informant' method has been criticized as giving "the least reliable results" by Wurm and Laycock (1961: 133-34) who also stated that informants "tend to claim a higher degree of understanding of another form of speech than is substantiated by subsequent tests". Direct observation of conversations also involve largely subjective judgments because the investigator is usually not a native speaker, and his appraisal therefore involves a number of variables. To avoid involving such subjective judgments the investigator would have to account for sociolinguistic factors such as
contact, trade partnerships, marital relationships and social status for each of the speakers. Furthermore, the speakers should be thoroughly tested and the linguistic aptitude of each speaker taken into account as well. It must be borne in mind that subjective judgments may be correct, and in the writer's opinion the 'ask the informant' technique is more accurate than scholars generally admit, particularly if the technique is applied to a suitable cross-section of the population.

36. Wurm, who, according to his statements in Wurm and Laycock (1961) and his proposed Central New Guinea Macro-phylum (Wurm, 1970a), may be classified as a 'grouper', actually split (Wurm, 1961: 18) where Rule (1965: 98-99) suggests the possibility of grouping and splits (Wurm, 1961: 18) where Bunn and Scott (1962: 3) indicated that a chain relationship exists.

37. See Capell (1962b) for suggestions in applying the structural status method to languages of the Pacific basin. Wurm and Laycock (1961: 137-38), recognizing that such classificatory tools as lexicostatistics, structural statistics, and degree of mutual intelligibility all have shortcomings, have suggested a method which combines all three. The method was suggested primarily to resolve the problem of dialect and language chaining which usually cannot be handled by lexicostatistical methods alone. The method, however, would be so difficult and complex if adequately applied that it negates the advantage obviously intended for
lexicostatistics in the first place, viz., a tool for the preliminary classification of languages when only limited amounts of data are available. In the final analysis the method may require as much time and effort as actual reconstruction.
Language names thus

--- Trade Routes
--- Area Boundaries

Map II: Huon Peninsula Languages
Map III: Finisterre-Huon Phylum
SELEPET PHONOLOGY

K.A. McELHANON

0. INTRODUCTION

This paper presents a descriptive analysis of the phonological system of the Selepet language. The theoretical basis underlying this paper is that developed by K.L. Pike. Selepet phonology is conceived of as a number of phonological layers arranged in a hierarchical order. Each layer may be described in terms of contrasting and variant types of units and distribution of these units in higher and lower layers. To conceive of phonology as a hierarchical layering does not mean that the layers are autonomous. 'The higher layer may condition the lower - or the lower mark or identify the higher' (Pike 1962: 14).

The highest level observed is the rhetorical period. Subsequent layers are the phonological paragraph, the breath group, the pause group, the stress group, the syllable, the phoneme and the phone. A unit from a lower layer may also function as a unit in higher layers. For example, the phoneme o may function as a syllable, stress group (word), pause group and breath group depending upon its occurrence with the appropriate features of stress, length, intonation, pause and initial and terminal breath.

1. RHETORICAL PERIOD

Four types of rhetorical periods have been identified: narration, oration, announcement and conversation. Although these four types generally occur in different social situations there is a certain amount of nesting. The narration type is the most flexible and often includes short bits of the other three, particularly as direct quotations within the narrative structure. When an announcement occurs embedded within a narration it usually is spoken with a falsetto voice quality. An oration has been observed to frequently include brief narrative bits and rarely includes conversational bits. A conversation among many people may lapse into oration when one speaker insists upon his right
de cre scen do. The intensity through the unit is high and vowels are lengthened. When the unit includes several pause groups each pause group is terminated with a prolonged vowel o.

1.4 CONVERSATION

The final type is that of conversation. The distinguishing feature of this type is that the speaker may be interrupted by other speakers at any time. This factor has a direct effect upon both the phonological and grammatical characteristics of the unit. Whereas the rate of utterance is rather uniform in other types, it varies considerably within any conversational unit. An extremely rapid rate of utterance occurs when others are trying to interrupt the speaker. This rapidity of utterance is accompanied by emphasised intonation contours, brief pauses and gasps substituting for a normal breath. When other speakers are not actively attempting to interrupt the speaker, the rate of utterance reduces to that of the narrative. The speaker, however, still speaks in a manner which makes it easy for him to thwart any attempts by others to interrupt. Final syllables within a pause group may be held unusually long and the final pauses are shortened. Moreover, pauses (/) which in narrative structure usually occur at the end of grammatical clauses are shifted to follow a connective particle or word added to the clause. Thus clauses are often suffixed by -âmâ (â = [o]) with the final vowel lengthened. In this context the particle has no semantic significance.

Example A

kâmgum nem tatmuâmâ / âo sâwan
bowing eating it-staying oh I-said

'Putting its head down it sat and ate and I said "Oh!".'

Example B

inâk tatmanâmâ bêngâ / mukanâmâ yûkât ihim dêim
just I stay then yesterday this-for chewing pulling
arimâmâ bêngâ / nine emelan
going then my house-to

'I was doing nothing yesterday, and because of this it chewed it and dragged it and then went to my house...'

When a speaker successfully interrupts another speaker, he may add this grammatical suffix to several of the initial words of his utterance until he has control of the conversation.
3. BREATH GROUP

The breath group consists of from one to six pause groups with the average being between two and three pause groups. Inasmuch as its nucleus is indeterminate, the breath group may be more easily defined by border phenomena. The breath group is characterised by an intake of breath at the beginning and an optional short exhalation of breath or breathiness at the end. In a series of breath groups this exhalation of breath or breathiness may be absent and breath intakes alone mark the borders. The breath group is bounded by pauses (//) which are relatively longer than the pauses bounding the pause group (/).

No contrastive breath group types have been observed although variants occur in relation to the speed and length of utterance. In excited speech, the pauses are shortened and the breath intake is a gasp. Breath intakes are also shorter if taken at pause points other than those at grammatical clause final. Understandably, pauses are longer and breath intakes greater after longer breath groups.

Intonation, however, is not relevant to the breath group and intensity is only relevant to the length of the breath group; i.e., as the breath group is lengthened, intensity diminishes. Intensity does not mark or otherwise signal boundaries. Although the terminal boundary of the breath group generally coincides with the potential pause point following clauses, there is no direct correlation between a breath group and any particular grammatical unit. Thus a breath group may include a final grammatical clause plus the introductory pause group of the following clause. In the following example the first breath group includes four pause groups, of which the first three coincide with temporal and locative phrases and the last with a manner and a predicate tagmeme. The second breath group includes an independent clause followed by its dependent transform embedded in a temporal phrase.

\[ \text{këdikum emelâk / Indum kapal patoân / Indum yan} \\
\text{at first before Indum village big-at Indum there} \\
\text{kapal tabâñan orotmeme yawu manbl} // \\
\text{village ancestral-at custom thus they lived} \\
\text{këdikum Selepet ga tatbi tatmê yan} // \\
\text{at first Selepet came they-stayed staying then} \\
\text{'Long ago at the very beginning, at Indum village, there} \\
\text{at Indum, at the ancestral village they lived according} \\
\text{to this manner. At first they came and stayed at Selepet.} \\
\text{When they stayed...'} \]
The nucleus is characterised by the greatest stressed syllable in the pause group. 'By the stressed syllable the presence of the waves is identified, and the nucleus of each wave is likewise identified' (Pike, 1962: 10). The peak of the intonation contour usually coincides with this stressed syllable.

Although each distinctive intonation contour is regarded as an emic unit, for purposes of description the terms HIGH, MID, and LOW are used. These terms themselves refer only to a relative level of pitch and it is the differing combinations of these terms which identify the emic units. The term SPIKE is used when the pitch has an abrupt rise and fall of very short duration. Further terms SMOOTH, ABRUPT and SQUARE refer to the shapes of the intonation contours. The following types of contrastive intonation contours have been observed.

4.1 FINALITY-OF-THOUGHT

The SMOOTH HIGH-LOW contour shows an attitude of finality-of-thought on the part of the speaker. It is a declaration of fact. It has been observed following HIGH-MID, MID-HIGH-MID, and LOW-MID contours. The prenuclear slope is short - never more than two syllables - and begins at low level when the contour occurs in isolation and mid level when it follows another contour. The contour is identified by a long smooth postnuclear slope with a gradually falling pitch and decrescendo. Postnuclear slopes of up to nine syllables in length have been observed.

4.2 INCOMPLETENESS-OF-THOUGHT

The HIGH-MID contour reveals an attitude of incompleteness-of-thought on the part of the speaker. Sequences of up to five HIGH-MID contours have been observed. The initial HIGH-MID contour has a prenuclear slope identical with that of the SMOOTH HIGH-LOW contour. The contour is characterised by a level postnuclear slope with an abrupt pitch drop to the mid level on the postnuclear margin. Rapid decrescendo accompanies this drop in pitch.
4.5 DISTANT CALLING

The SMOOTH HIGH-(RISE)-LOW contour is used for distant calling and shows a desire on the part of the speaker to be heard over a long distance. The prenuclear margin and slope show a sharp crescendo and pitch rise early in the syllable. The nucleus occurs on the second syllable and the postnuclear slope sustains high pitch until the margin. The vowel o is obligatorily suffixed to an utterance ending in a closed syllable and optionally suffixed to one ending in an open syllable. The final vowel (i.e., the margin) manifests an optional crescendo and rise in pitch before a sustained smooth pitch fall with accompanying decrescendo.

4.6 HESITANCY, DETERMINATION

The MID contour indicates hesitancy by the speaker. The prenuclear margin and slope are very short in pitch height. The nucleus often exhibits only stress as an identificational feature. Mid pitch height is maintained throughout the postnuclear slope which is abruptly terminated by glottal closure. Without glottal closure this contour evidences the attitude of determination or insistence.
The MID-HIGH contour shows that the speaker has an attitude of inquiry or lacks knowledge about the veracity of an otherwise factual statement. Its primary use, therefore, is in certain types of questions. In this contour the normal stress pattern is often perturbed with the result that the stress group manifesting the nucleus may exhibit regressive perturbation of the primary stress. Thus, rather than the primary stress occurring on the initial syllable of the stress group, it may occur on subsequent syllables which usually manifest secondary stresses. When this happens the initial syllable manifests a secondary stress. Whereas the prenuclear slope may be long, the postnuclear slope is usually short and rising and coincides with the margin. If a question is marked by the grammatical question marker me 'or', the marker occurs with a low pitch or a short MID-LOW pitch contour.

4.10 AMAZEMENT, WONDER

The SPIKE-HIGH-LOW contour shows amazement or wonder by the speaker. The contour has the same shape as the SMOOTH HIGH-LOW contour (4.1) except that a spike occurs in the pitch level at the nucleus.
4.13 SEDUCTION

The MID-LOW UNDULATING contour seems to indicate a seductive attitude in the speaker. The contour is distinguished by an undulating pitch drop from a nucleus occurring on the first syllable. The rate of utterance is usually slow so that overall syllable length is greater. A wavy decrescendo accompanies the pitch drop. The final margin resembles that of the SMOOTH HIGH-LOW contour (4.1).

Certain types of intonation contours have been observed occurring only initially in a breath group when it coincides with a grammatical sentence. These are: HIGH-MID, MID-HIGH-MID, MID and LOW-MID. In conversational material certain intonation contours are more likely to be followed by an interruption by another speaker. For example, the MID contour (hesitation) is more likely to precede interruption than the LOW-MID contour (suspense).

All types of intonation contours thus far identified have been observed in the narrative and conversational rhetorical periods. In oratorical units, however, the following intonation contours have not been observed: SMOOTH HIGH-(RISE)-LOW, LOW-MID, MID-HIGH, HIGH-MID-LOW or MID-LOW UNDULATING. Only four types of intonation contours have been observed in an annunciation unit: HIGH-MID, MID-HIGH-MID, MID and SMOOTH HIGH-(RISE)-LOW.

5. STRESS GROUP (WORD)

A stress group contains one primary stress occurring on the initial syllable followed by secondary stresses occurring on subsequent alternate syllables. The stress group is bounded by juncture (indicated by a space) and potential pause. Juncture characteristics of the stress group include the following: (a) a stress group final syllable is longer than the following stress group initial syllable; (b) morphophonemic changes do not occur across a juncture (see 12.2). Thus the
In these syllable types, V represents any vowel (except with restrictions of occurrence in complex nuclei as noted below), C₁ represents any consonant and C₂ represents only voiceless stops or nasals.

These classes of consonants are based upon distribution of consonants within monosyllabic words (stress groups). Although the phoneme r occurs only intervocally it is classed with Consonant Class C₁ because of its similarities with phoneme l. Both phonemes are liquids (+ consonantal, + vocalic) and neither phoneme occurs syllable finally. Whereas only phoneme l occurs word initially both phonemes occur intervocally.

Examples of the consonant classes follow:

Consonant Class C₁: pat 'news', tat 'You stay!', kat 'Put it!', bem 'story', den 'speech', gem 'coming down', mem 'holding it', nak 'wood', njn 'darkness', wat 'Chase it!', yat 'You are speaking.', hat 'forest', sáp 'time', lok 'man', karä 'sorcery';
Consonant Class C₂: tap 'It is here.', tat 'You stay!', sak 'sand', nem 'eating', nen 'we (pl.)', nenj 'coral'.

The first member of a complex nucleus is never i and the second member is never an a or å. The following diphthongs occur as complex nuclei: ei, eu, ai, åi, oi, ui, ae, åe, oe, ao, au, åo, åu and ou.

All structural syllable types may individually constitute one syllable words. Examples follow:

V i 'Sleep!' VV ai 'Dig!'
CV be 'taro' CVV bau 'pig'
VC ot 'Do it!' VVC åun 'now'
CVC tap 'He is here.' CVVC kaok 'white'

All structural syllable types with the exception of VV have been observed to occur in all syllable positions in polysyllabic words. The syllable type VV has not been observed to occur medially in poly-

---

Figure A: Selepet Syllable Structure

![Syllable Structure Diagram]

Onset - Nucleus - Coda

C₁

V

C₂

VV
As a result of all of these factors it is difficult to give a precise length for any single type of syllable. Syllables of up to 1.3 seconds duration have been measured: e.g., niŋ 'Give it to me!'. A CV syllable manifesting short phonemes and occurring at the end of a phonological phrase may be considerably longer than a CVC syllable manifesting long phonemes and occurring at the nucleus of a phonological phrase.

Syllable borders are determinate when either preceded or followed by pause or a consonant onset or closure of other syllables. Indeterminacy of borders occurs when the borders are bounded by vowels. Examples of indeterminate syllable borders follow: (voiceless stops) opon 'men's house', kitim 'missing', âkam 'expectorating'; (voiced stops) tebe 'bow', tado 'post', waga 'canoe'; (nasals) imen 'house', manam 'banana', aŋun 'stink bug'; (fricatives) awu 'victory plant', meyek 'Hold them!', tuhu 'Work!', gasam 'cassowary'; (vibrant) keram 'rat'; (lateral) balam 'flame'.

An examination of spectrograms does not yield any consistent evidence for dividing the above words into syllables. The indeterminacies with regard to the voiced stops, fricatives, vibrant and lateral may be resolved by resorting to the syllable structure and distribution of phonemes within consonant classes thereby placing the syllable division before the intervocalic phoneme as in the examples: te.be,10 ta.do, wa.ga, a.wu, me.yek, tu.hu, ga.sam, ke.ram, ba.lam.

Morphological evidence is inconclusive if it is sought for the purpose of substantiating these divisions. Positive evidence would be found in suffixes with consonant-initial sandhi forms. In the following examples morphological boundaries are indicated by a hyphen: {-be} -be ~ -we (1st person, singular, immediate future tense) as in ek-be 'I will see it.', ari-we 'I will go'; {-de} -de ~ -re (1st person, dual, immediate future tense) as in ek-de 'We (du.) will see it.' ari-re 'We (du.) will go.'; {-ge} -ge ~ -he 'your (sg.)' as in apet-ge 'your (sg.) wife', ata-he 'your (sg.) elder brother'; also -yetne 'your/their (du.)' and -yenê 'your/their (pl.)' as in ata-yetne 'your/their (du.) elder brother', ata-yenê 'your/their (pl.) elder brother'. Negative evidence is found in forms with consonant-final sandhi forms. In the following examples the syllable division (.) would precede the fricative, vibrant or lateral and the morpheme division (-) would follow them: ne.w-ân 'work at', âsi.r-ak 'scratch-yourself', e.h-op 'saw-it-he' (the verb stem morpheme is Ø), ha.l-ân 'forest-in' and o.l-op 'happened-it'.11

Morphological evidence is useful, however, in the case of indeterminate syllable boundaries involving nasals. In the following examples syllable division and morpheme division coincide and occur before the intervocalic nasal: ata-ne 'elder brother-my', ata-ne 'elder brother-
TABLE A: CONSONANTAL ALLOPHONIC VARIATION

<table>
<thead>
<tr>
<th>Phonemes</th>
<th>/p/</th>
<th>/t/</th>
<th>/k/</th>
<th>/b/</th>
<th>/d/</th>
<th>/g/</th>
<th>/m/</th>
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<tbody>
<tr>
<td>Word initial</td>
<td>[pʰ]</td>
<td>[tʰ]</td>
<td>[kʰ]</td>
<td>[b]</td>
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<td>[ɡ]</td>
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<td>[u]</td>
<td>[i]</td>
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<tr>
<td>Syllable final</td>
<td>[p]</td>
<td>[t]</td>
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<td>[ŋ]</td>
<td>[ŋ]</td>
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<tr>
<td>Following consonants</td>
<td>[b]</td>
<td>[d]</td>
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<td>[m]</td>
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<td>[ŋ]</td>
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</table>
7.2 VOWELS

The six vowel phonemes are plotted on Graph A according to the frequencies of their first and second formants (given in cycles per second (cps.)). The phoneme target areas are enclosed by a solid line and allophonic variation is shown by internal broken lines. Articulatory designations of front, back, high, mid and low are also indicated.

Graph A: Vowel Formant Frequencies

The phone [i] occurs before nasals and voiced prenasalised stops; phone [ι] occurs fluctuating with phone [i] and in other environments.

/giban/ [giban] 'yellow'
/lidup/ [lidup] 'barricade'
/lgel/ [lgel] 'spear'
/lipiap/ [lipiap] 'He washed it'
/likwel/ [likwel] 'Amboina Cuckoo-dove'
/gihit'ne/ [gihit'ne] 'its root'
The phone [u·] occurs before [t] and phone [u] occurs in other environments.

/kaiput/ [kʰɔipʰu·t] 'bead necklace'
/amutgen/ [amu·tgen] 'underneath'
/keluŋe/ [kʰeluŋe] 'its fat'
/use/ [use] 'sore'
/suem/ [suem] 'kind of wild sugar cane'
/duwi/ [duwi] 'kind of animal'
/gurumu/ [gurumu] 'kind of tree (Moraceae Ficus adenosperma)'

8. DISTINCTIVE FEATURES

The twenty-one Selepet phonemes may be identified by seven distinctive features. These are tabulated in Table B. Abbreviations used are: cons. for consonantal/non-consonantal, voc. for vocalic/non-vocalic, inter. for interrupted/continuant, nas. for nasal/non-nasal, cpt. for compact/diffuse, gr. for grave/acute and ten. for tense/lax. The plus symbol indicates the occurrence of the first feature of a set; the minus symbol indicates the occurrence of the second feature of a set. Redundant features are not indicated.16

9. MORPHOPHONEMICS

A number of morphophonemic processes have been observed in affixation and compounding and are summarised in the following rules: (C = consonant, V = vowel).

9.1

The initial and final stop phonemes of the morphemes are replaced by their fricative counterparts initially and/or finally if vowels occur contiguously. Thus V +b- → Vw-; V + d- → Vr-; V + g- → Vh-; -p + V → -wV; -t + V → -rV; -k + V → -hV.17

9.2

Phoneme t reduces before s or l. Thus t + s → s; t + l → l.
9.3

When two identical vowels occur contiguously one reduces. Vowels a and â act as identical vowels in morphophonemic processes. Thus

\[ a + a = a; a + â = a; â + a = a; e + e = e; i + i = i; o + o = o; u + u = u. \]

9.4

When two identical consonants occur contiguously one reduces. Thus

\[ k + k = k; m + m = m; n + n = n; ð + ð = ð; p + p = p; t + t = t. \]

9.5

When a nasal is followed by a homo-organic voiced stop the nasal reduces. Thus

\[ m + b = b; n + d = d; ð + g = g. \]

This rule produces poly-morphemic words which are homophonous with mono-morphemic words.

\[ [o^nâ] /âdâ/ 'kind of dance done by women'; [o^nâ] /âdâ/ 'you move' from ân- 'to move' and -dâ (2nd person singular, heteropersonal dependent verbal suffix).

A number of morphophonemic processes are associated with particular morphemes:

9.6

The final vowel of the adjectiviser -ïe or the pronominal elements with a final e is replaced by a when the morphemes -ïe (subject/instrument-agent clitic) or -gïi (causal-benefactive/possession clitic) are suffixed. Thus lok bâleïe 'bad men' but lok bâleïe 'the bad men' (as subject) or 'by the bad men' (as agent) and lok bâleïiïe 'for the bad men' (as causal-benefactive) or 'the bad men's' (as possession); barâïe 'his daughter' but barâïe 'his daughter' (as subject) or 'by his daughter' (as agent) and barâïiïe 'for his daughter' (as causal-benefactive) or 'his daughter's' (as possession); nine 'myself' but ninïïe 'for myself' (as causal-benefactive).

9.7

When the locative clitic -ân 'in, at' is suffixed to the adjectiviser -ïe or pronominal elements ending in e, the vowels e and â reduce to a. Thus emetïe 'his house' plus -ân 'in' yields emetïe 'in his house'; nine 'my own' plus -ân 'in' yields ninïïe 'with me' (lit. 'at my (place)').
TABLE C: TWO VOCOID SEQUENCES

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</table>

All of the above sequences occur with one mora timing except ea, eâ, eo, oa and oâ. Other sequences which occur with two mora's timing are i.e, l.a, i.â, l.o, i.u, e.a, e.â, e.o, o.a, o.â, u.e, u.a, u.â and u.o. Any sequence with one mora timing and which begins with i or u (with the exception of iâ and iu) contrasts with an identical sequence with two mora's timing. Vowel length does not occur and therefore there is no contrast between iâ and i.i and between iu and u.u. Contrastive examples follow: iek 'Look at them!' and sl.ep sl.ep 'Long plumed False Sun-bird' (Toxorhamphus liliolophus); iâl 'They are speaking.' and l.âl 'They are sleeping.'; ââk 'he' and l.âk 'Let him sleep!'; jongo 'Strike them!' and l.on 'You slept.'; îu 'this' and pl.u pl.u 'Mangrove Heron' (Butorides striatus (littleri)); yosan 'where' and u.on 'You cooked it.'; uâkâ 'Sulphur-crested cockatoo' (Kakatoe galerita (triton)) and u.â 'Let him cook it!' and u.at 'You cooked it.'; yeke 'ghost' and l.u.e l.u.e iap 'It howled.'; yîgînîn 'kind of grass' (Gramineae; Ischaemum polystachyum) and u.in 'We cooked it.'.

The writer suggests that the non-syllabic vocoid in these contrastive sets be interpreted as consonants /w/ and /y/ and the corresponding syllabic vocoids be interpreted as vowels /u/ and /i/. By this interpretation the phones [û] and [î] would be combined with the inter-vocalic phones [b] and [l] respectively to form phonemes /w/ and /y/. The phones [u] and [i] would then be combined with phones [û] and [î] (which occur as the second member of two-vocoid sequences with one mora timing) to form phonemes /u/ and /i/. This allophonic distribution is given in Table D.
(b) **Timing:** A sequence of two simple nuclei is two mora's timing but a complex nucleus is only one mora of timing.

(c) **Stress:** A sequence of two simple nuclei may manifest stress on either of its members (but not both) and a complex nucleus may manifest stress only on the initial member.

(d) **Number of syllable peaks:** Whereas a sequence of two simple nuclei occurs with two syllable peaks the complex nucleus occurs with only one syllable peak.

(e) **Glide direction:** The direction of glide from the initial member to the second member of two simple nuclei is down and forward, down, down and backward or backward; but the direction of glide in a complex nucleus is forward, upward and forward, upward or upward and backward.

11. **CONTOID INTERPRETATION**

11.1

The phones [mb], [ng], [gh], [ph], [rh] and [kh] are all interpreted as unit phonemes /b/, /d/, /g/, /p/, /t/, and /k/ respectively because there are no non-suspect consonant clusters in word initial position. Consonant clusters occur only across syllable boundaries.

11.2

The syllable final unreleased stops [p], [t] and [k], and the stops [b, p], [d, t] and [g, k] following consonants are in complementary distribution with the word initial and intervocalic phones of phoneme sets /p, t, k/, /b, d, g/ and /w, r, h/.

The voiceless unreleased stops [ph], [t] and [kh] are interpreted as allophones of phonemes /p, t, k/, and the stops [b, ph], [d, t] and [g, kh] are interpreted as allophones of phonemes /b, d, g/. This interpretation is most consistent with phonetic similarity and yields the most simplified phonemic orthography. To interpret these phones as allophones of the phonemes /w, r, h/ would yield a phonemic orthography with phonetic complexity. These two interpretations are given in Tables E and F for comparison.

It should be noted, however, that interpreting the phones as allophones of the phonemes /p, t, k/ and /b, d, g/ does yield a complication in morphology and morphophonemic rule no. 1 (see section 9), viz., in affixation or compounding the initial or final stop phonemes of the morphemes are replaced by their fricative counterparts initially and/or
To interpret the phones as allophones of phonemes /w, r, h/ would simplify the morphology. Those forms listed in the fourth column would appear.

11.3

The phone [w] occurring intervocalically in the verbal suffixes {-wuat} [yaŋ] 'you will' (2nd person singular, immediate future tense) and {-wuap} [yaŋ] 'he/she/it will' (3rd person singular, immediate future tense) is interpreted as two segments /wu/. Illustrative data are: ariwuat [aɾiˈwaŋ] 'You will go.', ariwuap [aɾiˈwaŋ] 'He will go.', gaɬiwuat [ɡaɬiˈwaŋ] 'You will cut it.', gaɬiwap [ɡaɬiˈwaŋ] 'He will cut it.' and all similar conjugations based upon vowel final verb stems.

This interpretation is based upon the following: (a) an initial stop phoneme is replaced by its fricative counterpart when a vowel occurs preceding it. Thus b + w, d + r and g + h; and (b) the suffixal forms following consonantal final verb stems are -buat and -buap as in katbuat [kʰaɬbuaj] 'You will place it.', katbuap [kʰaɬbuap] 'He will place it.', kunbuat [kʰuŋbuaj] 'You will call him.', kunbuap [kʰuŋbuap] 'He will call him.' and all other similarly conjugated verb stems ending in consonants. Thus the forms [buaj] and [buap] alternate with the forms [yaŋ] and [yaŋ] respectively and the phone [y] may be identified with the phones [bu] and so interpreted as /wu/.

12. JUNCTURE

Juncture (phonological word or stress group boundary) is indicated by a space. Three types of phonological evidence indicate the occurrence of juncture. All types involve morphophonemic processes.

12.1 VOWEL EVIDENCE

When two identical vowels (a and ə act as identical vowels in morphophonemic processes) occur contiguously with no intervening juncture, one reduces. When juncture intervenes the second vowel is stressed. Examples are:

[tʰọɡoŋ] /tʰọhop/ 'He came' from toho- 'to come' and -op (3rd person singular, remote past tense).
TABLE H: OBSERVED CONSONANT SEQUENCES

<table>
<thead>
<tr>
<th>Syllable initial</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>p</td>
<td>t</td>
</tr>
<tr>
<td>k</td>
<td>b</td>
</tr>
<tr>
<td></td>
<td>d</td>
</tr>
<tr>
<td></td>
<td>g</td>
</tr>
<tr>
<td>m</td>
<td>n</td>
</tr>
<tr>
<td>η</td>
<td>s</td>
</tr>
<tr>
<td>y</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Syllable final</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>m</td>
<td></td>
</tr>
<tr>
<td>n</td>
<td></td>
</tr>
<tr>
<td>η</td>
<td></td>
</tr>
</tbody>
</table>

14. FREQUENCY

A frequency count of phonemes in text material which consisted of 129,574 symbols yielded the percentages given in Table I.21

TABLE I: PHONEME FREQUENCY COUNT

<table>
<thead>
<tr>
<th>Phoneme</th>
<th>Percentage</th>
<th>Phoneme</th>
<th>Percentage</th>
<th>Phoneme</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>l</td>
<td>6.92</td>
<td>t</td>
<td>5.95</td>
<td>η</td>
<td>4.18</td>
</tr>
<tr>
<td>e</td>
<td>8.86</td>
<td>k</td>
<td>5.68</td>
<td>w</td>
<td>1.76</td>
</tr>
<tr>
<td>a</td>
<td>9.45</td>
<td>b</td>
<td>3.01</td>
<td>y</td>
<td>4.02</td>
</tr>
<tr>
<td>ñ</td>
<td>11.41</td>
<td>d</td>
<td>0.77</td>
<td>h</td>
<td>1.86</td>
</tr>
<tr>
<td>o</td>
<td>5.31</td>
<td>g</td>
<td>2.60</td>
<td>l</td>
<td>2.06</td>
</tr>
<tr>
<td>u</td>
<td>5.19</td>
<td>m</td>
<td>7.95</td>
<td>r</td>
<td>1.69</td>
</tr>
<tr>
<td>p</td>
<td>3.08</td>
<td>n</td>
<td>6.32</td>
<td>s</td>
<td>1.93</td>
</tr>
</tbody>
</table>
Consonants

/b/  [b] A voiced bilabial stop.  
[ᵐb] A voiced prenasalised bilabial stop.  
/p/ A voiceless unaspirated bilabial stop.

/d/  [d] A voiced dental stop.  
[n̩d] A voiced prenasalised dental stop.  
[t̩] A voiceless unaspirated dental stop.  

/g/  [g] A voiced velar stop.  

The preceding six phones are characterised by the presence of a voice bar during the stop gap and very short spike fills. The spike fills are usually between .01 and .04 seconds long and the longest measured spike fill was .06 seconds. This compares with spike fills of up to .20 seconds in the voiceless cognates. When a prenasalised phone occurs in initial position the prenasalisation is slight and rarely accounts for more than one-half of the phone's length. In intervocalic position, however, the prenasalisation is from one to three times as long as the stop portion of the phone. Generally, phones following nasals and initial phones are .15 to .25 seconds in length, whereas intervocalic phones are from .30 to .40 seconds in length. Like their voiceless counterparts these phones are identifiable by their influence on the formants of contiguous vowels.

Consonants

/m/  [m] A voiced bilabial nasal.  
/n/  [ŋ] A voiced dental nasal.  
[ŋ*] A voiced advanced velar nasal.  
[ŋ] A voiced alveopalatal nasal.  

The nasal phones are characterised by a formant structure with weaker formants than those manifested in the vowels. The upper formants are less defined in the nasals with some formants missing, particularly in word final position. The dental phone is identified by a strong formant at about 2900 cps and a weaker formant at 1800 cps. The velar phone manifests a strong formant at 1450 cps with a weaker formant at about 2850 cps. The bilabial phone is distinguished by formants of moderate strength at 1500, 2400 and 3400 cps. All nasals,
frequencies of 350 cps and 900 cps respectively. In the initial position these phones exhibit a crescendo in intensity with the result that the early portion of the formant may not be evident. The phone [Ʌ] in intervocalic position is short — .05 to .10 seconds in length — and sometimes evidences weak striations.

Consonants

/r/  [r]  A voiced alveolar flap.
     [Ʌ]*  A voiced alveolar trill.

/l/  [Ʌ]  A voiced alveolar lateral.

The 'liquid' phones are characterised by weaker formants than the vowels. They are easily recognised by their formant frequencies. The first formant remains stationary at 400 cps and the third at 2800 to 2900 cps. The identifying feature is the variability of the second formant. The second formant occurs at about 1500 cps contiguous to grave vowels and at about 2000 cps contiguous to acute vowels. The first three formants of the contiguous vowels are deflected to the frequencies of the formants of the liquids. The [Ʌ] phone varies from .10 to .40 seconds in length and its formants are characterised by narrowing towards the centre. The [r] phone varies from .05 to .15 seconds in length. Its spectrum is characterised by a short silence or stridency of about .025 seconds long following the formant portion of the phone.

Vowels

/Ʌ/  [Ɇ]  A voiced open high front unrounded syllabic vocoid.
     [i]  A voiced close high front unrounded syllabic vocoid.
     [Ʌ]  A voiced close high front unrounded non-syllabic vocoid.

The first and second formants of phone [Ɇ] occur at about 400 and 2350 cps whereas those of phones [i] and [Ɇ] occur at about 325 and 2425. As an allophone of phoneme /Ʌ/ occurring as the second member of complex syllable nuclei, the phone [Ɇ] is longer than the phone [Ɇ] which occurs as an allophone of phoneme /y/. It has no sharp crescendo or decrescendo in intensity and no evidence of striation. Its intensity is weaker than that of [i], especially in unstressed syllables.
Vowel

\[ u \]  A voiced close high back rounded advanced syllabic vocoid.

\[ u \]  A voiced close high back rounded syllabic vocoid.

\[ u \]  A voiced close high back rounded non-syllabic vocoid.

The first and second formants for the phones [u] and [y] occur at about 350 and 900 cps. The advanced phone [u*] exhibits a second formant advanced to about 1150 to 1200 cps. The non-syllabic phone exhibits weaker formants than [u] with upper formants often missing in word final position.
/l/ and /r/ /olo/ 'It happened.' /orop/ 'with'

/y/ and /r/ /houye/ 'Spear them.' /houre/ 'We (dual) will spear it.'

/w/ and /u/ /wat/ 'Chase it!' /uat/ 'You cooked it.'

/y/ and /i/ /yat/ 'You spoke.' /lat/ 'You slept.'

/b/ and /m/ /be/ 'taro' /me/ 'Hold it!

/tâbê/ 'ancestor' /tâmê/ 'eyewax'

/g/ and /ŋ/ /ga/ 'Come!' /ŋaŋa/ 'infant'

/ŋpetâŋa/ 'your wife' /ŋpetâŋa/ 'his wife'

/d/ and /ŋ/ /dâl/ 'Pull it!' /nâl/ 'bird'

/kude/ 'We (dual) will hit it.' /kune/ 'my head'

/h/ and /ŋ/ /hakêt/ 'You worked' /yahêt/ 'Stand up!'

/g/ and /ŋ/ /gôm/ 'kind of lizard' /hom/ 'intestinal worm'

/sogo/ 'animal' /soho/ 'thigh'

/i/ and /ŋ/ /nihŋ/ 'Give it to me!' /nëŋ/ 'coral'

/e/ and /ŋ/ /howen/ 'walking stick' /howên/ 'on the rack'

/ŋ/ and /o/ /tıpëŋa/ 'his spittle' /topëŋa/ 'its base'

/o/ and /u/ /oap/ 'He did it.' /uap/ 'He cooked it.'
5. This contrasts with American English for which Pike (1945: 20-1) states that some intonation contours serve a 'mechanical function' and others add 'shades of meaning'. Pence (1964) states that for Kunimaipa, a non-Austronesian language of New Guinea, intonation contours add shades of meaning. Other descriptions of intonation contours for New Guinea languages are found in Franklin (1965), May and Loeweke (1965) and Swick (1966).

6. Terminology is adapted from Pike (1962).

7. The four horizontal lines dividing the pitch envelope into LOW, MID and HIGH levels indicate - from the bottom to the top - 100, 180, 240 and 300 cycles per second. The nucleus of the pause group is indicated by the vertical mark.

8. Perturbation of the normal stress pattern may occur with certain intonation contours associated with the pause group (see 4.9 and 4.11).

9. See Haugen 1956 for syllables based upon distribution of phonemes.

10. In the case of voiced stops, phonetic syllable division occurs between the nasal portion and the stop portion so that the nasal portion acts as a closure for the preceding syllable and the stop portion acts as a release for the following syllable. The interpretation of phonemes, however, regards this nasal portion as subphonemic.

11. These sandi forms are described by the writer in McElhanon (1967a) and alternate solutions are given a fuller treatment in McElhanon (1968).


13. In examples given to illustrate a particular feature, only phonetic variation relevant to the feature illustrated is given. Since stress is predictable it is left unmarked.

14. This reduction is in accord with morphophonemic rule No. 4 (see Section 9) which states that when identical consonants occur contiguously one of them reduces. After such reduction the remaining stop phoneme may exhibit phonological characteristics not usually
otbâp 'He should have done it' and aribâp 'He should have gone' (not ariwpâp); otbisâp 'He will always do it' and aribisâp 'He will always go' (not ariwisâp).

18. In the sequence â + â vowel reduction does not occur; rather the second â dissimilates to e, i.e., â + â + âe. For example, bârâen 'in the forest' from bârâ 'forest' and -ân 'in'; sâhâek 'Let him tie it!' from sâhâ 'to tie it' and -âk '3rd per. sg., inchoative future tense'. When -âk 'only' is suffixed to ya 'that' the resulting form is either yaek or yaok 'only that'.

19. For alternate solutions to the problem of vocoid clusters see McElhanon (1967b).

20. See note 17.

21. This frequency count is from a concordance of 25,191 words of text material collected mainly in the southern dialect of Selepet. This concordance, which also proved useful in the formulation of the morphophonemic rules, was made on the IBM 1410 computer at the University of Oklahoma by the Linguistic Information Retrieval Project of the Summer Institute of Linguistics and the University of Oklahoma Research Institute, and sponsored by Grant GS-934 of the National Science Foundation.
Chapter 4

Roots

4.0 Introduction

Most, if not all, languages exhibit phenomena which render difficult the classification of the minimum free forms, whether these be called words, stems or roots. Often these phenomena may be explained in various ways, so that one may not say that one particular treatment is correct while another is incorrect. Rather, each treatment must be judged in terms of utility, economy and internal consistency.

The goals of the present classification are modest enough: (a) to define roots so as to involve the least amount of ambiguity in the remainder of the grammar. Concomitant with this are the goals of utility, economy, internal consistency and clarity. (b) To provide patterns and rules which are generative in the sense outlined in the introduction; i.e., they may be extrapolated beyond the analytical corpus.

In this analysis of Selepet the tagmemic model as espoused by Longacre (1964) is followed so that both the level of word and the level of stem are said to be represented by syntagmemes, i.e., construction types. By so defining word and stem the problem of classification is removed to the level of the root. Whereas word and stem classes in general are definable according to structural (morphological) criteria, root classes are definable only according to distributional (syntactic) criteria. It is when one has to rely solely on distributional criteria that problems arise in the classification, for within a significantly large corpus of data one can expect forms to occur with distributional overlap.
The selected data given below serve to illustrate the problem of classifying roots in Selepet.

There are a few roots which occur only in single compounds. These forms are similar to the English form *cran-* in *cranberry*. The root wârâ occurs only in the compound wârâ tou 'female siblings' in which the root tou 'elder sister (male speaker)' is identifiable. The root nim occurs only in the compound nimnaom 'children' in which the root naom 'child' is identifiable.

There are other roots, primarily kinship terms and body parts, which occur only with nominal affixation or in compounds. The form ata 'elder brother' occurs with nominal affixation as in atane 'my elder brother' or in compounds as in ata imi 'male siblings'.

Some roots occur with optional nominal affixation, but occur unaffixed as the first element of compounds or as free forms in certain phrase and clause level tagmemes. The form lok 'man' occurs with nominal affixation as in lokqê 'her husband', without affixation in the Head tagmeme of the General Noun Phrase (GNP.) with the meaning 'men', without affixation in the qualifier tagmeme of the GNP. with the meaning 'male' or in the compound lôhibê 'adults, people' from lok + ibi 'woman'.

A few roots occur with optional nominal affixation and also with an adjectivizer suffix. For example, the form kut occurs optionally with nominal affixation meaning 'name' but also occurs with an adjectivizer suffix -dâ as in kutdâ 'famous'.

Many roots occur with wide, but slightly variant, ranges of distribution in the nuclei of distinct word classes and as free forms in certain higher level
tagmemes. Often these roots also occur in the cores of stem classes. The form bâle occurs in compounds such as biwi bâle (lit. 'insides bad') 'sadness', in the Qualifier tagmeme of the GNP. with the suffix -ŋe as in bâlenęŋe 'bad', in the Manner tagmeme with the same suffix and meaning 'badly', in the core of a transitive verb stem with a verbal object-marking suffix as in bâlenęŋe 'do evil to me', in the nucleus of the verb as in bâlep 'it turned out badly', or reduplicated and added to another root as in sen bâle bâle 'a glare'.

The form bet occurs without affixation in the Manner tagmeme as 'later', affected by reduplication in the Manner tagmeme as betbet 'backwards' or in the Head tagmeme of the GNP. as 'kind of grub' (which is reputed to crawl upside down on its back), with nominal affixation as in betŋe 'its back', in the Complement tagmeme of the Auxiliary Verb Phrase (AVP.) as in bet yap 'he followed', and in the core of the transitive verb stem as in betnoho 'turn one's back on me'.

A number of roots never occur as free forms but occur only in compounds, as derived forms, or in the nuclei of particular word classes. For example, the form âlip occurs in compounds as in biwi âlip 'happiness', with the suffix -ŋe either in the Qualifier tagmeme as âlipŋe 'good' or in the Manner tagmeme as 'well', and reduplicated in the Manner tagmeme as âliwaâlip 'excellently'.

The form ari occurs in the nucleus of the verb as in ariap 'he went' or reduplicated in the Head tagmeme of the GNP. as in ari ari 'going'.

Although the foregoing data by no means exhaust the possibilities of variant overlapping distributions of
roots, they do serve to illustrate the complexity of root classification in Selepet.

4.1 Standard Solutions

Four possible solutions to positing classes on the basis of distribution are given by Bazell (1958: 7) and discussed in reference to Rarotongan by Buse (1965). These solutions may be restated as follows:

4.1.1 The first is to state that word classes overlap so that the same root may share membership in more than one class. Thus ṽok, when manifesting the Qualifier tagmeme, may be classified as an adjective 'male', but when manifesting the Head tagmeme of the GNP, may be classified as a noun 'man'. This then is a distributional statement by which the root is identified according to the syntactic positions it manifests.

4.1.2 The second is to set up classes so that the functional range of one class may include all or part of another class. Presumably one would posit ṽārā as class one because it occurs only as an element of a compound, ṽata as class two because it occurs as an element of a compound and in the nucleus of a word class with particular affixation, ṽato as class three because it has a broader distribution and so forth.

4.1.3 The third is to set up classes and then state the overlap in terms of total or partial homophoneity of the roots of the various classes. Thus ṽok 'man' as a noun is simply homophonous with ṽok 'male' as an adjective.

4.1.4 The fourth is to set up a single class of roots (bases) and then to posit gaps in the distribution of these bases in the syntactic positions (tagmemes). This distribution can be handled in a distributional paradigm.
4.1.5 The first solution is essentially that followed in the *Selepet-English Dictionary* (McElhanon and McElhanon, 1970), in which forms were classified (often in more than one class) largely on distributional criteria. That distributional criteria are important cannot be denied, but alone they are quite unsatisfactory for the analysis of Selepet.

Due to the extreme variability in the distributional patterns of the roots, the second solution soon leads to such a profusion of classes that the analysis becomes unmanageable and economy in the description is sacrificed.

The third solution is the mirror image of the first and subject to the same difficulties. Rather than assigning a multiplicity of class memberships to the roots, one posits a multiplicity of homophonous roots.

The fourth solution encounters difficulty in that the statement of the distributional paradigms is complex because of the variability in the distributional patterns. Moreover, some groups of semantically related forms occur with a limited distribution, e.g., demonstrative pronouns.

4.2 Hierarchy of Criteria

It is convenient to posit a hierarchy of criteria for the classification of roots, stems and words with the primary criterion at the top of the hierarchy.\(^1\) In the classification of Selepet roots, stems and words which follows, structural (morphological) criteria are given primary value. Word classes are set up on the basis of contrasting types of syntagmemes and the roots manifesting the nuclei are unambiguously identified if they occur in the nucleus of only one type of syntagmeme.
Syntactic (distributional) criteria are then used in assigning labels to these structural classes; e.g., a word may be assigned the label noun because it manifests certain tagmememes which in turn are assigned such labels as Head or Attributive. Roots or stems are distinguished from words by the addition of root or stem following the syntactic label: thus transitive verb (tv.), transitive verb stem (tv.s.), transitive verb root (tvr.).

There is little difficulty in assigning such syntactic labels to words because in general a particular word class manifests only one higher level tagmeme. On the level of stem, however, there are cases in which a stem may manifest more than one tagmeme and in these cases the label is assigned according to the tagmeme which is most often manifested by the stem class. That is, if the forms ending in -οε function primarily as adjectives and only a few of these function as adverbs, then the adjectival function is considered primary and the forms are classified as adjectives although a few of them also function as adverbs.

4.2.1 When it comes to the assignment of labels to roots (i.e., the classification of roots) it is more difficult because the assignment has to be done solely on distribution. The starting point for the classification is with groups of semantically related items which alone manifest a single tagmeme. These semantically and functionally related groups are potential classes and once they are identified they are assigned a class label. Groups may be considered as etic and classes as emic.

If group a alone manifests tagmeme A, then this group may be identified unambiguously as class a on the
basis of this unique spot-filler relationship. In such cases it is convenient to give the tagmeme and class identical labels. An example of this is the Demonstrative tagmeme manifested by the class of demonstratives (Dem: dem).

Once a class is so identified it does not mean that the class has no further distribution. On the contrary, such a class may have quite a wide distribution but its classification is not based on this further distribution. This further distribution, however, does play an important role in the identification of other classes. Thus class a may have a distribution which overlaps with that of other semantically related groups, for example group b. If group b shares the manifestation of tagmeme B with class a only, then group b can be identified as class b. That is to say, all the forms belonging to class a may be omitted in the classification of the forms manifested in tagmeme B, so that theoretically group b alone manifests tagmeme B. One may say that group b is primary and class a is secondary in the manifestation of tagmeme B. If class a did not occur in tagmeme B, then group b would have a unique spot-filler relationship with tagmeme B. On the other hand, if group b did not occur, then class a would have to be redefined in terms of a wider distribution because it alone would manifest two tagmemes, or alternatively, the tagmemes A and B would have to be considered as allotagmas. In assigning a label to class b, however, a label different from that for tagmeme B should be used because the tagmeme in reality manifests two classes. It should perhaps be noted here that not all tagmemes will be significant in the classification of word or stem level syntagmemes or roots.
This process of classification is continued with groups of semantically related forms of ever wider distributions until all the groups are unambiguously identified or until the remaining forms show such a variety of distributions that they cannot be unambiguously classified. This process reduces the number of ambiguous roots and thereby simplifies the application of any of the four solutions outlined above.

4.2.2 In the process of classification it is advantageous to work down the grammatical hierarchy and to classify free forms on the basis of their distribution in clause level tagmemes. This is because very rarely do free forms occur manifesting more than on clause level tagmemes. That is to say, if mukan occurs in the Time tagmeme it is very unlikely that it will also manifest the Subject or Manner tagmemes. In lower levels, particularly that of the word, these root forms may occur in the nucleus of a single syntagmeme or in the nuclei of a variety of syntagmemes. For example, it has been noted that bet occurs in the nucleus of the noun as in betnqe 'his back' and in the core of the transitive verb stem as in betnho 'turn one's back on me'. On the basis of this distribution the form bet cannot be unambiguously classified; i.e., it functions every bit as much as a verb root as it does as a noun root. But, because as a free form it manifests the clause level Manner tagmeme, it can be classified as an adverb. Similarly pato occurs as a free form in the Qualifier tagmeme. Although it also occurs with nominal affixation, it may be classified as an adjective root.
The morpheme girin occurs as a free form in the Head and Attributive tagmemes of the GNP, and can be classified as a noun, although it also occurs with verbal suffixation as in girin-san 'I laughed' and with a derivational suffix -dâ as in girindâ 'good natured, jolly'.

4.2.3 Derivational processes involve reduplication and/or suffixation. Derivational suffixes differ from structural suffixes in that, with but one exception, they are not inflectional. Because structural suffixes are inflectional they are given primacy over the derivational suffixes in assigning class membership. Thus egat which occurs with nominal structural suffixes as in egatne 'my neck', egatge 'your neck', and with the adjectivizer -dâ as in egatdâ 'mature' is regarded as a noun root rather than as an adjective root or word base.

4.2.4 Reduplication as a derivational process also is given secondary status. In a case where a reduplicated form is derived from a root which occurs only in the nucleus of a word syntagme, the root may be classified according to the word nucleus tagmeme it manifests, because inflectional affixes are given primacy over derivational affixes or processes. Thus in gâre gure 'intertwined' (adjunct stem) the root gâre only occurs elsewhere in the nucleus of the verb and so may be classified as a verb root, in this case transitive.

4.2.5 When a root occurs only affected by derivational affixes and reduplication, the derivational affixes are given primacy over the reduplication. Thus lohot lohot 'weakly' (adverb stem) is secondary to lohot-ne 'weak' (adjective stem) and lohot-e 'to weaken' (intransitive verb stem).
4.2.6 If different derivational affixes occur with a root and the resulting stems manifest tagmemes found at different levels of the grammatical hierarchy, the class is assigned on the basis of the highest tagmeme manifested. Thus in lohot-ñe weak and lohot-e to weaken the root lohot may be classified as an adjective root on the basis that lohot-ñe manifests a phrase level Qualifier tagmeme but lohot-e manifests a word level verb nucleus tagmeme. The hypothetical root *kâít may be classified as a transitive verb root because its occurrence in the core of the transitive verb stem kâít-ku to deceive s.o. has primacy over its occurrence in reduplicated forms kâít kâít deception (noun stem) and kâít mâît in a deceitful manner (adverb stem).³

4.2.7 When a root occurs only in the core of a single derived stem class or as the base element of a reduplicated form, one may resort to analogical criteria in the classification. That is, if it can be shown, for example, that adjectives derived by the adjectivizer -dâ are always derived from noun roots in the unambiguous cases, then it may be posited that the ambiguous cases also represent derivation from a noun root. Thus derep’dâ paralytic and derepku to paralyse s.th. may both be said to be derived from the hypothetical noun root *derep paralysis.

4.2.8 Moreover, analogical criteria are useful in determining the class of some roots which occur as free forms in more than one tagmeme at the same level. For example the following roots indicating colour occur as follows:
in the GNP. Head tagmeme, in the Qualifier tagmeme, in the core of the tvs.

heleŋ firehood heleŋ black heleŋ-gu to blacken s. th

kuriŋ rust kuriŋ red kuriŋ-gu to ripen

kaok European kaok white kaok-gu to have dry rot

The roots kuriŋ rust and kaok European may be omitted in the considerations because these are obvious semantic extensions of the roots found in the Qualifier tagmeme as a result of the Europeans' arrival. Because of these gaps in the pre-European speech of the people, one may posit that all of these roots are adjective roots, and that the root heleŋ evidences an extension of meaning to include the referent firehood.

4.2.9 In some cases it is necessary to posit a theoretical root which, although not occurring as a free form, is clearly isolatable due to its occurrence in compounds. Thus the theoretical root wârâ may be posited on the basis of its occurrence in the compound wârâtou female siblings in which the root tou elder sister occurs.

4.3 The Classification

This process of classification removes most of the ambiguities which would have occurred had the four possible solutions from Bazell (1958) been applied at the outset. Only a few remaining roots cannot be unambiguously identified. These may be grouped into a single class and labeled 'word bases'.

Applying this process of classification to Selepet roots yields the following syntactic classes of roots.

4.3.1 Adjective roots may be divided into a number of semantic subclasses on the basis of their post-Head order
when differing members of the subclasses occur in repeated GNP. Qual. tagmemes. Some of the members of the subclass of quality also occur in the Att. tagmeme. Adjectives of quantity occur in the Quant. Tagmeme.

4.3.1.1 The adjective roots indicating colour form a closed subclass including the basic colours plus patterns describing hair, fur and feathers. Some examples are:

- black  
- kaok white  
- sky blue  
- green  
- blue lebe  
- ginger brown  
- dark green  
- yellow kâmâta tawny

4.3.1.2 The adjective roots indicating sex are lok male and ibi female.

4.3.1.3 Some of the adjective roots indicating age are:

- new, young, sihan youthful  
- old

4.3.1.4 The adjective roots indicating quality include:

- wild  
- maren tame  
- kamen empty  
- clean  
- tanat useless  
- irawut unripe  
- handicapped kâsi childless

4.3.1.5 The adjective roots indicating size include:

- big  
- minute

4.3.1.6 The adjective roots indicating shape include:

- long  
- peka peka oval  
- thin  
- gâwâng gâwâng round

4.3.1.7 The adjective roots indicating quantity include:

- plenty  
- all  
- amon  
- how many

4.3.2 Adjuncts are a class of roots which occur in the Complement tagmeme of the Auxiliary Verb Phrases. Since they carry the meaning and the auxiliary verb serves to manifest the verbal affixation both forms are given here. Only a few verbs serve as auxiliary verbs so that a subclassification on the basis of the co-occurring auxiliary
verb is useful. One subclass would occur with sâ- to say and another with ot- to do. A limited number of other verbs occur but they require listing and may be found in the Selepet-English Dictionary (McElhanon and McElhanon, 1970). Some examples are:

putuk yap it collapsed purik yap it turned around
ang pang oap it yawned abu oap it was inflamed
bik bik giap it dripped aman ek to dream

Adjunct roots may be intensified by reduplication as in purik yap it turned around, purururik yap it rotated.

4.3.3 Adverb roots occur in the Manner tagmeme and include the following:
haonmâ always dârek dârek freely, additionally
bâsok nearly bâhâ almost
iholok in spite of in freely, just
gogun in every way

Adverb roots may be intensified by reduplication or the addition of the unrestricted suffix -âk only.

Reduplication:
ârâdândândâgâ completely from ârâdâgâ sufficiently sufficient
âilologologo very from âilologo well, healthy fruitful
hero maro very well from hero hero well

Addition of morpheme -âk:
ârâdânâk completely from ârâdâgâ sufficiently sufficient
getahâk very shortly from getek soon

4.3.4 Demonstrative pronoun roots may be divided into two subclasses on the basis of slightly different distribution: the regular demonstrative pronoun roots and the interrogative demonstrative pronoun roots.
4.3.4.1 The regular demonstrative pronoun roots are fused forms which consist of formatives indicating position and distance relative to the speaker and hearer. The linear order of the vectors is position and distance. The position formatives are: $y$- this, that, ed- that over there, eb- that down below and ew- that up above. The distance formatives are: $u$ near and $a$ distant.

- yu this, these (near the speaker)
- ya that, those (near the hearer)
- edu that, those over there (removed from both speaker and hearer but near by)
- eda that, those over there (distantly removed from both speaker and hearer)
- ewu that, those up there (near)
- ewa that, those up there (distant)
- ebu that, those down there (near)
- eba that, those down there (distant)

These pronouns occur in a fourth order post-Head Demonstrative tagmeme of the General Noun Phrase and thus frequently qualify the indefinite pronoun roots.

- kat pato ya (H: stone, Qual: big, Dem: that) that big stone
- alâ ya (Ind: another, Dem: that) that other one

4.3.4.2 Interrogative demonstrative pronouns. There are only two interrogative demonstrative pronouns: wosa which one and wuan what. Wosa includes both animate and inanimate referents; wuan includes inanimate referents as well as actions. Wosa occurs in the same tagmeme as the regular demonstrative pronouns. Wuan substitutes for the core of the General Noun Phrase.

- kaok wosa-ñe kupekâm (Qual: white, Dem: which-sub., tP: plucking) which white (man) plucked it...
wuân âlâ ekyongoai (GNP. core: what, Ind: another, tP: they told him) What else did they tell him?

wuân gogoñe (GNP. core: what, Qual: crooked) what crooked thing

4.3.4.3 The various demonstrative pronoun roots have slightly different patterns of distribution in clause level and phrase level tagmemes. Note that the demonstratives ewu, edu and ebu occur only in the axes of the Loc.Ph.

(a) Subject Axie-relator Phrase.

bau ya-ñe hobot kukum pilâm gaop pig that-sub. cane riding on casting it came

That pig came crashing through the cane.

wuân-ñe ari edaken ñerek tâtuk tâtuk yap what-sub. go over there all it became rotten

What has all gone over there and become rotten?

lok wosa-ñe gasam goweñe kupekmâ golem ariap man which-sub. casso- its leg plucking carrying it wary went

Which man plucked out the cassowary's leg and carried it away?

(b) Object tagmeme. All of the demonstratives except ewu, edu and ebu occur as objects.

ya otnom (O: that, tP: we will do it) We will do that.

wuân nemat (O: what, tP: you eat it) What do you usually eat?

wosa sâmumñe (O: which, tP: we say it) Which (statement) shall we make?

(c) Locative Axis-relator Phrase. All of the demonstratives expect the interrogative âlâñe occur in the axis of the Loc.Ph. The form wuân manifests vowel
contraction to the form won. The relator clitic is {-án} at.

\(\text{ya-ân (that-at) there} \)
\(\text{won-ân (what-at) where?} \)
\(\text{wosa-ân (which-at) where?} \)

(d) Benefactive/Causal Axis-relator Phrase. All of the demonstratives except wosa, ebu, edu and ewu occur in the axis of this phrase. The relator clitic is {-gât} for.

\(\text{ya-kât sâm katbi Speaking about that} \)
\(\text{that-for speaking they put it they put it.} \)
\(\text{wuân-gât giai Why did they come} \)
\(\text{what-for they came down down?} \)

(e) Possessive Axis-relator Phrase. The forms wosa, ebu, edu and ewu do not occur in the axis of this phrase.

\(\text{âlâ-hât emet yu Whose house is this?} \)
\(\text{who-of house this} \)
\(\text{muop ya-kât sumân ari Going to the grave of} \)
\(\text{he died that-of to the go him who died...} \)

(f) Instrument Axis-relator Phrase. There are two relators: the enclitic -ñe and the word kâdâk.

\(\text{pet ya-ñe latbagînetâ they girded him with a} \)
\(\text{loin cloth that- they girded loin cloth...} \)
\(\text{wuân-ñe mem yahatnom With what shall we begin} \)
\(\text{what-with holding we will get it (business)?} \)

(g) Accompaniment Axis-relator Phrase. Only the regular demonstrative pronouns have been observed occurring in the axis of this phrase.
ibiñe ya orop madomawot
his wife that with they(du.) will live
He will live with that wife of his.

4.3.5 Indefinite pronoun roots. There are only two pronoun roots in this class and the plural number is formed by reduplication.

âlâ  a, an, another âlâlâ others, some, a few
odop a, an, another odowodop others, some, a few

These pronouns are semantically distinct in that âlâ generally refers to another of the same sort but odop refers to another of a different sort. Furthermore, âlâ occurs with the contrastive suffix {-ku}: lok âlâhu takap A different man came.

yâk muop yâkât ibi âlâ mebom
she she died therefore woman another I will get
She died. Therefore I will get another wife (no indication that she will be different).

âlâ mem nihi Give me another (like the another holding give me first).

lok ya hâkâŋ oan lok odop mebom
man that dislike I do man another I will get
I do not like that man. I will get another husband (who is different).

These pronouns occur in the third order post-Head Indefinite tagmeme of the General Noun Phrase.

wahap bâleŋe âlâ (H: thing, Qual: bad, Ind: a) a bad thing

konok âlâ (Num: one, Ind: another) another one

When âlâ occurs alone (i.e., as the only item of the General Noun Phrase) in the axes of the Sub.Ph., the Bene./ Cau./Ph. and the Poss.Ph., it has the meaning who? and refers only to human referents.⁴
4.3.5.1 Subject Axis-relator Phrase.

imîñe  âlâ-ñe  såop
his younger brother another-sub. he said
Another younger brother of his spoke.
âlâ-ñe  mem  yingiap
who-sub. holding he gave it to them
Who gave it to them?

4.3.5.2 Benefactive/Causal Axis-relator Phrase.

hån  âlâ-gât  mene sâm
ground another-for wanting to hold
wanting to take over another country...
âlâ-gât  såwì
whom-for they spoke
For whom did they speak?

4.3.5.3 Possessive Axis-relator Phrase.

mesik  âlâ-gât  soki soki
sickness another-of germs
germs which cause another sickness
âlâ-gât  hânângen
who-of to the ground
to whose country

The pronoun âlâ also occurs in the following tagmemes.

4.3.5.4 Object tagmeme.

âlâ yat  What did you say?

4.3.5.5 Instrument Axis-relator Phrase with the relator word kâdâk.

bia bâgup  âlâ  kâdâk  kuop
no club another with he hit it
No, he hit it with another club.

4.3.5.6 Locative Axis-relator Phrase.
It went to another place, to a place with no food.

4.3.6 There are three noun root subclasses based upon distribution.

4.3.6.1 Noun root subclass I indicates kinship terms or body parts and occurs in the nucleus of subclass I nouns and so occur with both numerical suffixes and possessive suffixes. The kinship terms are described in McElhanon (1968a).

4.3.6.2 Noun root subclass II includes the majority of the noun roots and occurs in the nucleus of subclass II nouns and so occur with possessive suffixes. Some examples are:

emet-ŋe his house kapai-ŋe his to-ŋe its water
village

hân-ŋe his ground den-ŋe his tebe-ŋe his bow
voice

4.3.6.3 Noun root subclass III includes a few noun roots which occur without structural affixes in phrase and clause level tagmemes. This subclass includes proper names. Some examples are:

mesik sickness bubum epidemic
Pawi a man's name Hetgat a place name

4.3.7 Numerical roots are limited to the numbers one to four: konok one, yâhâp two, kalibu three and ibât four. All other numerals are higher level constructions. Numerals occur in the Quantifier tagmem of the GNP.

4.3.8 Particle roots function primarily as connectors or subordinators at the clause and sentence levels. Most of the particles are either stem level constructions or enclitics. Three such roots are ben-ŋe then, me or and yanâk therefore.
4.3.9 Regular personal pronoun roots indicate seven distinctions of person and number: 1s, 1d, 1p, 2s, 2-3d, 2-3p and 3s. In some instances third person may be distinguished from second person in the dual and plural number by the compounding of the 3s form before the dual or plural form. The personal pronoun roots substitute for the core of the General Noun Phrase (Poss., Att., H.) and thus may be further qualified by the peripheral elements (Qual., Quant., Ind., Dem.).

The regular personal pronoun root is a person-number composite in which the formatives, vectors and categories are clearly distinguishable. These are presented in Matrix 1. The linear order of the vectors in the realized forms is person (indicated by the formatives n first, g/y second and y third), number (indicated by the formatives à singular and e non-singular) and number (indicated by the formatives k singular, t dual and n plural). 5

Matrix 1: Selepet regular personal pronoun roots

<table>
<thead>
<tr>
<th>Sg.</th>
<th>Sg.</th>
<th>Non-Sg. Du.</th>
<th>Non-Sg. Pl.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>(a)(k)</td>
<td>(e) (t)</td>
</tr>
<tr>
<td>1st per.</td>
<td>(n)</td>
<td>n à k</td>
<td>n en t</td>
</tr>
<tr>
<td>2nd per.</td>
<td>(g/y)</td>
<td>g à k</td>
<td>y en t</td>
</tr>
<tr>
<td>3rd per.</td>
<td>(y)</td>
<td>y à k (yàk)</td>
<td>y en t (yàk)</td>
</tr>
</tbody>
</table>

The formative k singular is lost in all the first and second person regular personal pronoun forms except when the contrastive suffix {-ku} is added (see 5.6). The distinction between second and third person is absent in the dual and plural forms but this lack of distinction is overcome by the compounding of the 3s form yàk with the dual and plural forms to specify third person.
Context indicates in most cases whether second or third person is to be inferred in the use of the ambiguous forms. In the forms of address, commands, etc., the forms yet or yen refer only to the second person. In narrative structure, when yet or yen refer to the second person, these forms always occur within a quotative as the object of the verb någå- to think or sâ- to say. When the forms refer to the third person, the referent is clearly stated. Once the referent is stated, however, the ambiguous pronominal forms are used freely without further specification unless another referent intervenes. When another referent intervenes, the original referent is again brought into focus either by restating the referent or using the third person form yâk before the ambiguous forms are again used for indicating the third person.

sihan yen nengålân torokatnomai yawu sâm
young you with us you/they will join thus saying
saying thus, 'You young men must join us...'
atalipne kapam pato ahom tatmâ yene
his elder stick big fighting staying you/they
brother
ahom ba tatmâ
fighting go staying
his elder brothers fought hard and stayed there,
they fought and went and stayed...

The 3s pronoun yâk occurs in the Actor or Object
tagmemes without regard to number, the number of the actor or object being indicated in the verbal subject-marking or object-marking affixes respectively.
(a) Actor tagmeme

\[ \text{yâk geñetâ yan yawu sâm yerakbi} \]

they they came down when thus saying they shot each other

When they came down, they (all) said like this and shot each other.

(b) Object tagmeme

\[ \text{yâk katyelekbom} \]

them I will put them (du.)

I will appoint the two of them.

The regular personal pronoun roots substitute for the core (Possession, Attributive and Head tagmemes) of the General Noun Phrase. As such they may be qualified by the adjectives, numerals, indefinite pronouns and demonstrative pronouns. They occur in the clause level object tagmeme and in the axes of most of the axis-relator phrases.\(^6\) They do not occur in the axis of the Instrument Axis-relator Phrase (Inst.Ph.). In the Object tagmeme these pronoun roots occur with no affixes but in the axes of the various axis-relator phrases they are followed by either a relator enclitic or relator word. In addition to occurring with the suffixal relator enclitics, they also occur with certain unrestricted suffixes: \(-âmâ\) however, on the other hand which indicates comparison, \{-âk\} only which indicates exclusion or emphasis and \{-bân\} too, also which indicates that the item so identified is one of a number of similar items or that the item includes a number of subcatagorized items.

The regular personal pronoun roots have the following distribution in phrase and clause level tagmemes: 4.3.9.1 Object tagmeme. As already noted the pronouns occur with no affixation in the object tagmeme.
nen piri-nenek-op (O: us, iP: wash-us-he(rpt.))

He baptized us.

4.3.9.2 Subject Axis-relator Phrase. When the regular personal pronouns occur in the axis of this phrase they are suffixed by the relator enclitic -ŋe (sub.). The resultant forms are listed in Matrix 2.

Matrix 2: Regular personal pronouns as subject

<table>
<thead>
<tr>
<th>Sg.</th>
<th>Du.</th>
<th>Pl.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st per.</td>
<td>nâŋe</td>
<td>netŋe</td>
</tr>
<tr>
<td>2nd per.</td>
<td>gâŋe</td>
<td>yetŋe</td>
</tr>
<tr>
<td>3rd per.</td>
<td>yâkŋe</td>
<td>(yâk)yetŋe</td>
</tr>
</tbody>
</table>

nen-ŋe hân-gâêt pâŋ pâŋ yawu mansin
we-sub. ground-for searching thus we live
We live always searching for ground.

4.3.9.3 Accompaniment Axis-relator Phrase. The Acc.Ph. manifests the relator word orop with. The regular personal pronouns occur as free forms in the axis. Note that yâk does not occur with yet or yen to distinguish third person.

nâ orop with me yen orop with you
yâk orop with her/him/them

4.3.9.4 Benefactive/Causal and Possessive Axis-relator Phrases. These phrases both occur with the relator enclitic {-gâêt} but are distinguishable in that whereas the former is relevant to the clause level and is permutable, the latter is relevant to the phrase level and always precedes and qualifies the Head of a GNP. When the regular personal pronoun roots occur in the Bene./Cau.Ph. they agree in person and number with the benefactive-marking verbal suffixes.
They used to be well pleased with them.

They used to be well pleased with the two of them.

When the regular personal pronoun roots occur in the axis of the Poss.Ph. with the enclitic {-gät} the resulting forms show normal possession. The regular personal pronoun roots agree in person and number with the nominal possession-marking suffixes (if any) on the noun qualified by the Poss.Ph. In this regard the pronominal forms duplicate much of the information given in the possession-marking suffixes but have the additional clarification of person when yâk occurs before the forms yet or yen. The resultant forms are given in Matrix 3.

Matrix 3: Regular personal pronouns showing possession

<table>
<thead>
<tr>
<th></th>
<th>Sg.</th>
<th>Du.</th>
<th>Pl.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st per.</td>
<td>nâhât</td>
<td>netkât</td>
<td>nengât</td>
</tr>
<tr>
<td>2nd per.</td>
<td>gâhât</td>
<td>yetkât</td>
<td>yegât</td>
</tr>
<tr>
<td>3rd per.</td>
<td>yâkât</td>
<td>(yâk)yetkât</td>
<td>(yâk)yegât</td>
</tr>
</tbody>
</table>

The compound personal pronoun forms yâkyet and yâkyen are usually used to distinguish third person. Occasionally, however, the personal pronouns yet and yen occur qualifying a noun or proper name and so third person is indicated without the occurrence of yâk.

yet-gât emet (you(du.)-of, house) your(du.) house
yâkyet-gât emet (them(du.)-of, house) their(du.) house
Amerika yâkye-gât orotmeme (America, them-of, customs)
the customs of those Americans

Amerika ye-gât âi (America, them-of, work)
the work of those Americans

atalipne ye-gât kâiyêñan (his el.brs., them-of, on their legs)
on his brothers' legs

When occurring in the axis of the Poss.Ph. the morpheme yâk in the compound forms yâkyet and yâkyen is often replaced by the demonstrative pronouns yu this, these or ya that, those, particularly if the referent is non-human.

Amerika ya ye-gât sum (America, those, them-of, graveyard)
the graveyard of those Americans

nak ya ye-gât topyêñan (trees, those, them-of, at their bases)
at the bases of those trees

Occasionally the regular personal pronoun roots occur alone in the Possession tagmeme with the nominal possession-marking suffixes occurring obligatorily on the possessed noun if it occurs in the Head of the General Noun Phrase. The result is emphasis: nâ emêt-ne (Poss: me, H: house-my) MY house.

4.3.9.5 Locative Axis-relator Phrase. The regular personal pronoun roots usually do not occur in the axis of the Loc.Ph. Rather, the Poss.Ph. manifesting the regular personal pronoun in its axis occurs embedded in the axis of the Loc.Ph.

nâhâlâñ (nâ-gât-ân me-of-at) with me (lit. at my place))
nâhâlângen (nâ-gât-ângen me-of-towards) towards me
nâhâlângëbâ (nâ-gât-ângëbâ *me-of-from*) from me
nengâlâbâ (nêngât-âbâ *us-of-out of*) out from among

4.3.10 Emphatic personal pronoun roots occur only in the singular number: nine *I myself, my, mine, gîke your yourself, your, yours and iñçe he himself, she herself, his, her, hers, it’s*. They have the following distribution:

4.3.10.1 Subject tagmeme. The emphatic pronouns occur in the subject tagmeme rather than in the axis of Sub.Ph.

nine topâne sâmune någå

*I-myself its basis I tell you listen
Listen to ME as I tell about it!

4.3.10.2 Object tagmeme.

gîke kâit-gohom

you-yourself tricking-you

tricking YOU

4.3.10.3 Possession tagmeme. In the Possession tagmeme the emphatic pronoun substitutes for the Poss.Ph. and concord exists between person-number of the emphatic pronoun and the nominal possession-marking suffixes of the following noun if that noun occurs in the GNP. Head tagmeme.

nine emet-ne (Poss: *MY, H: house-my*) MY house
gîke emet-ge (Poss: *YOUR, H: house-your*) YOUR house

If the following noun is in the GNP. Attributive tagmeme, then it does not occur with possession-marking suffixes.
nine emet gowetñan (Poss: *MY, ATT: house, H: it’s lower area-at*) underneath MY house
When the emphatic pronoun occurs in the Possession tagmeme all other units of the GNP. are frequently absent.

gokorok yu ɲerek gulip tuhum, nine niap
chicken these all doing away with mine it ate it
It (a dog) did away with all the chickens and ate MINE (too).

4.3.10.4 Benefactive/Causal Axis-relator Phrase.

ikŋe-gât gâiakmâ mem tipi tapi tuhum
himself- cutting himself holding in small doing for
pieces
He held and cut himself in small pieces to his own advantage...

4.3.10.5 Locative Axis-relator Phrase.

Selepet ikŋe-ân yanâmâ Idumne tâti
Selepet itself-at there-however Indum they stayed
The Indum people stayed there at Selepet village itself.

4.3.10.6 Accompaniment Axis-relator Phrase.

yâk nine orop takawit
he me-myself with we(du.) came
He came with me alone.

4.3.11 Relators are a class of roots which occur as the final element in axis-relator phrases. These are orop with (accompaniment) and kâdâk with (instrument). The remaining relators are enclitics.

4.3.12 Time roots are a class of roots which occur in the Time tagmeme at the clause level. Some of these are:

mukan yesterday halihu day after tomorrow
gâmâlâk later

4.3.13 Intransitive verb roots occur in the nucleus of the verb syntagmeme and generally indicate an emotion, a state or condition, or movement. Some examples are:
ari to go  tat to be situated  âle to lust
yâhâ to ascend  biat to vanish  âwihî to not germinate
eke to flee  ise to cry  ketok to neglect a responsibility

4.3.14 Transitive verb roots occur in the core tagmeme of the transitive verb stem and generally indicate action. Some examples are:
man to live  gâi to pour s.th. out  kârâ to cut s.th.
hâi to insult  ai to dig  kat to place s.th.

All mono-syllabic roots with the simple vowel nucleus undergo the following root changes: e → i in the ipt., rpt. and 3s inch; the roots add a root-final velar nasal n if followed by the 2s object marker. In all future tenses the roots ne- to eat and me- to hold add a root-final N which assimilates to the point of articulation of the following consonant.

ne Eat!  negekmap it might devour you
se Burn it!  segekmap it might burn you
me Hold it!  megekmap it might grab you
ge Come down!  gewuap it will come down
niap he ate it  nebuaap he will eat it
siap it burned it  sewuap it will burn it
miap he held it  mebuap he will hold it

Two syllable roots ending in â undergo the root change â → a in the ipt.
kârâ → kara to cut it  sâhâ → saha to bind it
pîlâ → pila to throw it  hâgâ → haga to pick s.th. off a stalk

4.3.15 Theoretical roots cannot be assigned to syntactic classes. These are roots which may be isolated in compounds but for which no meaning may be determined.
Some examples are:

wârâ as in wârâtou female siblings (tou elder sister)
iki as in ikisobo senile (sobo old)

4.3.16 Word bases. This class represents the residue of roots which cannot be unambiguously assigned to a single class by the above process. Only a few of these occur. Asi occurs in the nucleus of a noun as in asîne its urine and in the nucleus of a verb as in asiap it urinated.
Notes

1. The idea of a hierarchy of criteria is taken from Newman (1967) and Wyk (1967).

2. This portion of the process of classification contrasts with the approaches 4.1.1 and 4.1.2 above which would simply list all the forms and posit classes on the basis of the extent of their distribution.

3. Hypothetical roots differ from theoretical roots in that the former have meanings and may be often assigned to a class by analogical criteria, but the latter have neither meanings nor may they be assigned to classes. Moreover, one may expect that all hypothetical roots could be eventually classified but not so with theoretical roots. Hypothetical roots are marked by an asterisk.

4. In narrative structure, however, the noun is frequently omitted from the General Noun Phrase when there is no confusion over the item under discussion. This omission frequently leaves âlå as the only remaining item.

bukuğa-ñe  âlå  tetmu
his friend-sub. another he excreted
and his friend excreted another (stool)
hån  âlå-gât mene sâm, âlå-gât âlå-gât
ground another- wanting to another- another-
for hold for for
mene sâm wanting to take over another coun-
wanting to hold try, wanting to take over another
and another...

5. To obtain the correct phonological realizations of the morphemes in the matrices and the morphemes
marked by hyphens in the examples morphophonemic rules must be applied (see Chapter 3). In the matrices the forms enclosed in parentheses are optional.

6. In early treatments of the noun morphologies of other languages of the Huon Peninsula Stock, Pilhofer (1926-27a, 1927-28, 1933) and Wacke (1930-31) used the case system approach. Pilhofer (1926-27a, 1933), in describing Kâte noun morphology, listed ten cases: *indiff.* (intransitive actor and transitive object), *nominativ agentis* (transitive subject), *destinativ* (benefaction/cause, possession), *adlativ* (location), *delativ* (direction from, origin), *adversiv* (direction towards), *deversiv* (direction away from), *komitativ* (association), *karitiv* (lack of possession) and *instrumentalis* (instrument). Because these case markers are phrase level enclitics rather than word level affixes, the present writer has abandoned the case system approach. The enclitics occur as relators in axis-relator phrases in which the axis may be manifested by a variety of constructions from various levels of the grammatical hierarchy.

7. The formative indicating plural number has two alloformatives in this matrix: *n* as in *ne-n-ŋe* and *∅* as in *ye-∅-ŋe*. For *∅* indicating plural number in the verbal subject-marking suffixes see 6.2.1.5.

8. There are three subclasses of Selepet nouns: those which occur with obligatory possession-marking suffixes, those which occur with optional possession-marking suffixes, and those which do not occur with
possession-marking suffixes. All subclasses of nouns may occur qualified by the Poss.Ph. so that possession may be shown only by the phrases or the nominal suffixes or redundantly by both.

9. The n in yen assimilates to the point of articulation of the g in -gât for and then reduces before the prenasalization of the g yielding yegât rather than yengât.

10. The one exception is that the regular personal pronouns do occur in the Loc.Ph. when it occurs in the Head of the Origin Noun Phrase: nâ-en gâtqe (me-at, one from) a member of my family.
Chapter 5

Stems

5.0 Introduction

The stem level is that level which is between the root and word levels in the grammatical hierarchy and involves derivational patterns. These derivational patterns include various forms of compounding, reduplication and/or occurrence of a derivational suffix.

It has already been noted (4.2.3) that derivational suffixes are non-inflectional but for one exception. The exception is that the verbal object-marking suffixes, which function as verbalizers, are inflected to show seven distinctions in person and number. Except for these object markers, derivational suffixes differ from word formation (structural) suffixes in that they do not involve inflection. They differ from enclitics in that the latter are phrase level suffixes.

The following stem classes have been observed and are labelled on the basis of their distribution in higher level tagmemes, primarily of the phrase and clause levels.

5.1 Noun stems

These are formed by (1) the suffixation of the nominalizer -ŋe, (2) reduplication, or (3) compounding. They potentially manifest the Head tagmemes of nominal phrases or the nucleus tagmemes of noun subclasses.

5.1.1 Nominalization by -ŋe. A variety of root classes or constructions manifest the core tagmeme.

5.1.1.1 Noun roots:

gibâ-ŋe mountain from gibâ ridge pole, roof
5.1.1.2 Hypothetical roots:
pare-ŋe stair tread from pare horizontal
hewuk-ŋe forest from hewuk thick, dense

5.1.1.3 Demonstrative pronoun roots:
wuān-ŋe which one from wuān what?
edâ-ŋe that one over there
ewâ-ŋe that one up there
ebâ-ŋe that one down there

The forms edâ-ŋe, ewâ-ŋe and ebâ-ŋe occur only in the axis of a Loc.Ph. followed by the clitic -ân at as in edâ-ṇan over there.

When the demonstrative pronoun roots qualify a time noun in the Head of the General Noun Phrase the derived noun may be regarded as a nominalized General Noun Phrase. It occurs only with the locative clitic -ân at in the Time tagmeme.
Sande ebâ-ŋe-ân on Sunday before last (lit. on that Sunday below)
Sande ewâ-ŋe-ân Sunday week, a week from Sunday (lit. on that Sunday above)

5.1.1.4 Locative phrases:
beṭnân-ŋe the one behind it from beṭnân at its back
wosapâ-ŋe those from which place from wosapâ which way?

5.1.1.5 Transitive verb stem: ahoak-ŋe juncture, fork, joint from ahoak- to hit oneself.

5.1.1.6 Clitic. The noun gâṭŋe one from is derived from -gâṭ for the benefactive/causal or the possessive clitic. This noun only occurs as the final element in the Origin Noun Phrase as in Weke gâṭŋe one from Weke village.

5.1.1.7 That the nominalizer is different from the homophonous 3s nominal possession-marking suffix is
evident from the fact that noun stems derived by -ŋe occur in the nucleus of noun words which manifest the possession-marking suffixes as in hewuŋe-ntenŋe (forest-our) our forest and han gíbâŋe-ntenŋe (ground, mountain-our) our mountainous country.

5.1.1.8 That the nominalizer -ŋe is different from the homophonous relator clitic of the Subject Axis-relator Phrase (Sub.Ph.) is evident in that Subject Axis-relator phrases do not occur embedded in the axes of Location Axis-relator Phrases (Loc.Ph.). Thus such forms as Sande ebâŋe Sunday before last are better regarded as nominalized General Noun Phrases. Moreover, a Loc.Ph. does not occur in the axis of the Sub.Ph. so that bétnan-ŋe the one behind it is better regarded as a nominalized Loc.Ph.

5.1.2 Nominalization by reduplication. Noun stems are derived from the following classes of roots or construction types by reduplication.

5.1.2.1 Verbs. When a noun is derived by reduplication from a verbal form, the verb nucleus, with or without the benefactive markers, is reduplicated. Derivation from a verbal form may in fact be regarded as derivation from a clause since the fillers of other clause level tagmemes have been frequently observed occurring with the reduplicated verb. Although generally no more than two other clause level tagmemes occur, there appears to be no steadfast rule which determines how many clause level tagmemes may be included. Rather it appears to be up to the competence of the individual speaker and the point at which he regards the construction type as overloaded. When the speaker feels that the construction
type cannot adequately handle the amount of information, he shifts to either an embedded clause or a clause qualified by a pronoun.

In the following example the construction is overloaded (the superscript ² indicates the word is to be reduplicated):

buku orop (Acc: friend, with) kalam-an (Loc: garden-in) kapam kâdâk (Inst: stick, with) sot-gât (Bene: food-for) pawarakmâ (tP: quarrelling) ahoahô fighting from aho² tP: to fight) ya (Dem: that) bâleâne (EqP: bad). Quarrelling in the garden with one's friends and fighting with sticks over food is bad.

When this was presented to the informant he rejected it as too cumbersome and transformed it to the following clause qualified by a demonstrative pronoun.

lok âlâ (S: man, a) bukuâne orop (Acc: friend, with) kalam-an (Loc: garden-in) kinmâ (tP: standing) sot-gât (Bene: food-for) sâm (tP: speaking) kapam kâdâk (Inst: stick, with) pawarakmâ (tP: quarrelling) ahoesâm oawot (tP: they went to fight) ya (Dem: that) bâleâne (EqP: bad). This is bad: that a man will be in the garden with his friend (and) speaking about food will quarrel and fight with sticks.

5.1.2.2. Intransitive verb roots (ivr.) alone.

kin kin standing from kin to stand
mumu death from mu to die
manman existence from man to live
ari ari travelling from ari to go
5.1.2.3. The following clause level tagmemes have been observed occurring with the reduplicated ivr.

(a) Actor tagmeme with ivr:

\textit{gelak ga}² (Act: \textit{rain}, iP: \textit{to come}) \textit{the coming of the rain}

\textit{emet kin}² (Act: \textit{place}, iP: \textit{to stand}) \textit{the dry season}

(b) Location tagmeme with ivr:

\textit{kakgan tat}² (Loc: \textit{on top of}, iP: \textit{to stay}) \textit{chair}

\textit{hânân tat}² (Loc: \textit{on the ground}, iP \textit{to stay}) \textit{relaxation}

\textit{senjan ge}² (Loc: \textit{on his eyes}, iP \textit{to descend}) \textit{teasing}

When the intransitive verb is a motion verb the locative clitic is frequently absent.

\textit{giop ari}² (Loc: \textit{road}, iP: \textit{to go}) \textit{travelling}

(c) Accompaniment tagmeme with ivr:

\textit{kahanjâit ari}² (Acc: \textit{with sister-in-law}, iP: \textit{to go}) \textit{walking with one's sister-in-law}

(d) Accompaniment and Benefaction/Cause tagmemes with ivr:

\textit{buku orop} (Acc: \textit{friend, with}) \textit{ibi-gât} (Bene: \textit{women-about}) \textit{ise}² (iP: \textit{to weep}) \textit{weeping over women with friends}

(e) Manner tagmeme with ivr:

\textit{sururuk ari}² (M: \textit{quickly, iP to go}) \textit{hurriedness}

\textit{tihâk ari}² (M: \textit{secretly, iP to go}) \textit{stealth}

(f) Location and Manner tagmemes with ivr:

\textit{emetnân} (Loc: \textit{into his house}) \textit{in} (M: \textit{just}) \textit{yahâ}² (iP: \textit{to ascend}) \textit{ascending into a house for no reason}
5.1.2.4 Nouns are also regularly derived from transitive verbs with or without other clause level tagmemes. These nouns are derived from the transitive verb stem, i.e. the root plus the object-marking suffixes.

When the transitive verb root is $\emptyset$, however, the third person singular object marker or the reflexive/reciprocal marker is reduplicated.

subclass I : ehek seeing from ek him, her, it
class I object marker
subclass II : agi agi reciprocity, exchange from agi class II benefactive reciprocal object marker
subclass III : aho aho fighting from aho class III reflexive object marker

Nouns derived from clauses manifesting subclass I transitive verbs. In the following examples the object pronoun is $-\emptyset$ it.

kâmet kâmet planting from kâmet- to plant it
nene eating from ne- to eat
nâgâ nâgâ attention from nâgâ- to listen to it

In the following examples the reciprocal object marker is included in the reduplication.

niak niak cannibalism from ne- to eat and ak oneself
meduhuak meduhuak meeting from meduhu- to meet and ak oneself
tuhuak tuhuak self affliction from tuhu- to do and ak oneself
wangiak wangiak point of passing from wangi- to pass by and ak oneself

The following clause level tagmemes have been observed occurring with the reduplicated subclass I verbal form.
(a) Manner tagmeme:
ki nāgā² (M: not, tP: to hear) inattention
biwî bâle nāgā² (M: insides, bad, tP: to know)
sadness, pity
biwî purîk pān² (M: insides, turn, tP: to throw)
(act of) repentance
konok tuhu² (M: one, tP: to do) joining,
collection

(b) Object tagmeme:
kara tuhuak² (O: sorcery, tP: to do to one
another) self affliction by means of sorcery
ibi miak² (O: women, tP: to take for oneself)
marrige
den lou² (O: words, tP: to carry) obedience
den bâlêne sâ² (O: words, bad, tP to say) profanity

(c) Object plus Manner tagmemes:
kalem ki mē² (O: generosity, M: not, tP: to hold)
greed
den hilâm konok sâ² (O: words, M: quickly,
tP: to say) speaking rapidly
iho lok maho lok tep tet² (M: everywhere, O: dung,
tP: to excrete) promiscuous defecation
den ki nāgā² (O: words, M: not, tP: to hear)
inattention

(d) Location tagmeme:
ne kamnân sâ² (Loc: on his chin, tP: to speak)
accusations
sen̄nân tuhu² (Loc: on his eye, tP: to do)
temptation to an individual
senyēnân tuhu² (Loc: on their eyes, tP: to do)
temptation to many persons
(e) Dependent Clause. Expansion is also possible by including dependent clauses preposed to the reduplicated verbal form.

nep iholok maholok kârâm kâmêt\(^2\) (dp.cl: garden, anywhere, cutting, tP: to plant) the cutting and planting gardens anywhere

ibi hâkân otmâ watyek\(^2\) (dp.cl: woman, dislike, doing, tP: to chase them) disliking and chasing away women (of a man who repeatedly rejects women after trial marriage)

bât lotohom aho\(^2\) (dp.cl: hand, folding, tP: to fight) fisticuffs, boxing

(f) Accompaniment tagmeme:

buku orop pawarak\(^2\) (Acc: friend, with, tP: to quarrel) quarrelling with friends

(g) Object and Location tagmemes:

âliwa hap emet gowelân pilâ\(^2\) (O: rubbish, Loc: house, under, tP: to throw) throwing rubbish under the house

(h) Instrument tagmeme:

sehe kâdâk hâre\(^2\) (Inst: saw, with, tP: to cut) cutting with a saw
tewet kâdâk karak\(^2\) (Inst: knife, with, tP: to cut one another) cutting one another with knives

(i) Subject tagmeme:

lohibi sobo meduhua k\(^2\) (S: people, old, tP: to meet together) an old people's meeting

(j) Benefaction/Cause tagmeme:

sotgât pawarak\(^2\) (Bene: food-for, tP: to quarrel) quarrelling over food
5.1.2.5 In the following examples the benefactive markers occurring in the transitive verb are included in the reduplication. When the benefactive markers are so included the verbal form is usually reduplicated with other clause level tagmemes.

(a) Manner tagmeme:
\[
\text{kadi meagi}^2 (\text{M: temporarily, tP: to hold for one another}) \text{ borrowing from one another}
\]

(b) Object tagmeme:
\[
\text{kabo meagi}^2 (\text{O: theft, tP: to hold for one another}) \\
\text{stealing from each other} \\
\text{ibi meagi}^2 (\text{O: woman, tP: to hold for one another}) \\
\text{wife stealing}
\]

5.1.2.6 Nouns derived from clauses manifesting subclass II transitive verbs in the transitive Predicate tagmeme:
\[
\text{mabot mabot waiting from mabot- to await someone} \\
\text{mewale mewale cheating from mewale- to cheat someone}
\]

In the following example the benefactive marker is also included in the reduplication.
\[
\text{ihiagi ihiagi biting (to death) of one another's domestic animals from 0-ihi-agi bite-it-for one another}
\]

5.1.2.7 Nouns derived from clauses manifesting subclass III transitive verbs in the predicate tagmeme. Generally the verbal form manifests the reflexive/reciprocal object marker.
\[
\text{aho aho fighting from 0- to hit and aho one another} \\
\text{tânaho tânaho self help from tân- to help and aho one another}
\]
self destruction from hillip to destroy and aho one another

As in the case of subclass I verbal forms these constructions may also be expanded by the inclusion of other clause level tagmemes before the reduplicated verbal forms.

5.1.2.8 Nouns derived from the Auxiliary Verb Phrases. Only the auxiliary verbal form is reduplicated.

hoŋ bawa servant from hoŋ ba- to serve, be a messenger
gulip orot disappearance from gulip ot- to disappear
gâruŋ guruŋ orot dizziness from gâruŋ guruŋ ot- to be dizzy
telan telan orot laziness from telan telan ot- to be lazy

hutuk sâsâ silence from hutuk sâ- to be silent
orok sâsâ diminishing from orok sâ- to diminish

5.1.2.9 Such derived nouns may also be expanded by the inclusion of other clause level tagmemes before the Auxiliary Verb Phrase. Often such derived nouns are derived from idiomatic expressions, and the noun functioning as the actor in the idiomatic expression occurs without affixes.

(a) Actor:
emet haŋ sâ² (Act: place, AVP: to dawn) daybreak
nâgâ nâgâ pârâŋ sâ² (Act: thought, AVP: to be pierced) thinking clearly

(b) Object:
den alahu golahu ot² (O: words, AVP: to converse) conversation
5.1.2.10 Nouns may be derived from roots by reduplication.

(a) Adverb roots:

bet bet k. of grub from bet later

(b) Noun roots. The resultant noun stem generally expresses diminuation.

tebetebe play bows for children from tebe bow
bâtbât bough from bât hand, arm
toto juice, serum from to water
lâmun lâmun snail from lâmun conch
hâpu(â)pu- larynx from hâpu bamboo
kulem melem designs from kulem mark
kawit tawit small insects from kawet insects (larger)

5.1.3 Compounding. Noun stems may be formed from the compounding of various root classes and construction types. Each element of the compound is said to manifest a core tagmeme.²

5.1.3.1 Noun root and noun root:

togelâk tempest from to water and gelâk rain
lohibi parents, adults from lok man and ibi woman
ata imi male siblings from ata elder brother and
imi younger brother
kâi bât (leg, hand) which occurs only in the construction lok kâi bât towatâne (Att: man, leg, hand, H: its appearance) a person's manners.

5.1.3.2 Theoretical root and noun root:

wârâtou female siblings from wârâ (?) and tou
elder sister of male speaker
nimnaom children from nim (?) and naom child
âli wahap rubbish from âli (?) and wahap thing.
5.1.3.3 Noun root and theoretical root. This compound differs from the above compound in that the theoretical root occurs as the second element and as a distinct phonological word.

bokosok bero kind of fish (carp?) from bokosok mud and bero eater (?)

hep bero soldier from hep blood and bero eater

wik bero worm eater (a vulgarism) from wik worm and bero eater.

The compound bät kadi bero (hand, borrow, eater) a person who lives off others consists of noun root, adverb root and bero.

The compound sot pato bero (food, big, eater) glutton consists of a General Noun Phrase (H: noun, Qual: ajr) plus bero.

The compound hâwurum bero scavenger consists of a dependent homopersonal verb hâwurum gathering and bero eater.

5.1.3.4 Noun root and adjective root:

biwi ålip happiness from biwi insides and ålip good

biwi bâle sadness from biwi insides and bâle bad

5.1.3.5 General Noun Phrase manifesting Attributive and Head tagmemes (cf. phrasal compounds in Hockett, 1958: 243).

emesenge moon from Att: place and H: its eye

emesâpge afternoon from Att: place and H: its time.

5.1.3.6 Dependent homopersonal verb and adjunct. In these compounds the verb generally qualifies the adjunct by indicating a method. Note that these nominal constructions could be derived from clauses by the omission of the auxiliary in the Auxiliary Verb Phrase.
um kiriŋ pāroŋ sumptuousness from um cooking and
kiriŋ pāroŋ the sound made by a splitting bamboo
cooking-container
mem kitiŋ kätŋ a kind of magic used for causing
things to become invisible or to go unnoticed
from mem holding and kitiŋ kätŋ (?)
um pitiriŋ a kind of divination from um burning and
pitiriŋ a noise. This noise is made by a bamboo
blade which is bent under tension and burnt in half.
As the tension is released the bamboo shoots away
with a pitiriŋ noise.
mem ṣotuk ṣotuk- oesophagus from nem eating and
ṣotuk ṣotuk the noise made by swallowing.

Adjunct roots which occur in the Com. tagmeme of
the AVP in unreduplicated forms occur with reduplication
in this construction.
nāgām gulip gulip forgetfulness from nāgām thinking
and gulip disappear
otmā hilip hilip destruction from otmā doing and
hilip ruin.
5.1.3.7 Two transitive verb roots:
kukumagan greetings from kuku to carry it and magan
to shake someone in greeting
5.1.3.8 Noun root and adjunct root:
kun tâwoŋ kind of beetle from kun head and tâwoŋ ot
to nod
âdâp bok pupa from âdâp ear and bok yap it became
defaf
5.1.3.9 Noun root and adjective root:
hân hewuk death adder from hân ground and hewuk
thick
awu kārik kind of herb from awu plant family and kārik strong
awu kaok kind of herb from awu plant family and kaok white.

5.1.3.10 Noun root and relator:
awu bia kind of banana from awu banana blossom and bia without

5.1.3.11 Noun root and intransitive verb root:
den biaot Black-throated Monarch from den talk and biaot to disappear
hân tete plant from hân ground and tete to appear

5.1.3.12 Noun root and transitive verb stem:
hân tāmātgu bandicoot from hân ground and tāmātgu to root
nak âsit wood plane from nak wood and âsit to scratch, scrape it
hân kârâ hoe from hân ground and kârâ to cut it

5.1.3.13 Locative Axis-relator Phrase and adjective root:
kunjan kurīq Little Coronated Fruit Dove from kunjan on its head and kurīq red

5.1.3.14 Locative Axis-relator Phrase and hypothetical root:
hâhân hâtik pimple from hâhân on the skin and hâtik crossing

5.1.3.15 Noun root and Accompaniment Axis-relator Phrase:
hâk kukņāi cinnamon from hâk skin and kukņālīt (loss of a final t) with a fragrance

5.1.3.16 A large number of syntactic nouns consist of simple descriptions of referents. These nouns are generally other word or stem classes or larger constructions which simply function as nouns. Since they
are descriptive in themselves there is little qualification of them. Some examples are:

(a) Homopersonal dependent verb:

âbâkum necklace from âbâku to hang s.th. on the neck or arm

(b) Head plus Qualifier:

kâiñe hibitdâ Australian Brown Hawk (lit. its legs, with orchids)

(c) Locative Axis-relator Phrase:

barahanân bracelet, armband (lit. at the upper arm)
hânângen kind of marsupial (lit. at the ground)
tâk pânânan kind of tree-climbing marsupial (lit. at the middle of the vine)

(d) Independent clause:

bekom ariap kind of cat's cradle (lit. The flying fox went away.)
habe mohasap rainbow (lit. The snake vomits.)

(e) Attributive plus Head:

emet aboqe kind of lizard (lit. the owner of the place)

(f) Adjective stems derived by noun roots plus -dâ:

kâlâpdâ (fiery red) Stephan's Bronze wing (?)

pigirâ (spiny) anteater

awurâ (coloured like a kind of red herb) red oohre

5.2 Verb stems

Three classes of verb stems occur: two derived and one compound.

5.2.1 Intransitive derived verb stems are formed from adjective roots by the addition of the intransitive verbalizer suffix -e. Some examples are:
lohot-e to weaken from lohot-ŋe weak
hapak-e to remain unripe from hapak-ŋe tough, hard
kārik-e to become strong from kārik-ŋe strong

5.2.2 Transitive derived verb stems are formed by the addition of the object-marking suffixes to transitive verb roots as in the case of subclasses I and II and to other root classes as well as in the case of subclass III. The verbalizing force of the object markers is most evident in the subclass III stems.

With the exception of a single verb root, -n to call someone, to name someone, all Selepet transitive verb roots occur with object-marking suffixes. The subclass III object-marking affixes which occur with the verb root -n, however, are clearly prefixal:

noho-n-sap (me-call-he(ipt.)) He called me; goho-n-sap (you-call-he(ipt.)) He called you.

There are three allomorph subclasses of the object-marking suffixes, and transitive verb roots filling the core are divided into three subclasses on the basis of their occurrence with one of the allomorph subclasses. The structure of the transitive verb stem is an obligatory core manifested by a root plus an obligatory object slot manifested by the object-marking suffixes.

It should be noted that each subclass of verb roots contains a verb root morpheme represented by zero and that these roots are distinguished by the allomorphs of the object-marking suffixes. Thus the zero morphemes mean to see with subclass I object-marking allomorphs, to give or to bite with subclass II allomorphs and to hit or to kill with subclass III allomorphs.
The object markers may be tentatively analyzed as composites having the structure: + person + number + subclass marker. The subclass marker may be analyzed as a velar stop phoneme plus a prosody of vowel quality. In subclass I the class marker is k plus vowel quality e, in subclass II it is g plus vowel quality i and in subclass III it is k/g plus vowel quality o/u.

5.2.2.1 The morphemes and formatives for subclass I object markers are given in Matrix 1.

Matrix 1: Subclass I object markers

<table>
<thead>
<tr>
<th></th>
<th>Sg.</th>
<th>Du.</th>
<th>Pl.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st per.</td>
<td>(Ø)</td>
<td>(1)</td>
<td>(n/Ø)</td>
</tr>
<tr>
<td>2nd per.</td>
<td>(g/y)</td>
<td>g-e-Ø-ek</td>
<td>y-e-1-ek</td>
</tr>
<tr>
<td>3rd per.</td>
<td>(Ø/y)</td>
<td>0-e-Ø-ek</td>
<td>y-e-1-ek</td>
</tr>
<tr>
<td>reflexive/reciprocal marker</td>
<td>-ak</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The 3s object marker ek occurs only with the zero morpheme verb root with the meaning to see and has an allomorph -Ø occurring with all other verb roots. In the class marker indicating subclass I, the velar stop metathesized with the following vowel and then became voiceless in the word final position; thus ek rather than ge.

pilâ-nek-sap He dismissed me pilâ-Ø-ap He cast it
gâi-pek-sap He cut me gâi-Ø-ap He cut it
gâi-ak-sap He cut himself yerâ-ak-sai they shot one another
kâhâi-pek-sap He offended me from kâhâi- temple (of the head)

When the reflexive/reciprocal form -ak occurs with the verb meaning to see the 3s object-marker occurs
as the verb root: ek-ak-sap *He saw himself*, ek-ak-sawot
They (du.) *saw each other*.

The morpheme -ak also occurs with the meaning *for oneself* and regularly functions as a benefactive reflexive marker when the subject is in the singular number.

pulu-hu-ak-buap *He will buy it for himself.*

kat-ak-sap *He put it away for himself.*

5.2.2.2 The morphemes and formatives for subclass II object markers are given in Matrix 2.

*Matrix 2: Subclass II object markers*

<table>
<thead>
<tr>
<th></th>
<th>Sg.</th>
<th>Du.</th>
<th>Pl.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st per.</td>
<td>(n)</td>
<td>n-i-Ø-gi</td>
<td>n-i-t-gi</td>
</tr>
<tr>
<td>2nd per.</td>
<td>(Ø/y)</td>
<td>g-i-Ø-gi</td>
<td>y-i-t-gi</td>
</tr>
<tr>
<td>3rd per.</td>
<td>(Ø)</td>
<td>Ø-i-Ø-gi</td>
<td>y-i-t-gi</td>
</tr>
</tbody>
</table>

reflexive/reciprocal marker is -agi

The 3s object marker ihi occurs only with the zero morpheme meaning *to bite*. An allomorph waŋ occurs only with the zero morpheme meaning *to give*. All other verb roots occur with a zero morpheme indicating 3s object marker. The subclass II object markers are obviously related to the benefactive markers and often it is difficult to decide whether a particular verb root occurs with subclass II object markers or whether it occurs with subclass I object marker 3s, Ø, followed by the benefactive markers.

The benefactive markers occur as a first order verbal suffix and all forms are identical with the subclass II object markers except 3s which has the form -wagi. That the benefactive markers are distinct
from the subclass II object markers is evident in
the following example: Ø-ghi-ghi-ap (bite-it-for
me-it(ipt.)) It chewed up it (my rooster) for me.
(a) subclass II object markers:
  mabot-ghi-ghi-ap He awaited me mabot-Ø-sap he awaited
      him
  mewale-ghi-ghi-ap He cheated me mewale-Ø-ap he cheated
      him.
(b) Benefactive markers:
  Ø-ku-ghi-ghi-ap (hit-it-for me-he(ipt.)) he killed it
      for me
  kat-Ø-yingi-apa (put-it-for them-he(ipt.)) he put
      it away for them

5.2.2.3 The morphemes and formatives for subclass III
object markers are given in Matrix 3.

Matrix 3: Subclass III object markers

<table>
<thead>
<tr>
<th></th>
<th>Sg.</th>
<th>Du.</th>
<th>Pl.</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Ø)</td>
<td>(Ø)</td>
<td>(t)</td>
<td>(n)</td>
</tr>
<tr>
<td>1st per. (n)</td>
<td>n-o-Ø-go</td>
<td>n-o-Ø-go</td>
<td>n-o-n-go</td>
</tr>
<tr>
<td>2nd per. (Ø/y)</td>
<td>g-o-Ø-go</td>
<td>y-o-Ø-go</td>
<td>y-o-n-go</td>
</tr>
<tr>
<td>3rd per. (Ø)</td>
<td>Ø-Ø-ku</td>
<td>y-o-Ø-go</td>
<td>y-o-n-go</td>
</tr>
</tbody>
</table>

reflexive/reciprocal marker is -aho

When the zero morpheme verb root meaning to hit,
kill occurs the 3s allomorph is -ku. The other
allomorphs, -gu or -hu, occur with all the other verb
roots.

When the subclass I reflexive/reciprocal form -ak
occurs with the verb roots meaning to hit or to call
someone, call someone's name, the verb roots are aho-
and ahon- respectively: aho-ak-sap He hit himself,
ahon-ak-sap He said his own name.5
The verbalizing force of the pronominal object markers is most evident in subclass III. Transitive verb stems are derived from the following classes of roots.

(a) Noun roots:
- lâm-gu to watch him from lâm hole
- kâlâp-gu to arouse him from kâlâp fire
- tân-gu to help him from tân bone
- kulem-gu to draw it from kulem mark
- hewum-gu to bundle it from hewum bundle

(b) Adjective roots:
- helêŋ-gu to blacken s.th. from helêŋ black
- kurin-gu to ripen from kurin red

(c) Adjunct roots. Only adjuncts occurring with the auxiliary ot to do have been observed as derived transitive verb stems.
- gulip-gu to erase s.th. from gulip ot to disappear
- hên-aho to play together from hên ot to play

(d) Transitive verb roots. The following roots have been observed only in the core of transitive verb stems.
- ulit-gu to beg him
- âik-ku to ask him
- hegém-gu to decorate it
- ek-ku to tell him
- hawam-gu to encircle it
- wallp-ku to touch it

(e) Hypothetical roots:
- hilip-gu to destroy it from hilip destruct
- dirin-gu to put side by side from dirin adjacent

5.2.3 Compounding. The following verb roots have been observed to occur in compounds: intransitive verb roots indicating motion, arî to go, ba to go, ga to come, ge to descend, yâhâ to ascend, taka to come (from a distance), toho to come (from a distance); intransitive
verb roots indicating position, kin to be standing, tat to be here; transitive verb roots man to live, me to hold, ot to do, become. When manifesting a transitive verb root the compound functions as transitive. When the verb roots man and tat occur in isolation, root allomorphs m and t respectively may occur. The motion verb roots occur as either the first or the second root in a compound. Antonyms do not occur in the same compound.

5.2.3.1 Ari occurs principally as root one and occurs as root two only when ba occurs as root one.
   ari kat to go and put it ari me to go and hold it
   ari man to go and live ari kin to go and stand
   ba ari to go

5.2.3.2 Ba occurs only as root one.
   ba yâhâ to ascend ba kin to go and stand
   ba tat to go and stay ba ari to go

5.2.3.3 Ga occurs only as root one.
   ga taka to come ga tat to come and stay
   ga toho to come ga kin to come and stand

5.2.3.4 Ge occurs only as root one.
   ge taka to come down ge tat to sit down
   ge toho to come down ge kin to come down and stand

5.2.3.5 Yâhâ occurs principally as root one and only occurs as root two when ba occurs as root one.
   ba yâhâ to ascend yâhâ kin to go up and stand
   yâhâ tat to go up and stay yâhâ taka to come up
   yâhâ me to go up and get it yâhâ toho to come up

5.2.3.6 Taka occurs as root two only when it occurs with other verb roots expressing motion.
ge taka to come down  taka tat to come and stay
  ga taka to come  taka man to come and live
  yâhâ taka to come up  taka kin to come and stand
taka me to come and get it

5.2.3.7 Man occurs principally as root two and only
occurs as root one when tat occurs as root two.
    ari man to go and live  man tat to live (here)
    taka man to come and live  ot man to do and live

5.2.3.8 Kin occurs principally as root two and occurs
only as root one when tat occurs as root two.
    ari kin to go and stand  yâhâ kin to go up and stand
    ba kin to go and stand  taka kin to come and stand
    ge kin to come down and stand  kin tat to stand (here)
    ga kin to come and stand

5.2.3.9 Tat occurs only as root two
    ari-tat to go and stay  taka tat to come and stay
    ba tat to go and stay  toho tat to come and stay
    ga tat to come and stay  yâhâ tat to go up and stay
    ge tat to sit down  kin tat to stay
    ot tat to do and stay

5.2.3.10 Me occurs principally as root two and occurs
only as root one when man occurs as root two.
    ari me to go and get it  me man to do and live
    ga me to come and get it  yâhâ me to go up and get it
taka me to come and get it  ge me to come down and
    get it

5.2.3.11 Ot occurs only as root one when tat or man
occurs as root two.
    ot tat to do and stay  ot man to do and live

5.2.3.12 One sequence of three roots occurs.
    ge taka kin to come down and stand
5.3 Adjective Stems

Adjective stems may be derived from classes of roots or other constructions by the suffixation of the adjectivizers -ŋe or -då, compounding or reduplication.

5.3.1 Derivation by -ŋe. The formula is core + -ŋe → derived adjective stem. The core may manifest a variety of root classes and construction types.

5.3.1.1 Noun roots:

- kun-ŋe *first born* from kun *head*
- kâbuk-ŋe *forbidden* from kâbuk *tabu*
- bâlâp-ŋe *cold* from bâlâp *wind*

5.3.1.2 Adjective roots: This is simply to say that these roots occur only in the core of a derived adjective.

- hâgi-ŋe *old*
- umat-ŋe *heavy*

5.3.1.3 Adverb roots:

- in-ŋe *insignificant* from in *for no reason, just*
- dodâ-ŋe *large* from dodâ *hard, fiercely*

5.3.1.4 Numerals: Adjectives derived from numerals are equivalent to English ordinal numerals.

- konok-ŋe *first*, yâhâp-ŋe *second*, kalibu-ŋe *third*, etc.

5.3.2 Reduplication of verbal forms plus the adjectivizer -ŋe. This derivation is similar to that for nouns derived from verbs (5.1.2.1) except that the adjectivizer -ŋe is suffixed to the reduplicated verbal form. There appears to be very little overlap, however, and only rarely do such derived nouns form adjectives by the addition of the adjectivizer. As in the case of nouns derived from verbs, other clause level tagmemes occur with the reduplicated verbal form. Some examples follow.
5.3.2.1 Intransitive verb root:
- yâhâ yâhâ-ŋe arrogant from yâhâ to ascend
- mumu-ŋe dead from mu to die
- yahat yahat-ŋe high (of pay) from yahat to arise
- irike irike-ŋe buck (of teeth) from irike to protrude

5.3.2.2 Location tagmeme and intransitive verb root:
- hânân tat^2 + -ŋe (Loc: on the ground, IP: to be situated) which is on the ground
- hibimân arî^2 + -ŋe (Loc: in the sky, IP: to go) flying (of aeroplanes)
- saruân arî^2 + -ŋe (Loc: on the sea, IP: to go) sailing (of ships)

5.3.2.3 Manner tagmeme and intransitive verb root:
- kadi taka^2 + -ŋe (M: temporarily, IP: to come) temporarily resident

5.3.2.4 Transitive verb stem:
- ehek-ŋe visible from Ø-ek see-it (subclass I)
- ihi ihi-ŋe bitten from Ø-ihi bite-it (subclass II)
- golagu golagu-ŋe stirred from golagu to stir it (subclass III)

When an adjective derived from a transitive verb stem occurs qualifying a noun, concord exists between the number expressed by the bound object marker in the verb stem underlying the derived adjective and the number expressed by the noun qualified by the derived adjective. In the following examples, the morphemes in concord are in italics.

naom-yâhât-ŋe (H: child-du.-his) me-yelek^2 + -ŋe (tP: to hold them (du.)) his two initiated children

naom-lip-ŋe (H: child-pl.-his) me-yek^2 + -ŋe (tP: to hold them (pl.)) his initiated children.
5.3.2.5 Object tagmememe and transitive verb stem:

den loul\(^2\) + -\(\eta\) (O: words, tP: to carry it) obedient
emet huhu\(^2\) + -\(\eta\) (O: house, tP: to smash it) perverted
kobo me\(^2\) + -\(\eta\) (O: theft, tP: to hold it) thieving
biwi ku\(^2\) + -\(\eta\) (O: insides, tP: to hit it) angry

5.3.2.6 Subject tagmememe and transitive verb stem:

weke a\(\text{lit}\)\(^2\) + -\(\eta\) (S: spirit, tP: to withhold) stunted
gelâk \(\text{ihi}\)\(^2\) + -\(\eta\) (S: rain, tP: to bite it) rain-washed
turebe hio\(\text{nak}\)\(^2\) + -\(\eta\) (S: ditch, tP: to break oneself) fissured (of ground)

5.3.2.7 Location tagmememe and transitive verb stem:

biti\(\text{gan}\) ku\(^2\) + -\(\eta\) (Loc: on the trap, tP: to hit it) trapped
iwân pan\(^2\) + -\(\eta\) (Loc: on the rope, tP: to throw) strung
hâk\(\text{n}\)an sâ\(^2\) + -\(\eta\) (Loc: on his skin, tP: to speak) accused

5.3.2.8 Location and Object tagmememes with transitive verb stem:

lohân den\(\text{ne}\) sâ\(^2\) + -\(\eta\) (Loc: on a man, O: its word, tP: to speak) betrothed

5.3.2.9 Manner tagmememe and transitive verb stem:

sen konok ek\(^2\) + -\(\eta\) (M: eye, only, tP: to look at it) unhelpful
ki ek\(^2\) + -\(\eta\) (M: not, tP: to see it) invisible, not for viewing
ki ne\(^2\) + -\(\eta\) (M: not, tP: to eat it) inedible, not for eating

5.3.2.10 Manner and Object tagmememes with transitive verb stem:

kâi bât towat\(\text{ne}\) ki ek\(^2\) + -\(\eta\) (O: leg, hand, appearance, M: not, tP: to see it) ill-mannered
sâliku sâlikuhât topne (O: basis of counting) kî
nâgâ\textsuperscript{2} + -\(\text{ne}\) (M: not, tP: to know) illiterate

5.3.2.11 Instrument tagmeme and transitive verb stem:
tewet kâdâk hâre\textsuperscript{2} + -\(\text{ne}\) (Inst: knife, with, tP: to cut it) cut by a knife

5.3.2.12 Dependent homopersonal clause and transitive verb stem:
den sâm pâpku\textsuperscript{2} + -\(\text{ne}\) (dp.cl.: speaking words, tP: to err) asphasic

5.3.2.13 Auxiliary Verb Phrases. In these the filler of the Com. tagmeme occurs with the reduplicated auxiliary verb root. When the auxiliary is sâ to say, the reduplication is optional. It appears that the auxiliary ot to do does not enter into such derivation.
palatak sâ\textsuperscript{2} + -\(\text{ne}\) (Com: slip, auxH: to say) slippery
kugug sâ\textsuperscript{2} + -\(\text{ne}\) (Com: ripe, auxH: to say) ripe
kododoŋ sâ\textsuperscript{2} + -\(\text{ne}\) (Com: cascade, auxH: to say) cascading
tân tân sâ\textsuperscript{2} + -\(\text{ne}\) (Com: swell, auxH: to say) swollen

Adjective stems derived from the Auxiliary Verb Phrase may be expanded by the inclusion of the Actor tagmeme. In such derivation the affixes on the noun filling the Actor tagmeme are deleted.
ådâp lak sâ\textsuperscript{2} + -\(\text{ne}\) (Act: ear, Com: full, auxH: to say) cauliflower-eared
hâk orok sâ\textsuperscript{2} + -\(\text{ne}\) (Act: skin, Com: collapse, auxH: to say) skinny
kâi tân tân sâ\textsuperscript{2} + -\(\text{ne}\) (Act: leg, Com: swell, auxH: to say) swollen-legged
5.3.3 Adjective stems derived by reduplication. The following classes of roots may be reduplicated to form adjective stems.

5.3.3.1 Noun roots:
- tewet tewet *sharp* (of a nose) from tewet *knife*
- kubut mabut *very knobby* (of potatoes) from kubut
  *knot, knob*
- yogo yogo *sharp* (of a nose, mountain ridge) from yogo
  *corner*
- esen esen *soft* from esen *leaf*
- piwot piwot *stringy* from piwot *kind of vine*
- hâk(ŋe) hâkŋe *ordinary* from hâkŋe *its skin*

5.3.3.2 Adjuncts:
- turuk baruk *obese* from turuk yap *it swells up*
- bok bok *smouldery* from bok yap *it dies* (of a fire)
- aman aman *squint-eyed* from aman *i to sleep*

5.3.3.3 Relator:
- kâdâk kâdâk *broad* from kâdâk *with* (instrument relator)

5.3.4 Compounding.

5.3.4.1 Two adjectival forms (antonyms):
- kâlip tâlâwâk *uneven* from kâlip *long* and tâlâwâk
  *short*
- pato tipiŋe *unequal sizes* from pato *big* and
  tipiŋe *small*

5.3.4.2 Theoretical root and adjective root:
- ikisobo *senile* from iki (?) and sobo *old*
- wansihan *virginal* from wan (?) and sihan *young*

5.3.4.3 Theoretical root and noun root:
- kâwâkoda *promiscuous* from kâwâ (?) and koda
  *fornication*
5.3.4.4 Noun root and numeral root:
   pāŋ konok *short* from pāŋ *middle* and konok *one*

5.3.4.5 Noun root and compound adjective stem:
   nelâm pāŋ konok *forgetful* from nelâm *mind* and
   pāŋ konok *short*

5.3.4.6 Two adverb roots of related meanings:
   mian kadi *of migrant standing* from mian *immigrate*
   and kadi *temporarily*

5.3.4.7 Two verbal antonyms in the inchoative future tense:
   yâhâwe gewe *uneven* *(of countryside)* *(lit. I will go
   up, I will go down)*

5.3.4.8 Theoretical root plus bero. Note that the root
   bero occurs in many compound nouns (5.1.3.3).
   huŋberō *poor* from huŋ *(round worm?)* and bero *eater* (?)

5.3.4.9 Adjective stems formed by compounding intransitive verb roots and an adjective root in reduplication:
   gegogonogagogonogagogonogagogonogagogon *wriggily*
   from
   ge *to descend*, ga *to come*, ba *to go* and gogon *crooked*

5.3.4.10 Adjective stems consisting of a phrasal compound formed from an Accompaniment Axis-relator phrase.
   The Axis tagmeme is manifested by nominal forms and the
   Relator tagmeme by orop with.
   kubutue orop *knotty*
   kukne orop *fragrant*

5.3.5 Derivation by the suffixation of -då. With but
   a single exception only noun roots occur in the core.
   The resultant stems indicate a quality which is a
   characteristic of the noun they qualify.
   kigitdå *fearful* from kigit *fear*
   kutdå *famous* from kut *name*
nepdâ industrious from nep work
derepdâ paralytic from *derep paralysis
egatdâ responsible from egat neck

One adjective of this type is derived from the instrument relator word kādâk with and -dâ, viz., kādâk’dâ whole.

5.3.6 Derivation by the suffixation of -âk. The relation of this suffix to the homophonous forms occurring as the adverbalizer (5.5.3), the relator of the Manner Axis-relator Phrase, or as the unrestricted suffix is not clear. Only two adjective stems of this type have been observed.

5.3.6.1 Adverb root plus -âk:
  bâwâk plenty (= sesegât) from bâp tightly

5.3.6.2 Noun plus -âk:
  tânqiâk heavy set, stocky from tânqe his bone.

5.3.7 Intensification of adjectival forms.

5.3.7.1 A number of adjective stems are intensified by an intensifier word occurring following the adjective. This construction is an Adjective Phrase and is described in 7.2.

5.3.7.2 A number of adjective stems are intensified by reduplication. In most cases this reduplication is a reduplication of the adjective with a heterophononic change of the first syllable to ma. Adjectives which already consist of a reduplicated form manifest the heterophononic change only.

  heroqe friendly  heroqe maroqe very friendly
gogoqe crooked  gogoqe magoqe(e) very crooked
bâlene bad  bâlene maleqe very bad, wicked
i lo k i lo k matted  i lo k malo k very matted
A number of adjectives may be intensified by a partial reduplication of the root.

kârilip long  käkâlip very long, slender
țâlăwâk short  tātălăp very short, stout
pato big  papato gigantic

5.3.7.3 Adjective stems which are a phrasal compound of an Accompaniment Axis-relator phrase may be intensified by several methods.

(a) If the noun in the axis is a count noun the phrase is intensified by a reduplication of the relator.

yâbâne orop (whiskers with) bearded yâbâne orop pato heavily bearded

kubutne orop (knots with) knotty kubutne orop orop very knotty

bâokne orop (crack with) cracked bâokne orop orop fractured

(b) If the noun in the axis is a mass noun the phrase is often intensified by pato big following the relator.

kukne orop (fragrance with) fragrant kukne orop orop very fragrant

korokne orop (stench with) smelly korokne orop pato very smelly

(c) Idioms which occur in the axis of the Accompaniment Axis-relator phrase are intensified only by pato big following the relator. If the intensifier pato is included in the axis, the idiom loses its idiomatic meaning or the result is nonsense.

egatne pato orop (neck big with) (one) with a big neck (goitre)
egatqe orop (neck with) mature egatqe orop pato very mature

hâmeqe mumuqe orop (nose dead with) disagreeable hâmeqe mumuqe orop pato very disagreeable but hâmeqe mumuqe pato orop (one) with a big dead nose) (nonsense).

These types of intensification do not occur if the Accompaniment Axis-relator phrase rather than the adjective phrasal compound manifests the Qualifier tagmeme. Rather the noun or construction manifesting the axis of the phrase is further qualified.

mesik orop (Ax: sickness, Rel: with) sickly becomes mesik pato orop very sickly (lit. with a big sickness)
någå någåqe orop (Ax: his thoughts, Rel: with) intelligent becomes någå någåqe pato orop very intelligent (lit. with very big, important thoughts)

(d) If the relator in the Rel. of the Acc.Ph. is bia without, no intensification occurs; the result would be nonsensical, e.g. very greaseless.

5.3.7.4 A few adjectives which occur only in a reduplicated form are intensified by pato big.

turuk baruk obese turuk baruk pato extremely obese
den (words) gilåŋ gilåŋ (chatter) chatter den gilåŋ gilåŋ pato much chatter

5.3.7.5 Adjectives which are derived from clauses by the reduplication of the verb root or stem usually are intensified by pato big following the reduplicated verb root. There are alternate methods of showing intensification and these apparently are used at random by different speakers. The following methods have been observed.

(a) Pato big or papato gigantic occurring as an intensifier after the reduplicated root:
palatak săsâ-ñe pato very slippery
yahat yahat-ñe pato very high (of pay)
yahat yahat-ñe papato extremely high (of pay)
nepâ pâruŋ orotñe pato full of freckles, very freckled

(b) Transforming the derived adjective to a homopersonal dependent clause and adding another verb which is then reduplicated:

hurung săsâ-ñe sunken becomes hurung sâm ari ariñe (being sunken, gone on) sunk very deeply
tântân săsâ-ñe swollen becomes tântân sam tioting
săsâ-ñe (being swollen, stretched tightly) very swollen

When a construction is regarded as overloaded, a speaker may transform it to a clause qualified by a demonstrative pronoun. The immediately preceding example, although grammatical, would be transformed by some speakers as the following:

hâkçe tântân sâm (his skin, having swollen) tioting yap
(it became tight) ya (that) that skin which swelled and became tight.

(c) Suffixing the morpheme -âk only to the reduplicated verb root:

palatak săsâ-ña slippery becomes palatak săsâñeâk
very slippery

(d) Adding a Loc.Ph. to the clause from which the adjective stem is derived:

hân (ground) turebe hînaŋak hînaŋ-ñe (ditch, self-broken) fissured ground becomes hân turebe amokân hînaŋak hînaŋ-ñe (ground, ditch, at-its-depth, self-broken) deeply fissured ground
(e) Adding an adjective to the noun in the clause from which the adjective stem is derived:
bitiño (in the trap) kuhun-Ge (struck) trapped
becomes bitiño kàrikèn (in the strong trap) kuhun-ge (struck) firmly trapped

(f) odop another occurs as an intensifier after the reduplicated root:
yàhà yàhà-Ge arrogant yàhà yàhà-Ge odop very arrogant
yahat yahat-Ge high (of pay) yahat yahat-Ge odop very high

(g) One adjective root occurs in the reduplicated form to indicate a lessening rather than an intensification.
seduk crazy seduk seduk foolish

The intensification is done by reduplication plus the heterophonic change: seduk maduk-Ge very crazy.

5.4 Numeral stems

The base numerals are the roots konok one, yàhàp two, kalibu three and ibàt four. These roots occur in compound stems for many of the higher numerals.

5.4.1 bàtnobot five. This is a compound derived from the noun root bàt hand and the hypothetical root nobot part, half, side.

5.4.2 Numerals six through nine are phrasal compounds consisting of a Locative Axis-relator Phrase manifesting nobot in the axis and -àn at as a relator plus the base numerals.

nobolàn konok six (lit. one at the side)
nobolàn yàhàp seven (lit. two at the side)
nobolàn kalibu eight (lit. three at the side)
nobolàn ibàt nine (lit. four at the side)
5.4.3 Numerals eleven through fourteen have the same structure but kâî foot replaces nobot. In fifteen bâtnobot serves as a base numeral.

kâîân konok eleven (lit. one at the foot)
kâîân yâhâp twelve (lit. two at the foot)
kâîân kalibu thirteen (lit. three at the foot)
kâîân ibât fourteen (lit. four at the foot)
kâîân bâtnobot fifteen (lit. five at the foot)

5.4.4 Numerals sixteen through nineteen have the same structure but the axis of the Locative Axis-relator Phrase is manifested by kâî nobot the other foot and the relator is manifested by -ân or -gen at.

kâî nobolân konok sixteen (lit. one at the other foot)
kâî nobolân yâhâp seventeen (lit. two at the other foot)
kâî nobolân kalibu eighteen (lit. three at the other foot)

kâî nobolân ibât nineteen (lit. four at the other foot)

5.4.5 bâlâk ेrek ten. This compound consists of the noun root bât hand plus the unrestricted suffix -âk only plus the adjective ेrek all (lit. all of only the hands).

5.4.6 lok konok ेrek twenty. This is a phrasal compound derived from the General Noun Phrase manifesting the structure: H: man, Num: one to which the adjective ेrek all is compounded yielding all of one man. For multiples of twenty, the numeral one is replaced by two, three, etc. as in lok yâhâp ेrek forty, lok kalibu ेrek sixty.

5.4.7 For all numerals beyond twenty, except multiples of twenty, the lower multiple of twenty is followed by the Possession Axis-relator phrase manifesting lok âlâ in the axis and -gât as the possessive relator, viz.,
lok állahát another man's. To this is added the numerals for one to nineteen as in lok yâháp 'ôrek lok állahát ibât forty-four (lit. all of one man, for another man, four).

5.5 Adverb stems

This class of stem occurs in the Manner tagmeme of the clause level. Adverb stems may be derived from other classes of roots by the occurrence of adverbalizer suffixes and/or reduplication. One adverbalizer suffix, -âk, also functions as a relator clitic in the Manner Axis-relator Phrase (7.4.5). When it occurs on words, stems or roots, however, it is regarded as an adverbalizer because many of such derived adverbs are intensified by the occurrence of pato big following the adverbalizer. If these were axis-relator phrases the root pato would occur in the axis and be followed by the clitic. (See 5.3.6.3 for a similar treatment of phrasal compounds in adjective stems). The adverbalizer -âk also occurs suffixed to reduplicated forms.

Note that all of these processes of derivation may work on the same root as in tik hidden area (noun root): tik tik, tihâk, tikñe tikñe, tikqiâk, all of which mean noiselessly, secretly,

5.5.1 Adverb stems derived by the adverbalizer -wu are derived from the demonstrative pronoun roots: ya that, yu this, and the adverb gira how.

yawu thus, like that girawu in which manner
yuwu thus, like this

The stems yawu and yuwu also occur suffixed by -âk as in yawuâk just like that, yuwuâk just like this.

5.5.2 Adverb stems derived by reduplication are derived from the following classes of roots, stems or words.
5.5.2.1 Adjective roots:
  tānāt tānāt babbling from tānāt useless as in den
tānāt tānāt yap he babbled
golā golāek suddenly from golā green, alive, as in
golā golāek muop he died suddenly, without warning.
5.5.2.2 Adjective words:
  herone marone in a pleasing manner from herone
       pleasant
  bâleñe maleñe badly from bâleñe bad
5.5.2.3 Noun roots:
  hohet guhet tuhu to mix, intermingle s.th. from
  hohet middle area.
5.5.2.4 Noun words:
  hâkñe hâkñe not well (of mediocre workmanship) from
  hâkñe its skin
5.5.2.5 Number roots:
  konok konok singly, one at a time from konok one
  yâhâp yâhâp two at a time from yâhâp two
5.5.2.6 Time roots:
  gâmâlâk gâmâlâk slowly from gâmâlâk later
  getek getek quickly from getek soon.
5.5.2.7 Adverb roots:
  betbet backwards from bet later
  inin superficially from in just
5.5.2.8 Verbs. As in the case of noun stems being
derived from verbs, these derived forms are in fact
derived from clauses since other clause level tagmemes
or an adjunct always occur preceding the reduplicated
form. Adverb stems derived from verbal forms by reduplica-
cation are derived by reduplicating the dependent
homopersonal verb. This verb may also be an auxiliary verb with its attendant adjunct. The following preposed tagmemes have been observed.

(a) Manner and Complement tagmemes:

ki torok otmu otmu temporarily from ki torok oap it did not lengthen.

(b) Object tagmemes:

biwi någåm någåm ek to self-examine from biwi- någå to think to oneself (lit. to feel one's insides)

(c) Location tagmemes:

den hohetån hohetån så to mix different languages in speaking from den hohetån in the middle of the languages

(d) Adverbs formed by compounding intransitive verb roots with a transitive verb stem and reduplicating the homopersonal dependent form: gekum bakum careening downwards from ge to descend, ba to go and kum hitting it.

5.5.2.9 Predicateless Clause. Adverbs may be derived from predicateless clauses by the reduplication of the filler of the final tagmeme.

hâkge kou kou unwashed from hâkge kou your skin is ashen.

5.5.2.10 Adverbs may also be derived from Attributive-Head constructions by a reduplication of the root in the last element.

sen gingin with a sideways glance from sen- gingne the edge of one's eye.

5.5.2.11 In the following form the structure is adjunct root plus noun root plus reduplicated adjunct root: aman tân hutuk hutuk (sleep, bone, silent) deeply (of sleep).
5.5.2.12 Adjunct roots:
hero hero well from hero kat- to be agreeable.
This form is intensified by heterophonic reduplication as in hero maro very well.

5.5.3 Adverbs may be derived from the following root, stem and word classes by the suffixation of the adverbalizer/relator enclitic {-âk} -âk~ek~ok (cf. 7.3.5).

5.5.3.1 Adjective roots:
kuriŋâk reddened from kuriŋ red
kerehâk completely from kerek all
patoâk only big from pato big

5.5.3.2 Adjective stems:
âlipneâk well from âlipne good
ukenqeâk pleasantly from ukenqe sweet

5.5.3.3 Adverb roots:
kiâk never from ki not
inâk without a purpose from in just

5.5.3.4 Emphatic pronoun roots:
ikŋiâk alone from ikŋe he himself, she herself

5.5.3.5 Noun roots:
kigilâk fearfully from kigit fear

5.5.3.6 Noun words:
hodoŋeâk fruitless from hodoŋe its dry banana leaf
uwurupŋeâk in a flood stage from uwurupŋe its flood

Adverb stems derived from adjectival or nominal forms may be intensified by the occurrence of pato big following -âk.
hodoŋeâk pato completely fruitless
kuriŋâk pato very reddened
kigilâk pato in great fear
uwurupŋeâk pato in a state of enormous flood
5.5.3.7 Numerical roots:
konohâk in common from konok one

5.5.3.8 Relators:
orowâk also from orop with (accompaniment)

5.5.3.9 Intransitive verb roots:
teteâk openly from tete to appear

5.5.3.10 Compound noun stem:
hâk nelâmâk without affliction from hak skin, nelâm mind

5.5.3.11 Accompaniment Axis-relator Phrase:
topöe biaek without a purpose from topöe bia without its base

5.5.3.12 Hypothetical roots:
bunewâk completely from bunep all(?)

5.5.4 Adverbs may be derived from the following root, stem and word classes by the suffixation of the adverbalizer -âk together with reduplication. Both of these methods of derivation are essential.

5.5.4.1 Adjunct roots:
heñâk heñâk playfully from heñ of to play
tiŋ tiŋâk to the finish from tiŋ yap it is used up, finished

5.5.4.2 Adjective roots:
'ŋirik ŋirihâk pleasantly from ŋirik sweet

5.5.4.3 Noun words:
pâŋiâk pâŋiâk in part from pâŋe its middle

5.5.4.4 Adverb roots:
bâpbâwâk in a continuous line from bâp tightly

5.6 Contrastive Pronoun Stems

The regular personal pronoun roots and the indefinite pronoun root âlâ a, an, another, may be modified to indicate contrast by the suffixation of the
morpheme {-ku} -ku ~ -gu ~ -hu. The resulting forms emphasize that the person so identified is contrasted with other persons. For instance, when a host distributes food to a group of guests but omits one person, the omitted person could say nâku bia (I-contrastive morpheme, no) which, freely translated, means But what about me! The 3s form yâku is regularly used with inanimate referents and fulfills the semantic distinctions of the demonstrative pronouns which do not occur with the morpheme {-ku}. The resulting forms are given in Matrix 4.

Matrix 4: Contrastive pronoun stems from regular personal pronoun roots

<table>
<thead>
<tr>
<th></th>
<th>Sg.</th>
<th>Du.</th>
<th>Pl.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st per.</td>
<td>nâku</td>
<td>netku</td>
<td>nengu</td>
</tr>
<tr>
<td>2nd per.</td>
<td>gâku</td>
<td>yetku</td>
<td>yengu</td>
</tr>
<tr>
<td>3rd per.</td>
<td>yâku</td>
<td>yâk(yet)ku</td>
<td>yâku or yâkyengu</td>
</tr>
</tbody>
</table>

From the indefinite pronoun root: âlâhû a, an, another

These pronoun stems occur only with future tense verbs and have a limited distribution:

5.6.1 Actor and Subject tagmemes:

- nâku ariwom I will go (not anyone else)
- nâku kuan I hit it (not anyone else)

5.6.2 Object tagmeme:

- nâku nohowuap He will hit me (and no one else)

5.6.3 Possession tagmeme. When the pronouns showing contrast occur in the Possession tagmeme the nominal possession-marking suffixes also occur on the noun if it occurs in the Head of the General Noun Phrase:

- nâku emet-ne (my, house-my) my house and no one else's
5.6.4 Accompaniment Axis-relator Phrase:

\[
gâ\ nâku\ orop\ arirom\quad You\ will\ go\ with\ me\\
you\ me\ with\ we(du.)\quad and\ no\ one\ else\\
will\ go
\]

The contrastive pronoun stems are intensified by the occurrence of the second element of the emphatic pronoun stems (see 5.10) in a post position

\[
nâku\ niniâk\ tatbom\ (I,\ myself,\ I\ will\ remain)\\
I\ will\ remain\ alone\ by\ myself
\]

5.7 Comparative Pronoun Stems

The regular personal pronoun roots, the demonstrative pronoun roots and the indefinite pronoun roots may occur with the unrestricted suffix -âmâ however, on the other hand showing comparison. The resulting forms are given in Matrix 5.

Matrix 5: Comparative pronoun stems

from regular personal pronoun roots

<table>
<thead>
<tr>
<th></th>
<th>Sg.</th>
<th>Du.</th>
<th>Pl.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st per.</td>
<td>nâmâ</td>
<td>nerâmâ</td>
<td>nenâmâ</td>
</tr>
<tr>
<td>2nd per.</td>
<td>gâmâ</td>
<td>yerâmâ</td>
<td>yenâmâ</td>
</tr>
<tr>
<td>3rd per.</td>
<td>yâhâmâ</td>
<td>yâhâmâ</td>
<td>yâhâmâ</td>
</tr>
</tbody>
</table>

From the demonstrative pronoun roots:

yuâmâ this one, however yamâ that one, however
edâmâ or eduâmâ that one over there, however
ewâmâ or ewuâmâ that one up there, however
ebâmâ or ebuâmâ that one down there, however
wuânâmâ what, however
wosâmâ which one, however

From the indefinite pronoun roots:

âlâmâ another, however
odowâmâ another (of a different sort), however
Comparative pronoun stems occur only in the Actor, Subject and Object tagmemes.

5.7.1 Actor and Subject tagmemes:

yen-âmâ den waialesiân agimai
you-however talk on radios you give one another
You [Europeans], however, always talk to one
another on the two-way radios.

5.7.2 Object tagmeme:

hân ya-âmâ ñerek mem pesuk pilâwi
ground that-however all holding they did it completely
They took all of that ground, however,....

5.8 Inclusive Pronoun Stems

The regular personal pronoun roots also occur with
the inclusive (incl.) suffix {-bân} -bân ~ -wân too,
also. When suffixed to nouns this suffix focuses
attention on the items sub-classed under the noun, and
can best be translated as all kinds of or different
kinds of. Thus lokbân (man-incl.) focuses attention
on the various groups of people: Europeans, New Guineans,
Chinese, Japanese, etc. and gokawân (sweet potato-incl.)
focuses attention on all the various sweet potato
cultigens. When the suffix occurs on the personal
pronoun root the pronoun stem includes its referent
plus someone else. The resulting forms are given in
Matrix 6.

Matrix 6: Inclusive pronoun stems

<table>
<thead>
<tr>
<th></th>
<th>Sg.</th>
<th>Du.</th>
<th>Pl.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st per.</td>
<td>nâwân</td>
<td>neþbân</td>
<td>nenbân</td>
</tr>
<tr>
<td>2nd per.</td>
<td>gâwân</td>
<td>yetbân</td>
<td>yenbân</td>
</tr>
<tr>
<td>3rd per.</td>
<td>ýâkbân</td>
<td>ýâk(yet)bân</td>
<td>ýâk(yen)bân</td>
</tr>
</tbody>
</table>

These pronoun stems have a very limited distribution.
5.8.1 Actor and Subject tagmemes. The pronouns occur both in the Actor tagmememe and in the axis of the Sub.Ph. The verbal subject-marking suffixes in the same clause occur in the plural number.

nâwân tatnom (I-also, we will remain) We will remain (you and I and a third party).

5.8.2 Object tagmeme. The pronominal object-marking suffix of the verb in the same clause occurs in the plural number.

nâwân ningiwuap (I-also, he will give us) He will give it to us (you and I and a third party).

nâwân orop netjiâk pirinenehop (I-also, with, ourselves (du.), he washed us (pl.) He baptized us, not only you but also me.

5.9 Exclusive Pronoun Stems

When the regular personal pronoun roots or the regular demonstrative pronoun roots (excluding ebu, edu, ewu) occur in the object tagmeme they are often suffixed by the unrestricted suffix {-âk} -âk ~ -ek ~ -ok only and show emphasis or exclusion. The resulting forms are given in Matrix 7.

Matrix 7: Exclusive pronoun stems from regular personal pronoun roots

<table>
<thead>
<tr>
<th></th>
<th>Sg.</th>
<th>Du.</th>
<th>Pl.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st per.</td>
<td>nâek</td>
<td>nelâk</td>
<td>nenâk</td>
</tr>
<tr>
<td>2nd per.</td>
<td>gâek</td>
<td>yelâk</td>
<td>yenâk</td>
</tr>
<tr>
<td>3rd per.</td>
<td>yâhâk</td>
<td>yâhâk</td>
<td>yâhâk</td>
</tr>
</tbody>
</table>

From regular demonstrative pronoun roots:

yuâk this alone yaok that alone
edaek that one over there alone
ewâek that one up there alone
ebaek that one down there alone
nå-ek nohom arap (me-only, hitting me, he went away)
   He hit only me and went away.

ya-ok hidâm (that-only, pulling out)
   Pulling out only that one.

5.10 Emphatic Personal Pronoun Stems

The emphatic personal pronoun roots (4.3.10) occur preceded by an optional regular personal pronoun root and suffixed by the unrestricted suffix {-âk} -âk -ek -ok only. In the dual and plural numbers, rather than the emphatic personal pronoun roots occurring, the forms netë 1d, yetë 2-3d, nenë 1p, and yëne 2-3p occur. The final vowels of the second form change from e to i when the suffix -âk is added. Some speakers, however, do not always make this vowel change in the dual and plural forms. Moreover, in the singular forms the final vowel e plus â may yield a as in ninak 1s. When the optional regular personal pronoun occurs, the resulting composite form shows greater emphasis. These forms are given in Matrix 8.

**Matrix 8: Emphatic personal pronoun stems**

<table>
<thead>
<tr>
<th></th>
<th>Sg.</th>
<th>Du.</th>
<th>Pl.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st per.</td>
<td>(nå) niniåk/ninak</td>
<td>(net) netniåk</td>
<td>(nen) nenåk</td>
</tr>
<tr>
<td>2nd per.</td>
<td>(gå) gikiåk/gikak</td>
<td>(yet) yetniåk</td>
<td>(yen) yenåk</td>
</tr>
<tr>
<td>3rd per.</td>
<td>(yåk) ikniåk/ikqak</td>
<td>(yåk) yetniåk</td>
<td>(yåk) yenåk</td>
</tr>
</tbody>
</table>

These forms have the following distribution:

5.10.1 Actor and Subject tagmemes. All the stems except ninak, gikak and ikqak occur both in the Actor tagmeme and in the axis of Sub.Ph. with the enclitic -øe (sub.). The forms ninak, gikak and ikqak occur in the Actor and Subject tagmemes (i.e., not marked by -øe).
nà niniâk ariwom (I, myself, I will go) I myself will go.
nà niniâk-ñe kuan (I, myself-sub., I killed it) I killed it myself
nà ninak sogo kum takan (I myself animal killing I came) I myself killed the animal and came.

5.10.2 Object tagmeme. In the Object tagmeme the emphatic pronoun usually occurs without the preposed regular personal pronoun roots.

gikiâk ge gohom negekmâ yâhâwuap (You yourself, descending, killing you, eating you, it will ascend)
It will descend, kill and eat only you and go back up.

5.10.3 Possession tagmeme. The emphatic personal pronoun stems do not occur in the Possession tagmeme; rather this distinction appears to be shown by the regular personal pronoun roots with the morpheme {-ku} showing contrast.

5.10.4 Benefactive/Causal Axis-relator Phrase. The relator enclitic is {-gât}.

nà niniâk-gât yap He spoke only about me.

5.10.5 Location tagmeme. This pronoun form does not occur in the Location tagmeme; see the emphatic personal pronoun roots (4.3.10).

5.10.6 Accompaniment Axis-relator Phrase. When the emphatic personal pronoun stems occur in the axis, the relator word orop with is permuted to a pre-axis position.

orop netjiâk with us (du.) only
orop yejiâk only with them

5.11 Derived Demonstrative Pronoun Stems

These stems have the structure: + core + -wu like + -ya. The core manifests the regular demonstrative pronoun roots eba, eda, ewa, ya and yu or the adverb gira how.
ebawuya  one like that down there
edawuya  one like that over there
ewawuya  one like that up there
yawuya  one like that (one) near you
yuwuya  one like this (one) near me
girawuya  which kind of one?

These pronoun stems have the following distribution:

5.11.1 Actor and Subject tagmemes:
yuwuya kinmâ nitkiap (One like this, standing, he gave us) One like this one stood and gave it to us (du.).

5.11.2 Subject Axis-relator Phrase:
girawuya-ŋe kasai (What kind of one-sub., they put it) What kind of people put it.

5.11.3 Object tagmeme:
yuwuya mem tohorâ (One like this, holding, you come) When you bring one like this...

5.11.4 Benefactive/Causal Axis-relator Phrase:
girawuya-kâtl nagat (What kind of thing-for, you thought) About which kind of thing did you think?

5.11.5 Possessive Axis-relator Phrase:
girawuya-kâtl toŋe ki nagan (What kind of thing-poss., its essence, not, I know) Which kind of thing do I not know the meaning of?

5.12 Adjunct Stems

This class of stems occurs in the Complement tagmeme of the Auxiliary Verb Phrase.

5.12.1 They may be derived by reduplication from the following classes of roots.

5.12.1.1 Adjective roots:
kuririrĩŋ yap to become reddened from kurĩŋ red

5.12.1.2 Adjunct roots. When an adjunct root is reduplicated the resultant form shows intensification.
dâŋdâŋâk ek to stare intently from dâŋâk ek to stare
puriririk yap it spins, rotates from purik yap it turns
gileŋ beleŋ yap it flashes from beleŋ yap it reflects

5.12.1.3 Adverb roots:
báp báp oap it sticks from báp tightly

5.12.1.4 Noun roots:
tâp tâp oap it is frothy from tâp- spittle
iwit iwit oap it is bleached from iwit white hair
belâm belâm oap it became whole again from belâm-
place
kât kât yap it is stiff from kât stone

5.12.1.5 Intransitive verb roots including optional
preposed clause level tagmemes:
yâhâ yâhâ ot to be arrogant from yâhâ to ascend
hâk gehe ot to be haggard from hâkâg gei yap he is
haggard (lit. his skin came down)

5.12.1.6 Transitive verb stems including optional
preposed clause level tagmemes:
bât kuhu ot to marry from bâtyet¹eti kuawot they shook
hands (lit. hit their hands)
gâre gure ot or hâre gâre ot to twine around s.th.
from gâre to sew it
melon guloŋ ot to wallow from melon to stir it

5.12.1.7 A number of reduplicative adjuncts involve the
antonyms ba, ari to go and ga to come in compounds with
either ku hit it or -wa(?)
baku gaku ot or ariku gaku ot to sway back and forth
bawa gawa tuhu to slide s.th. back and forth

5.12.2 A number of adjunct stems are formed by com-
pounding other roots.

5.12.2.1 Adjunct root and noun root:
aman nelâm i to sleep deeply from aman sleep and
nelâm mind
5.12.2.2 Theoretical root and noun root:

olo gilâp tuhu to weep bitterly from olo (?) and gilâp tear
olen girinot to be joyous from olen (?) girin laughter

5.13 Time Stems

The following stems occur in the Time tagmeme of the Transitive and Intransitive clauses.

5.13.1 kâdikum in the beginning. This is a fossilized form of a homopersonal dependent verb kâdikum starting out.

5.13.2 emelâk before. This is a phrasal compound derived from the Manner Axis-relator Phrase: emet-âk place-only. This may vaguely refer to the time which predated settlement of the Pumune valley.

5.13.3 kâdikum emelâk in the very beginning. This is a compound of the previous two forms.

5.13.4 yâhâlân the day before yesterday. This is a compound formed from the dual marking first order nominal suffix yâhât two and the locative clitic -ân at.

5.13.5 edâân beyond the day after tomorrow. This is a phrasal compound derived from the Loc.Ph. manifesting the nominalized demonstrative edâne that beyond and the locative clitic -ân at.

5.13.6 omoânâk morning. This is a phrasal compound derived from a Loc.Ph. Phrase embedded in the axis of a Manner-relator Phrase: omoân-âk night-at-only.

5.13.7 hâdâhân tomorrow. This is a phrasal compound derived from the Loc.Ph. with the theoretical root hâdâk manifesting the Axis and -ân at manifesting the Relator. In the closely related Timbe language hâdâk means night.
5.13.8 hâdâhân mukan after tomorrow. This is a compound of the antonyms hâdâhân tomorrow and mukan yesterday.

5.13.9 A number of time stems are derived from noun roots by the suffixation of the time word derivative suffix -dâne at, in⁶.

hilâmdâne in the daytime  omonâdâne at night
nîndâne in the evening  gelâkdâne in the time of rain
elemdâne in cloudy weather.

5.14 Particle stems

Particle stems represent apparently fossilized forms which are derived from higher level syntagmemees or portions of higher level syntagmemees. Particular stems function as conjunctions at the clause and/or phrase levels. Some examples are given below.

5.14.1 Otmu and is a fossilized heteropersonal 3s verb it happened and...

5.14.2 Yapa gâtnâne as a consequence represents an apparent fossilization of a nominalized Origin Noun Phrase which literally means that which came out of that.

5.14.3 Gârâmâ however, furthermore is a compound of the bene./cau. enclitic -gât for and the unrestricted suffix -âmâ however.
Notes

1. The forms ki agi agi not exchanging and ki aho aho not fighting do not occur; rather the nouns wawi greed and sădük peace occur.

2. Compounds may be one or more phonological words. No systematic relationship between grammar and phonology has been observed at this level and so no further statement can be made at this stage of analysis.

3. An alternate solution would be to posit a discontinuous morpheme Ø..n.

4. An historical explanation of the similarity between the benefactive markers and the subclass II object markers as well as the development of the disparate forms waŋ, wagi and ihi for 3s is expected after diachronic studies are completed. The forms wagi and ihi may follow regular sound shifts. Note that the verb root to beg has two forms ulit- and welet-. The vowels u and i, moreover, often fluctuate. Thus as u is a correspondence of we so also i may be posited as a correspondence of wa. The form waŋ then may reflect a simple loss of the class marker gi.

5. It is apparent that the verb roots are related to the reflexive/reciprocal marker -aho and may be derived from that form. Whether one should regard the forms aho- and ahon- as allomorphs of Ø and -n respectively or whether one should posit special derived verbal forms may become evident after diachronic studies are completed.

6. The suffix -dâŋe may be the ajzer. -dâ (5.3.5) plus the suffix -ŋe (nomzer.--5.1.1, or inst.--7.4.7).
Chapter 6

Words

6.0 Introduction

There are only two word classes in Selepet: the noun and the verb. These differ from each other in the filler classes manifesting the nuclei and their suffixal morphology.

6.1 Nouns

The noun class may be divided into two subclasses on the basis of the number of obligatory suffixal tagmemes.

6.1.1 Subclass I nouns are obligatorily possessed and marked for number. This subclass includes fillers indicating two semantic categories: those indicating kinship relationships and those indicating body parts. The noun roots indicating kinship terms are regarded as obligatorily possessed in spite of the fact that they occur in unpossessed vocative forms. The kinship nouns include the usual kinship terms (see McElhanon, 1968a) plus a few other nouns or larger constructions which denote social relationships.

The structure of subclass I nouns is: \( n_1 = + \) nucleus + number + possession

6.1.1.1 The number tagmeme is manifested by a closed class of morphemes: -Ø singular, -yahát dual and -lip plural as in: ata-Ø-ne (elder brother-sg.-my) my elder brother, ata-yahát-ne (el.br.-du.-my) my two elder brothers and ata-lip-ne (el.br.-pl.-my) my elder brothers.

6.1.1.2 The possession tagmeme is manifested by a closed class of seven possession-marking suffixes. These possession markers are similar in phonemic shape to the regular personal pronoun roots (4.3.9). The suffixes and their formatives are given in Matrix 1.
<table>
<thead>
<tr>
<th></th>
<th>Sg.</th>
<th>Du.</th>
<th>Pl.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st per. (n)</td>
<td>-n e Ø Ø</td>
<td>-n e t Ø Ø</td>
<td>-n e n Ø Ø</td>
</tr>
<tr>
<td>2nd per. (g/y)</td>
<td>-g e Ø Ø</td>
<td>-γ e t Ø Ø</td>
<td>-γ e Ø Ø</td>
</tr>
<tr>
<td>3rd per. (Ø/y)</td>
<td>-Ø - Ø Ø</td>
<td>-γ e t η Ø</td>
<td>-γ e Ø η Ø</td>
</tr>
</tbody>
</table>

An analysis which is more apparent in diachronic studies is to regard the -η Ø as a fossilized adjectivizer. In an early stage of development the proto-structure was a noun plus an adjective which was derived from a regular personal pronoun root as in emet yη Ø house their du. Later on fusion occurred and the derived adjective became a nominal suffix.

The formative Ø indicating third person with the singular number is also found in the singular forms of the subclass II verbal object-marking affixes occurring with the verb to bite: n-ihi me, g-ihi you and Ø-ihi him, her, it.

6.1.1.3 The nucleus may be manifested by:

(a) Subclass I noun roots (kin terms, titles, body parts):

- ata-Ø-ne (elder brother-sg.-my) my elder brother
- barat-Ø-ne (daughter-sg.-my) my daughter
- barat-Ø-ne (daughter-pl.-my) my daughters
- sonan-Ø-ne (church elder-pl.-my) my church
- kiap-Ø-ne (patrol officer-pl.-our elders) our patrol officers

Body parts rarely occur in the nucleus of subclass I nouns, and when they do so the reference is usually to a larger portion of the body which includes the named parts.

- kai-yååhåt-ne (leg-du.-my) the lower part of my body
Inanimate nouns are regarded as having body parts.

esen-lip-yeñé (*leaf-pl.-their*) their leaves

Rarely a speaker will use roots referring to animals to express endearment or to speak facetiously. These occurrences may be regarded as special.

bau-lip-ñe (*pig-pl.-his*) his precious pigs
sogo-lip-ñe (*animal-pl.-his*) his precious livestock

(b) Compound noun stems:

lok-ibi-lip-ñe (*man-woman-pl.-his*) his people
wârâ-tou-lip-ñe (?-elder sister-pl.-his) his female siblings

(c) General Noun Phrase. The most common manifestation is an optional H. plus Qual.

lok kutdá-lip-nenñe (*H: man, Qual: famous-pl.-our*)
our prestigious men

lok pato-lip-nenñe (*H: man, Qual: big-pl.-our*)
our leaders

papato-lip-nenñe (*Qual: very big-pl.-our*) our great ancestors

The GNP. may manifest the Att. and H. tagmemes. In this case the number is indicated in the noun manifesting the H. tagmeme.

kapai abo-lip-ñe-nenñe (*Att: village, H: owner-pl.-its-our*) our native residents

(d) In the following example the Att.-H. construction manifests the axis of a Loc.Ph. which in turn manifests the nucleus of the noun.

kâi-ge ñorñan-lip-ñe (*Loc: (Att: feet-your, H: at its base)-pl.-your*) your descendents

Note that concord (indicated by the solid line) exists between the possession markers of the noun in the Att. tagmeme and the possession markers modifying the noun nucleus.
(e) A noun derived from a clause by reduplication of the verbal form (see 5.1.2.4).

\[ \text{satna} \text{ meme-}l\text{-}p\text{-}ne \]  
\text{(Loc: at his feet, tP: to hold}^2\text{-pl.-his) his henchmen}

Note that concord exists between the possession markers of the noun in the Location tagmeme and the possession markers modifying the noun nucleus.

(f) A noun derived from an Auxiliary Verb Phrase.

\[ \text{ho} \text{\text{g}a} \text{wa-}l\text{-}p\text{-}ne \]  
\text{(Com: inform, auxH: to go}^2\text{-pl.-his) his servants}

6.1.2 Subclass II nouns are of the same structure as subclass I except that the number tagmeme is absent and the possession tagmeme is optional: + nucleus ± possession. The nucleus is manifested by the majority of the noun roots.

\[ \text{emet-}p\text{-}ne \]  
\text{his house}  
\[ \text{tebe-}p\text{-}ne \]  
\text{his bow}

The possession-marking suffixes may be permuted to the prenuclear position in the noun structure with the result indicating emphasis. Only dual and plural possession-marking suffixes have been observed exhibiting such permutation. The fact that singular forms do not so occur may indicate that the regular personal pronoun occurring in the Possession tagmeme (see 4.3.9.4) serves this function.

\[ \text{denen}p\text{-}ne \]  
\text{(den-}nen\text{-}ne language-our) our language

\[ \text{nennen} \text{en} \]  
\text{(nenen-den our-language) OUR language}

In narratives the noun root which manifests the possession-marking suffixes may be deleted if confusion is unlikely to result. Such deletion occurs only when the possessed noun occurs in the axis of an axis-relator phrase (usually a Loc.Ph.). The remaining possession-
marking suffix and relator enclitic assume the phonological characteristics of a single word.

In the following example nenñe-ân occurs rather than nen-gát-ân (see 4.3.9.5).

\[\text{yakenâmâ bau hulin sesegât nenñe-ân yuàn biatmu}\]
\[\text{over there-pig wild many our-at here they disappeared}\]

\[\text{Over there, however, are many wild pigs. Here at our (place) they disappeared...}\]

In the following examples yeñe-gát occurs rather than ye-gát (see 4.3.9.4).

\[\text{yeñe-gát nam nem im âdeenêtâ}\]
\[\text{their-of milk eating sleeping they continued}\]
\[\text{they slept on drinking their (mother's milk)...}\]

6.2 Verbs

The verbs may be divided into two subclasses, independent and dependent, on the basis of morphological differences and external distribution within the sentence. Paradigms are given in Appendix A.

6.2.1 The independent verbs may be divided into two subtypes on the basis of differing structures of the verb periferal morphology. It must be noted, however, that these morphological variations have no distributional or functional relevance. Rather they seem to reflect a historical development which appears to be common to the languages of the Finisterre-Huon Phylum (see 10.10.1).

6.2.1.1 The Non-immediate future verb has the suffixal structure as given in Table A. All tenses may be regarded as representing the indicative mode although there is no affix actually signifying the indicative mode.
The chart above is intended to illustrate the co-occurrence restrictions amongst the suffixes. The allomorph -an 1s. occurs with past tenses; allomorph -m occurs elsewhere. The allomorph -t 2s. occurs with ipt. and ctf. only; allomorph -n occurs elsewhere. Allomorphs -w - -o rpt. are phonologically conditioned: -w precedes vowels, -o precedes consonants. Allomorph -a ipt. occurs with all person-number forms; -Ø occurs only with 1st person, dual and plural forms. The remaining person-number suffixes have no co-occurrence restrictions.

There is no occurrence of a tense morpheme with the ctf. Rather, time is indicated by the occurrence of a filler in the Time tagmeme of the clause.
The second order suffixal tagmeme is manifested by morphemes indicating mode: -mini hab. (see Appendix A, §1), -m proh. or hab. (see §2). Other morphemes (with the exception of ctf.) indicating mode appear to be fused forms indicating both mode and tense.

The morphemes -wio rft. and -bisâ hbt. are fused forms. To isolate a probable morpheme {wi} -wĩn -bĩ indicating fut. would necessitate a tagmeme order of tense plus mode, the reverse of that posited for this type of verb periphery. Therefore, for the time being the writer prefers to treat these forms as being fused forms. Further research may yield evidence which would necessitate the division of the forms into morphemes indicating tense and mode.

6.2.1.2 The Immediate Future Verb has the structure as given in Table B.

Table B: Immediate Future Verb

<table>
<thead>
<tr>
<th>+ nucleus</th>
<th>+ bene.</th>
<th>+ number</th>
<th>+ tense/mode (ift.)</th>
<th>+ person-number</th>
</tr>
</thead>
<tbody>
<tr>
<td>as in Table A</td>
<td></td>
<td>-w sg.</td>
<td>-om</td>
<td>-Ø 1st person</td>
</tr>
<tr>
<td></td>
<td></td>
<td>-r du.</td>
<td>-ua</td>
<td>-t 2s</td>
</tr>
<tr>
<td></td>
<td></td>
<td>-n pl.</td>
<td>-p 3s</td>
<td>-p 3s</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>-oma</td>
<td>-wot 2-3d</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-i 2-3p</td>
</tr>
</tbody>
</table>

Co-occurrence restrictions are: -Ø 1st person occurs with -om; -t 2s. and -p 3s. occurs with -ua; and -wot 2-3d. and -i 2-3p. occur with -oma. Concord exists
between the number indicated in the number slot and
the number indicated in the person-number composites.
6.2.1.3 A comparison of inch. ($\S 10$) and perm. ($\S 11$)
forms with those of the ift. ($\S 5$) verb reveals some
similarities but also some striking dissimilarities.
The 1st person inch. forms resemble the 1st person ift.
forms inasmuch as only the tense-mode marker $-e$ is
different. A comparison of the formatives indicating 2nd
and 3rd person in inch. with the formatives of the
regular personal pronoun roots is interesting. The
formatives of the regular personal pronoun roots are
given in Matrix 3.

Matrix 3: Regular personal pronoun formatives

<table>
<thead>
<tr>
<th></th>
<th>Sg.</th>
<th>Sg.</th>
<th>Non-Sg.Du</th>
<th>Non-Sg.Pl.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st per.</td>
<td>(n)</td>
<td>$n\hat{a}k$</td>
<td>$net$</td>
<td>$nen$</td>
</tr>
<tr>
<td>2nd per.</td>
<td>(g/y)</td>
<td>$g\hat{a}k$</td>
<td>$yet$</td>
<td>$yen$</td>
</tr>
<tr>
<td>3rd per.</td>
<td>(y)</td>
<td>$y\hat{a}k$</td>
<td>$(y\hat{ak})yet$</td>
<td>$(y\hat{ak})yen$</td>
</tr>
</tbody>
</table>

Note that the formative $k$ singular has an alloformative
$\emptyset$ which occurs in all the first and second person regular
personal pronoun roots except when the contrastive suffix
$-ku$ is added (see 4.3.9 and 5.6).

The inch. suffixes (including person-number) are
given in Matrix 4.

Matrix 4: Inchoative future tense suffixes

<table>
<thead>
<tr>
<th></th>
<th>Sg.</th>
<th>Du.</th>
<th>Pl.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st per.</td>
<td>we</td>
<td>re</td>
<td>ne</td>
</tr>
<tr>
<td>2nd per.</td>
<td>$\emptyset$</td>
<td>yet</td>
<td>$\emptyset$</td>
</tr>
<tr>
<td>3rd per.</td>
<td>$\hat{a}k$</td>
<td>yet</td>
<td>$\emptyset$</td>
</tr>
</tbody>
</table>
In the inch. forms the formative $\eta$ indicates plural (see 4.3.9.4, note 9 in which n plural assimilates to $\eta$). It may be posited that the formative $\gamma$ has lost any person-marking significance and taken on dual significance. The form âk, as in the case of the regular personal pronouns, indicates singular redundantly. According to this analysis the forms exhibit the structure of the Immediate Future Verb and the following morphemes may be added to the inventory: $-\emptyset/-\hat{a}k/-ek$ singular, $-\gamma$ dual, $-\eta$ plural and $-e$ inchoative future.

6.2.1.4 The formatives of the permissive (§11) are not clearly discernible. Number is evident in the $l$ of $-wel\emptyset$ dual. Perhaps a zero may be posited for plural as in $-wi-\emptyset-o\eta$ since zero may indicate plural in the person-number composites (see 6.2.1.5).

6.2.1.5 The person-number composites may be analyzed to indicate that the person-marking formative precedes the number-marking formative. This is immediately apparent in comparing $-it$ 1d. with $-in$ 1p. The t marks dual and the n marks plural. One may posit that $\emptyset$ marks singular. The structure is + person + number and the formatives are given in Matrix 5.

Matrix 5: Person-number formatives of verbal subject suffixes

<table>
<thead>
<tr>
<th></th>
<th>Sg.(\emptyset)</th>
<th>Du.(t)</th>
<th>Pl.(n/\emptyset)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st per.</td>
<td>(an/i)</td>
<td>-an-\emptyset</td>
<td>-i-t</td>
</tr>
<tr>
<td>2nd per.</td>
<td>(t/wo/i)</td>
<td>-t-\emptyset</td>
<td>-wo-t</td>
</tr>
<tr>
<td>3rd per.</td>
<td>(p/wo/i)</td>
<td>-p-\emptyset</td>
<td>-wo-t</td>
</tr>
</tbody>
</table>

Note that it is necessary to posit that the $\emptyset$ indicating plural (see 4.3.9.2, note 7 for zero indicating plural in the regular personal pronoun roots)
also indicates 2nd and 3rd person. One may expect that some of the complexities in the formative structure of the person-number composites will be clarified when diachronic studies are completed.

6.2.2 The dependent verbs may be divided into two subtypes on the basis of differing periferal morphologies.

6.2.2.1 The structure of the dependent homopersonal (i.e., same subject as following verb) verb may be posited as follows: + nucleus ± benefactive + identity + mode. The fillers of the nucleus and benefactive tagmemes are the same as those of the independent verbs. The identity tagmeme is manifested by the morpheme -m homopersonal. The mode tagmeme is manifested by the morpheme {-a} -â ~ Ø punctiliar, in which -â occurs when the preceding -m follows consonants and -Ø occurs when it follows vowels, and by the morpheme -a prolonged. Examples are:

- sâ-m kinsap he stood and spoke
- sâ-ma kinsap he stood and spoke for a prolonged time
- ek-mâ kinsap he stood and watched it
- ek-ma kinsap he stood and watched it for some time

6.2.2.2 The structure of the dependent heteropersonal (i.e., different subject as following verb) verb may be posited as follows: + nucleus ± benefactive + identity + number + person. The nucleus and benefactive tagmemes manifest the same fillers as those of the independent verbs. The remainder of the periphery consists of fused forms indicating identity, person and number. In paradigm §12, one may tentatively isolate -mu heteropersonal as a second order suffix. This leaves the remaining forms indicating person-number. These are shown in Matrix 6.
Matrix 6: Heteropersonal subject-marking person-number composites

<table>
<thead>
<tr>
<th></th>
<th>Sg.</th>
<th>Du.</th>
<th>Pl.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st per.</td>
<td>-ne</td>
<td>-tne</td>
<td>-nne</td>
</tr>
<tr>
<td>2nd per.</td>
<td>-râ</td>
<td>-tâ'</td>
<td>-nêtâ</td>
</tr>
<tr>
<td>3rd per.</td>
<td>-Ø</td>
<td>-tâ</td>
<td>-nêtâ</td>
</tr>
</tbody>
</table>

In accordance with the morphophonemic rules ($V$ = any vowel), $-V + d- + -Vr-$ and $-t + d- + -t-$, these forms may be rewritten and a zero morpheme indicating singular added to yield the forms of Matrix 7.

Matrix 7: Rewritten heteropersonal person-number composites

<table>
<thead>
<tr>
<th></th>
<th>Sg.</th>
<th>Du.</th>
<th>Pl.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st per. (ne/êe)</td>
<td>Ñ0-ne</td>
<td>-t-ne</td>
<td>-n-ne</td>
</tr>
<tr>
<td>2nd per. (dâ)</td>
<td>Ñ0-dâ</td>
<td>-t-dâ</td>
<td>-nêt-dâ</td>
</tr>
<tr>
<td>3rd per. (Ø/dâ)</td>
<td>Ñ0-Ø</td>
<td>-t-dâ</td>
<td>-nêt-dâ</td>
</tr>
</tbody>
</table>

Examples follow:

ari-mu-t-dâ (go-hetero-du-2-3 per.) you/they (du) went and...
ari-mu-t-êe (go-hetero.-du.-1 per.) we (du.) went and...
ari-mu-n-êe (go-hetero.-pl.-1 per.) we (pl.) went and...
ari-mu-Ø-Ø (go-hetero.-sg.-3 per.) he went and...
Notes

1. The allomorphs indicating rpt., when given in a matrix (Matrix 2) indicating their co-occurrence with person-number formatives, reveal a clearly discernible L pattern opening to the lower left.

Matrix 2: Person-number composites and allomorphs of rpt.

<table>
<thead>
<tr>
<th></th>
<th>Sg.</th>
<th>Du.</th>
<th>Pl.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st per.</td>
<td>w-an</td>
<td>w-it</td>
<td>w-in</td>
</tr>
<tr>
<td>2nd per.</td>
<td>o-n</td>
<td>o-wot</td>
<td>w-i</td>
</tr>
<tr>
<td>3rd per.</td>
<td>o-p</td>
<td>o-wot</td>
<td>w-i</td>
</tr>
</tbody>
</table>

This raises the interesting question posited by Pike and Erickson (1964: 212) that emic matrices may prove to be subject to historical reconstruction and to occur in diachronic oscillation from approximations of simple toward ideal matrix, and from ideal toward simple matrix structures. As more data from languages related to Selepet become available, historical reconstruction of the phonological development of matrix patterns may indeed be possible.

2. This morpheme has an alternate form -sa following consonant-final fillers of the nucleus.

3. The designation 'inchoative future' is preferred over the designation 'imperative' because the idea of time is foremost. The English translation, however, is best represented by the English imperative. An alternative analysis would be to posit that the composite forms yet and yet indicate 'dual' and 'plural' respectively (see 6.2.2.2 for yet 'plural' in the heteropersonal person-number composites).
To do so would necessitate a zero allomorph indicating 'inchoative future' with the dual and plural forms. Both analyses are very tentative in view of the apparent complexities involved. Because the structure of the inchoative future verb is similar in most of the languages of the Finisterre-Huon Phylum (see 10.1.1) one may expect that diachronic study would clarify the apparent complexities.

4. The terms *heteropersonal* and *homopersonal* are adopted from P. Healey, 1965: 7.
Appendix A: Verb paradigms

The forms given in paradigms §3, 4 and 8 are analyzed in chapter seven, Phrases.

§1 remote past tense (rpt.) I went a long time ago etc.

<table>
<thead>
<tr>
<th>Sg.</th>
<th>Du.</th>
<th>Pl.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st per.</td>
<td>ari-wan</td>
<td>ari-wit</td>
</tr>
<tr>
<td>2nd per.</td>
<td>ari-on</td>
<td>ari-owot</td>
</tr>
<tr>
<td>3rd per.</td>
<td>ari-op</td>
<td>ari-owot</td>
</tr>
</tbody>
</table>

The rpt. is made habituative by the occurrence of -mini preceding the above suffixes: ari-mini-wan I used to go etc.

§2 immediate past tense (ipt.) I recently went etc.

<table>
<thead>
<tr>
<th>Sg.</th>
<th>Du.</th>
<th>Pl.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st per.</td>
<td>ari-an</td>
<td>ari-aït</td>
</tr>
<tr>
<td></td>
<td></td>
<td>-it</td>
</tr>
<tr>
<td>2nd per.</td>
<td>ari-at</td>
<td>ari-awot</td>
</tr>
<tr>
<td>3rd per.</td>
<td>ari-ap</td>
<td>ari-awot</td>
</tr>
</tbody>
</table>

The ipt. is made habituative or prohibitive by the occurrence of -m preceding the above suffixes: ari-m-ap He always goes or He should not go.

§3 inceptive future tense (icft.) I am about to go etc.

These forms are analyzed as constituting an Intenitive Verb Phrase (7.1.2.2)

<table>
<thead>
<tr>
<th>Sg.</th>
<th>Du.</th>
<th>Pl.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st per.</td>
<td>ari-woman</td>
<td>ari-româït</td>
</tr>
<tr>
<td>2nd per.</td>
<td>ari-womat</td>
<td>ari-româïwot</td>
</tr>
<tr>
<td></td>
<td></td>
<td>-romawot</td>
</tr>
<tr>
<td>3rd per.</td>
<td>ari-womap</td>
<td>ari-româïwot</td>
</tr>
<tr>
<td></td>
<td></td>
<td>romawot</td>
</tr>
</tbody>
</table>

§4 delayed future tense (dft.) I will soon go etc.

These forms are also analyzed as constituting an Intenitive Verb Phrase (7.1.2.3)

<table>
<thead>
<tr>
<th>Sg.</th>
<th>Du.</th>
<th>Pl.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st per.</td>
<td>ari-womosan</td>
<td>ari-romosait</td>
</tr>
<tr>
<td></td>
<td></td>
<td>-romosït</td>
</tr>
<tr>
<td>2nd per.</td>
<td>ari-womosat</td>
<td>ari-romosawot</td>
</tr>
<tr>
<td>3rd per.</td>
<td>ari-womosap</td>
<td>ari-romosawot</td>
</tr>
</tbody>
</table>
§5 immediate future tense (ift.) I will go, you will go, you must go etc.

1st per. ari-wom ari-rom ari-nom
2nd per. ari-wuat ari-romawot ari-nomai
3rd per. ari-wuap ari-romawot ari-nomai

§6 remote future tense (rft.) I will go in the distant future etc.

1st per. ari-wiom ari-wioit ari-wioin
2nd per. ari-wion ari-wiowot ari-wioi
3rd per. ari-wiop ari-wiowot ari-wioi

§7 future tense, habituative (hbt.) I will always go etc.

1st per. ari-bisâm ari-bisâit ari-bisâin
2nd per. ari-bisân ari-bisâwot ari-bisâi
3rd per. ari-bisâp ari-bisâwot ari-bisâi

§8 desiderative (desid.) I want to go etc. These forms are analyzed as constituting a Desiderative Verb Phrase (7.1.2.1)

1st per. ari-wesâman ari-resâmait ari-nesâmain
2nd per. ari-wesâmat ari-resâmawot ari-nesâmai
3rd per. ari-wesâmät ari-resâmawot ari-nesâmai

In addition to the above forms the desiderative may evidence labialisation after the m: [ařibësōman] etc.

§9 contrary-to-fact (ctf.) I should have gone or I might go etc.

1st per. ari-bâm ari-bâit ari-bâin
2nd per. ari-bât ari-bâwot ari-bâi
3rd per. ari-bâp ari-bâwot ari-bâi

§10 inchoative future (inch.) I must go! You go! Let him go! etc.

1st per. ari-we ari-re ari-ne
2nd per. ari-Ø ari-yet ari-ğet
3rd per. ari-ák ari-yet ari-ğet
-ek
Allomorph -ek follows vowels a and â and allomorph -âk follows vowels i, e, o, u and consonants.

§11 permissive (perm.) You may go etc.

2nd per. ari-wot ari-weloŋ ari-wioŋ

§12 dependent heteropersonal (hetero.) I went and...

(someone else)...etc.

1st per. ari-mune ari-mutŋe ari-munŋe

2nd per. ari-raŋ ari-mutŋ ari-ŋetŋ

3rd per. ari-mu ari-mutŋ ari-ŋetŋ
Chapter 7

Phrases

7.0 Introduction

Phrase syntagmemes constitute a level between the levels of clause syntagmemes and word syntagmemes. That is to say, phrases consist of tagmemes generally manifested by fillers from lower levels (word, stem, root) and they in turn generally manifest tagmemes of clause level syntagmemes.

There are four general types of phrases in Selepet: (a) verbal phrases which contain head tagmemes generally manifested by verbal classes, (b) endocentric nominal phrases which contain head tagmemes generally manifested by nominal classes, (c) adjectival phrases which contain head tagmemes generally manifested by adjectival classes, and (d) axis-relator phrases which consist of two tagmemes, axis and relator.

7.1 Verbal phrases

There are two types of verbal phrases: the Auxiliary Verb Phrase and the close-knit verb phrases. These two types differ in that auxiliary phrases contain an initial Complement tagmeme which generally manifests root and stem classes but the initial constituent of the close-knit phrases manifests independent verbs (clauses). Moreover the close-knit phrases exhibit concord in number between the verbs occurring as the initial and final constituents.

7.1.1 Auxiliary Verb Phrase (AVP.)

The AVP. has the structure + Complement + auxiliary Predicate. The Complement tagmeme (Com.) manifests
adjuncts (4.3.2 and 5.12) and the auxiliary Predicate tagmeme manifests a limited number of intransitive or transitive verb roots/stems. The verbs most frequently occurring in the auxP. are of to become, do and sà to say. The AVP. occurs manifesting the intransitive Predicate tagmeme (iP.) of the Intransitive Clause (ICl.) and the transitive Predicate tagmeme (tP.) of the Transitive Clause (TCl.). There are no formal features which can be correlated with the occurrence of any particular manifestation of the AVP. within either the iP. or tP. Rather the basis for the distribution of particular AVP. manifestations within the iP. or tP. tagmemes appears to be whether the Com. and auxP. fillers yield AVP.'s with transitivity or intransitivity; e.g., hâkâŋ ot to dislike manifests the tP. and occurs with an Object as in lok ya hâkâŋ oan (O: man, that, Com: dislike, auxP: I do) I dislike that man but gulip ot to disappear manifests the iP.

The AVP. formally resembles the occurrence of an iP. with a Manner tagmeme or a tP. with a Manner or Object tagmeme if the filler of the predicate tagmemes is a verb which also functions as an auxiliary verb and if the Manner or Object tagmemes manifest adjectival, adverbial or nominal roots or stems and directly precedes the predicate tagmeme. These latter tagmeme collocations differ from an AVP. in the following ways:

(a) Adjuncts are inseparable from their auxiliary verb. Whereas the nominal, adjectival or adverbial root or stem manifesting the Object or Manner tagmeme is subject to clause level permutations, the adjunct manifesting the Com. is not.
(b) When the clause manifesting an AVP. in the predicate is transformed to a dependent clause the adjunct is repeated with the auxiliary verb in its dependent form. The occurrence of the Object or Manner tagmeme in the dependent transform, however, is optional.

(c) In the derivation of an adjective from an AVP. the adjunct occurs with the reduplicated root/stem of the auxiliary verb. The noun as Object or the adjective or adverb as Manner is separated from the verb in the predicate tagmeme and undergoes other derivational processes in adjective derivation (cf. 5.3).

Some examples follow:

kin kin kǎn kǎn oap it oozed hatak oap he detected sorcery

ŋâtâk oap he hiccupped gulip oap he disappeared
kitik patak yap it crackled saŋ yap it dried up
kirik kârâk yap it rattled putuk yap it collapsed
bih bik giap it dripped buk buk giap it swelled up
kotok kunsap he coughed asion kunsap he sneezed
bululuŋ pilap it exploded kitiŋ kâtâŋ tuhuap he put it back together again

AVP.'s which manifest ot (oap) or sâ (yap) as the auxiliary verb and are intransitive may be made transitive by replacing the auxiliary verb by tuhu to do, pan or pilâ to throw or a limited number of other transitive verb stems and by preposing a dependent homopersonal verb. This dependent homopersonal verb generally specifies the manner in which the action was performed. For example, bâok yap it split may be made transitive as in the following: mem bâok tuhuap he
held it and split it, ligmâ bâok tuhuap he trod on it and split it and kum bâok tuhuap he hit it and split it.

As a result of the influence of Neo-Melanesian the verb tuhu to do, build, make frequently occurs as the auxiliary when a Neo-Melanesian transitive verb ending in im occurs as the adjunct. Note that many Selepet homopersonal verbs end in m so that this type of AVP. is probably analogous to the Selepet sentence which consists of a dependent homopersonal verb immediately followed by an independent verb.

drai vim tuhuap he drives it stre tim tuhuap he straightens it
pen im tuhuap he paints it sub im tuhuap he shoves it

7.1.2 Close-knit verb phrases

There are three subtypes of close-knit verb phrases: the Desiderative Verb Phrase, the Immediate Intensive Verb Phrase and the Delayed Intensive Verb Phrase. Verb paradigms illustrating these three verb phrases are found in §8, §3 and §4 respectively in Appendix A of chapter six, Words. In all of the close-knit verb phrase subtypes the constituents are inseparable; i.e., no other tagmeme may intervene.

7.1.2.1 Desiderative Verb Phrase (DVP.)

The DVP. has the structure:
```
+ inch. verb in + sâm speaking + ot- to do
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first person

Concord exists between the number indicated in the inch. verb and the number indicated in ot- to do. The inch. verb is an independent clause functioning as the object of the dependent verb sâm saying. The examples given below are written indicating grammatical structure rather than phonological unity as in paradigm §8.
When ot- occurs with ipt. suffixation the phrase has the phonological characteristics of a single word. When ot- occurs with rpt., dependent homo. or hetero., or when it is replaced by another verb, the inch. verb plus sâm constitute one phonological word and the following verb constitutes another phonological word. In over 25,000 words of text the phrase has been observed only with ot- manifesting ipt., rpt., homo. or hetero. suffixation. Informants have responded positively, however, to suggested forms with ot-manifesting ift., rft., hbt., or ctf. suffixation as in the following:

ariwe sâm otbom  (I must go, speaking, I will do(ift.))
I will want to go.

ariwe sâm otbiom (I must go, speaking, I will do(rft.))
After a long time I will want to go.

ariwe sâm otbisâm (I must go, speaking, I will always do(hbt.))
I will always want to go.
ariwe sâm otbâm (I must go, speaking, I should have done it (ctf.))
I should have wanted to go.

7.1.2.2 Immediate Intentive Verb Phrase (IIVP.)
The immediate Intentive Verb Phrase indicates action which is expected to occur immediately and has the structure:

+ ift. verb in + ot- to do
first person

When ot- occurs with ipt. suffixation the phrase has the phonological characteristics of a single word and ot- occurs in its contracted form o-. In singular forms of paradigm §3 the o- is lost. In dual and plural forms the o- and the following tense marker -a contract to form â. Some speakers, particularly younger people, replace 2nd and 3rd person, dual and plural forms with the corresponding ift. (§5) forms. The ift. verb functions as the object of ot- and concord exists between the number indicated in the ift. verb and the number indicated in ot-.

ari-wom o-a-an (go-I will, do-ipt.-I)
I am about to go.

ari-wom o-a-t (go-I will, do-ipt.-you)
You are about to go.

ari-rom o-a-it (go-we(du.) will, do-ipt.-we(du.))
We(du.) are about to go.

ari-rom o-a-wot (go-we(du.) will, do-ipt.you/they(du.))
You/they(du.) are about to go.

ari-nom o-a-in (go-we(pl.) will, do-ipt.-we(pl.))
We(pl.) are about to go.

ari-nom o-a-i (go-we(pl.) will, do-ipt.-you/they(pl.))
You/they(pl.) are about to go.
7.1.2.3 Delayed Intensive Verb Phrase (dIVP.)

The dIVP. has the same structure as the iIVP. except that the ot- occurs in a non- contracted form. Accordingly, the ipt. allomorph -sa, which follows consonants, occurs and the morphophonemic rule t - s → s yields the forms o-san 'ls, ipt.', o-sat '2s, ipt.', o-sap '3s, ipt.' etc. This construction is used to indicate intended action which will commence after a short delay. Concord exists between the number indicated in the ift. verb and the number indicated in ot-.

ari-wom o-sa-an (go-I will, do-ipt.-I)
   I will soon go.
ari-wom o-sa-t (go-I will, do-ipt.-you)
   You will soon go.
ari-rom o-sa-it (go-we(du.) will, do-ipt.-we(du.))
   We(du.) will soon go.
ari-nom o-s-in (go-we(pl.) will, do-ipt.-we(pl.))
   We(pl.) will soon go.
ari-nom o-sa-i (go-we(pl.) will, do-ipt.-you/they(pl.))
   You/they(pl.) will soon go.

In investigating possible variations of intensive phrases the writer suggested to informants various combinations of tenses and modes for the two verbs in these phrase subtypes. In general the informants' responses were inconsistent so that no definitive statement can currently be made regarding the limitations except to note that all informants rejected any occurrence of the ctf. in the second verb and permitted ctf. in the first verb only if the second verb was in the rpt., ipt. or inch.
7.2 Nominal Phrases

There are four nominal phrases: (a) the General Noun Phrase (GNP.) which is endocentric and single-centered, (b) the Closed Co-ordinate Noun Phrase (C-CoNP.) which is double-centered, (c) the Open Co-ordinate Noun Phrase (O-CoNP.) which is open ended and (d) the Origin Noun Phrase which is double-centered.

7.2.1 General Noun Phrase (GNP.)

The GNP. is the most frequently occurring noun phrase. It occurs in the axes of all the axis-relator phrases, the Attributive (Att.) and Possession (Poss.) tagmemes of the GNP. (i.e., embedded in itself), the Actor and Object tagmemes of the ICl. and TCl. respectively,

The structure of the GNP. is + (± Poss. ± (± Att. + H.’) ± Qual. ± Quant. ± Ind. ± Dem.). The GNP. consists of a Head tagmeme which typically manifests any of several nominal forms. The Head may be qualified in the following ways:

(a) the Attributive tagmeme manifesting a GNP. (usually Att.-H. or H.-Qual.), homopersonal dependent clause, names, or adjectival forms.

(b) the Possession tagmeme manifesting a Poss.Ph., regular or emphatic personal pronoun roots, or contrastive pronoun stems.

(c) the Qualifier tagmeme manifesting an adjectival form or a limited GNP. (usually H.-Qual.).

(d) the Quantifier tagmeme manifesting a numeral.

(e) the Indefinite (Qualifier) tagmeme manifesting indefinite pronouns.
(f) the Demonstrative (Qualifier) tagmeme manifesting demonstrative pronouns, regular personal pronoun roots or contrastive pronoun stems.

Note that none of these tagmemes is obligatory, but of course at least one tagmeme must appear to have an occurrence of the phrase.

The GNP. tagmemes are so presented that the usual minimal manifestation of the GNP., i.e., the Head tagmeme, is described first and this is followed by the qualifying tagmemes.

7.2.1.2 Head tagmeme (H.)

The Head tagmeme manifests a wide variety of nominal forms (see 4.3.6 and 5.1) as well as the interrogative demonstrative pronoun wuan what. The noun in the Head tagmeme may occur reduplicated with the meaning 'each and every'. When it is reduplicated the noun is marked by the suffix -ne occurring optionally on the initial occurrence of the noun and obligatorily on the latter occurrence. Such a construction expresses plural number. It has been observed in the following phrase and clause level tagmemes:

Location: kapaine kapaine ari kinbi They went and stayed at each and every village.

Axis of Bene./Cau.Ph.: sot topne topna-hât (for every food) sâwi (spoke they)

They called for each and every kind of food.

Axis of Sub.Ph.: lok topne topnaie (every sort of man) hawat ya me manbi (magic, that, hold, they lived)

Every type of person practiced white magic.
Attributive tagmeme: kapaiñe kapaiñe abolipñe (every village, owners)
the leaders of all the villages

Actor: lok topñe topñe gam tatbi Every kind of man came and stayed (here).

Object: denñe denñe nagap He knows every language.

Manner: nå hilâm hilâmñe manmâ gaman (I, every day, living, I always come)
I come (here) continually, every day.

7.2.1.2 Attributive tagmeme (Att.)

The villagers of the Att. and H. tagmemes together bear a variety of semantic relationships. In most cases the filler of the Att. qualifies the filler of the H. but there are exceptions as noted below.

The occurrence of the Att. tagmeme is dependent upon that of the H. tagmeme; i.e., when the Att. occurs the H. occurs but not vice versa. It manifests a number of fillers and each of these fillers in combination with the filler of the H. expresses a particular relationship.

When a noun denoting a body part or location occurs in the H. its relation to the noun filling the Att. is one of inclusion; i.e., the noun filling the H. is a part of the noun filling the Att. Often the Att. manifests a GNP.

goka (Att. sweet potato) esen-ñe (H: leaf-its) sweet potato leaf
hâpu (Att: bamboo) papa-ñe (H: splinter-its) bamboo splinter
sarü (Att: sea) sät-ñe (H: teeth-its) seacoast
tebe lok (Att: (Att: bow, H: man)) hohe-yehe-an
(H: midst-their-at) among the policemen
lok kaok (Att: (H: man, Qual: white)) tanam-
enene-an (H: midst-our-at) in the midst of
us Europeans
opon kalibu (Att: (H: men's house, Quant: three))
ose-yehe-an (H: midst-their-at) in the area
between the three men's houses.

When a personal name or a limited GNP. (manifest-
ing an animate noun in the H. and terminated by the
Quant., Ind. or Dem.) occurs in the Att., the Att.
indicates possession. There is concord between the
number of the filler of the Att. and the number indicated
by the possession-marking suffixes on the noun occurring
in the H. (solid lines indicating items in concord).

Proper name: Pawi emet-¥e (Att: Pawi, H: House-his)
Pawi's house
Adaria awa-
¥e (Att: Adaria, H: father-his)
Adaria's father

Limited GNP.:
lok ala (Att: (H: man, Ind: a)) tebe-
¥e (H: bow-his)
another man's bow
lok yahap (Att: (H: man, Quant: two)) kut-yet¥e (H:
name-their(du.) the names of the two men
kiap ya (Att: (H: patrol officer, Dem: that)) emet-
¥e (H: house-his) the house of that patrol
officer
ya (Att: (Dem: that)) bon¥e (H: truth-its) the truth
of that.

When nouns derived from clauses by reduplication of
the verb occur in the Att. they qualify the filler of the
H.
kalem meme (Att: (O: generosity, tP: hold2)) lok
(H: man) a generous man

ki orotqe tsuhu tsuhu (Att: (Qual: (M: not, tP: do2
-ajzer), tP: do2)) lok (H: man) an ill-behaved man

kawi piri piri (Att: (O: floor, tP: wash2)) somot (H: hair)

floor brush

umut ehék (Att: (O: picture, tP: see it2)) emet (H: house)

theatre

gelâk gaha (Att: (Act: rain, tP: come2)) sâp-ŋe

(H: time-its) rainy season.

When an unpossessed noun with or without a Qual.
tagmeme occurs in the Att. it qualifies the noun in
the H.

hat lok (Att: forest, H: man) a hunter

saru mesik (Att: sea, H: sickness) malaria

pet kulem (Att: (H: loincloth, Qual: marked)) emet-ŋe

(H: house-its) gaol.

The Att. also qualifies the H. when it is mani-
fested by a homopersonal dependent clause:
to pirim (Att: (O: water, tP: washing it)) kut-ŋe

(H: name-its) baptismal name

loum (Att: (tP: carrying it)) kukumagan (H: greeting)
greeting a person by wrapping one's arms around him.

Frequently adjective roots or stems occur in the Att.
indicating emphasis or contrast as compared with their
occurrence in the Qual. tagmeme.

hâgi den (Att: old, H: words) very useless outdated

speech

kopa den (Att: handicapped, H: words) very illogical

speech

perâk den (Att: deceitful, H: words) very deceitful talk

kâwâkoda lok (Att: promiscuous, H: man) a very promis-
cuous man
kən̂iŋ den (Att: false, H: words) misrepresentations.

The Att. may be manifested in turn by a GNP. consisting of an Att. and a H. In this construction the first Att. qualifies the H. and then this embedded GNP. qualifies the following H.

sen-yeŋe tebe-ŋe somot-ŋe (Att:(Att: eyes-their, H: bow-its), H: hair-its) eyebrows

It should be noted that many Att. - H. collocations may be confused with a noun qualified by an adjective stem derived by the adjectivizer -ŋe because formally they may be the same.

bau (Att: pig) hapə-ŋe (H: tail-its) a pig's tail
lok (H: man) bâlə-ŋe (Qual: bad-ajzer,) a bad man

The confusion arises from the similarity of the possession-marking suffix -ŋe his, her, its and the adjectivizer -ŋe. The two examples above may be distinguished because in the example lok bâlə-ŋe another adjective may be added between the H. manifested by lok and the Qual. manifested by bâlə-ŋe as in lok kaok bâlə-ŋe (man, white, bad) a bad European. The order of these two adjectives may be permuted to read lok bâlə-ŋe kaok with no change in the meaning since both qualify the H. If in the example bau hapə-ŋe the adjective kaok is added between the Att. manifested by bau and the H. manifested by hapə-ŋe the result is bau kaok hapə-ŋe (pig, white, tail-its) a tail of a white pig. If, however, the adjective kaok and the noun hapə-ŋe are permuted to read bau hapə-ŋe kaok the meaning is a white tail of a pig. This difference of meaning reflects the fact that bâlə-ŋe has an entirely
different relationship to lok than hapene has to bau; namely that of Qual. to H. rather than H. to Att.

Furthermore, in the Att.-H. collocation concord exists between the number expressed by the filler of the Att. and the possession-marking suffixes of the noun in the H. The words naom kunqe may be either an Att.-H. collocation, a child's head, or a H.-Qual. collocation, a first-born (head) child. The concord which exists in the Att.-H. collocation but which of course does not exist in the H.-Qual. collocation becomes evident if the noun naom child is changed to the plural. If the construction represents an Att.-H. collocation the concord becomes evident (shown in italics).

naom-lip-yeqe kun-yeqe (Att: children-plural-their, H: heads-their)
  their children's heads.

If, however, the construction represents a H.-Qual. collocation there is no concord.


If the collocation is Att.-H., the filler of the H. may be repeated (cf. 7.2.1.1) meaning each and every or all as in manam hodoqe hodoqe each and every dry banana leaf. If the collocation is H.-Qual., however, the filler of the Qual. is only infrequently repeated and then only to show intensification or diminution (cf. 5.3.7).

7.2.1.3 Possession Tagmeme (Poss.)

The Possession tagmeme is manifested by the Poss.Ph. (7.4.3), the emphatic personal pronoun roots (4.3.10), the regular personal pronoun roots (4.3.9), or the
contrastive pronoun stems (5.6).

The filler of the Poss. and the filler of the H. of the GNP. express a number of relationships. The most frequent is that of possession which is expressed when the filler of the Poss. is animate or has an animate referent. The filler of the H. is apparently any noun root or word (not involving derivation).

nâ-gât emet *(me-of, house) my house* nine emet my own house

Lumat-gât (Poss: *Lumat-of*) bau maren (H: pig,
Qual: *tame*) Lumat's tame pig

sêduk banearâ ye-gât (Poss: *spirits, them-of*) lâm-yene
(H: hole-their) the hole of the evil spirits.

A relationship of inclusion is shown when the noun in the H. denotes location or a body part.

mâmâ-ñe-gât (Poss: *mother-his-of*) got-ñe-ân (H: vicinity-her-at) near his mother

kât kârikên topnân nak pato âlâ talop (indp.cl: stone, cave, at-its-base, tree, big, a, it stayed)
yâ-kât (Poss: *that-of*) hikin-ñe-ân (H: dry area-its-at) at the dry sheltered spot of that big tree which stands at the base of the cave.

When the noun in the H. is abstract or a verbal noun (i.e., a noun derived from a verb or a noun with action implicit in its meaning) the filler in the axis of the Poss.Ph. indicates the recipient or beneficiary of the action expressed by the filler of the H.

be-gât (Poss: *taro-about*) bem dënë (H: story) the story about taro

lok-gât (Poss: man-for) den (H: message) a message for men (to come).
When the axis of the Poss. Ph. is manifested by a place name or name of a ceremony, the filler of the Poss. Ph. axis indicates the origin of the filler of the H.

Puleŋ-gât (Poss: Puleŋ-for) mâmâ-ğu (H: mother-its) the female ancestress from the Puleng valley

Niu Gini-gât (Poss: New Guinea-for) kapam (H: stick) fighting which originates in New Guinea (i.e., New Guinea style fighting)

Hae Oroŋ-gât (Poss: Hae Oroŋ ceremony-for) pat-ğu (H: promises-its) the promises which originate with the Hae Oroŋ ceremony.

7.2.1.4 The Qualifier Tagmeme (Qual.)

The filler of the H. may be qualified by a number of postposed adjectives occurring in the Qual. When the Qual. is repeated there is a preferred semantic ordering of adjectives. This ordering is: sex, colour, age, quality, shape, size, and quantity. This order indicates a preferred ordering of semantic categories, not construction types. Differing structural classes of adjectives generally are found in each semantic category so that any coincidence of structural classes and semantic categories is probably coincidental. This coincidence is illustrated by the category of quality which includes a variety of adjectival forms.

(a) roots:
   kopa lame, handicapped goā living
   kâsi childless maren tame

(b) stems derived by reduplication:
   esen esen soft aman aman squint-eyed
   gare gare oily
(c) stems derived by -ṇe:
   ḍalip-ṇe good  bāle-ṇe bad

(d) stems derived by -dā:
   kut-dā famous  koda-dā adulterous

(e) phrasal compounds derived from Acc.Ph.:
   tōṇe orop juicy  gutṇe orop knotty

A sampling of 19,000 words of text was undertaken to determine the limits of post-Head qualification in the GNP. All GNP. constructions of more than one post-Head phrase level tagmeme were counted. The 19,000 words of text consisted of 13,400 words of descriptive narrative (des.), 3,100 of conversation (conv.) and 2,700 of mythology (myth). The narrative text consisted mainly of narrative descriptions of the indigenous customs and history spoken for the benefit of Europeans. The conversational material consisted of conversations solely between indigenes. An examination of the use of the GNP. in the different types of text material yielded some interesting observations.

GNP.'s manifesting more than one post-Head Qual. are rare, representing only 13.8% of all occurring qualified GNP.'s. On the other hand, nouns qualified by a single Ind. or Dem. represent 35.5% of all occurring qualified GNP.'s. The myths show a very significant absence of derived adjectives or multiple qualification as well as a lower frequency of GNP. occurrence. This style undoubtedly reflects the fact that the stories were well known and concerned only the indigenous culture. In both the descriptive material and the conversational material there was need to keep the listener oriented to the subject matter; this was particularly true for
the non-indigenous listener. The conversational material included one particularly long text concerning the need for economic development and thus involved a discussion of the culture of the Europeans. It is not surprising then that the descriptive and conversational materials contain substantially more derived adjectives and generally more complex GNP. constructions.

Table A provides a tabulation of the frequency of occurrence for differing GNP. constructions. The particular combinations of Head plus other tagmeme(s) are given in the left hand column. The next three columns list the frequency of occurrence for the particular construction per 1,000 words of text as the text has been divided into the three categories: Descriptive narrative (des.), Mythology (myth) and Conversation (conv.). The right hand column gives the overall percentage of occurrence for the construction within the total number of GNP. constructions. Entry number (9) 'repeated phrases' indicates that rather than using two adjectives qualifying a single noun, the speaker has chosen to repeat the Head, each time with a different adjective: e.g., lok kaok (man, white), lok bâlene ya (man, bad, that) the white man, that bad man.
Table A: GNP Occurrences

<table>
<thead>
<tr>
<th>Head plus other Tagmeme</th>
<th>des.</th>
<th>myth.</th>
<th>conv.</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Ind.</td>
<td>12.3</td>
<td>9.0</td>
<td>20.0</td>
<td>35.5</td>
</tr>
<tr>
<td>2. Dem.</td>
<td>8.9</td>
<td>4.0</td>
<td>4.2</td>
<td>18.6</td>
</tr>
<tr>
<td>3. Qual.</td>
<td>5.4</td>
<td>5.5</td>
<td>8.7</td>
<td>16.6</td>
</tr>
<tr>
<td>4. Quant.</td>
<td>2.3</td>
<td>2.6</td>
<td>6.1</td>
<td>8.3</td>
</tr>
<tr>
<td>5. Qual. plus Ind.</td>
<td>1.7</td>
<td>3.3</td>
<td>2.3</td>
<td>5.8</td>
</tr>
<tr>
<td>6. Qual:ajs.</td>
<td>2.3</td>
<td>0.4</td>
<td>2.2</td>
<td>5.6</td>
</tr>
<tr>
<td>7. Qual. plus Dem.</td>
<td>0.5</td>
<td>1.5</td>
<td>0.6</td>
<td>2.0</td>
</tr>
<tr>
<td>8. Ind. plus Dem.</td>
<td>0.7</td>
<td>0.7</td>
<td>nil</td>
<td>1.7</td>
</tr>
<tr>
<td>9. Repeated phrases</td>
<td>0.7</td>
<td>nil</td>
<td>0.3</td>
<td>1.6</td>
</tr>
<tr>
<td>10. Qual. plus Ind./Dem.</td>
<td>0.5</td>
<td>nil</td>
<td>nil</td>
<td>1.0</td>
</tr>
<tr>
<td>11. Quant. plus Ind.</td>
<td>0.4</td>
<td>nil</td>
<td>0.6</td>
<td>1.0</td>
</tr>
<tr>
<td>12. Qual. plus Quant.</td>
<td>0.4</td>
<td>0.7</td>
<td>nil</td>
<td>1.0</td>
</tr>
<tr>
<td>13. Qual. repeated</td>
<td>0.3</td>
<td>nil</td>
<td>0.3</td>
<td>0.7</td>
</tr>
<tr>
<td>14. Qual. repeated (one manifesting lengthy derived filler)</td>
<td>0.2</td>
<td>nil</td>
<td>nil</td>
<td>0.3</td>
</tr>
<tr>
<td>15. Qual. plus Quant.</td>
<td>nil</td>
<td>nil</td>
<td>0.3</td>
<td>0.2</td>
</tr>
<tr>
<td>plus Ind./Dem.</td>
<td>0.1</td>
<td>nil</td>
<td>nil</td>
<td>0.1</td>
</tr>
<tr>
<td><strong>TOTALS</strong></td>
<td><strong>36.7</strong></td>
<td><strong>27.7</strong></td>
<td><strong>45.6</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

When multiple qualification is desired, often the GNP is repeated, the first being a H.-Dem. collocation and the second being a Qual.-Dem. collocation.

nane ya (H: my son, Dem: that) sihan álîpêe (Qual: youthful, Qual: good) ya (Dem: that) that son of mine, that one in the prime of youth

orōtmeme ya (H: custom, Dem: that) balene dođà ya (Qual: bad, very, Dem: that) that custom, that very bad (one)

hoŋ bawa ya (H: servant, Dem: that) kaok ya (Qual: white, Dem: that) that servant, the European (one).

Occasionally H.-Qual. collocations are repeated with the same filler in the H.
lok kutdâ (H: man, Qual: famous) lok yahat yahatne yu (H: man, Qual: important, Dem: this) this important and famous man.

Frequently the Qual. is repeated with the second filler expressing a meaning related to the first.
lok wawi (H: man, Qual: greedy) tepne umatne yu (Qual: heavy stomach (selfish), Dem: that) that inhospitable greedy man
waga pato (H: canoe, Qual: big) tipine bia (Qual: little not) a big canoe, not a little (one).

In paragraph structure, apparently a H.-Qual. collocation is used initially and thereafter the Qual.-Dem. collocation is used; that is, the H. is deleted. This occurs very frequently when the noun in the H. is animate or human.

ibi yâhâp (H: women, Quant: two) Wiliki-hebâ takaowot (Loc: Wiliki-from, iP: they came) Two women came from Wiliki village
Wiliki-hebâ taka taka-ñe (Qual: (Loc: Wiliki-from, iP: came^2 -ajzer.)) yu (Dem: those) those who came from Wiliki village
kadi taka taka-ñe (M: temporarily, iP: (Qual: come^2 -ajzer.)) yu (Dem: those) those who came only (to stay) temporarily.

When an adjective stem which is a phrasal compound of an Acc.Ph. (cf. 5.3.4.10) occurs in the Qual. tagmeme, concord exists between the number expressed by the noun in the qualified H. tagmeme and the number expressed by the possession-marking suffixes on the noun in the axis of the Acc.Ph. from which the adjective stem was derived. In the following examples the morphemes in concord are shown in italics.
naom-yâhât-ne obe-yêtne bia my two irresponsible children
child-du.-my necks-their (du.) without children
naom-lip-ne obe-yêne bia my irresponsible children
child-pl.-my necks-their (pl.) without.

The occurrence of this concord is probably related to the fact that there exists a transform relationship between the GNP. and the predicateless clause. Note that a GNP. may be transformed into a predicateless clause by permuting the order of the tagmemes (cf. 8.4).

lok sobo ya (H: man, Qual: old, Dem: that) that old man
lok ya sobo (H: man, Dem: that, Qual: old) that man is old

Similarly:

naomlipne ya obeyêne bia (H: my children, Dem: those, Qual: their necks, without) those children of mine are irresponsible.

Similarly concord exists between the number of the noun in the axis of the Acc.Ph. from which the adjective stem was derived and the number expressed by fillers of the Quant.

naom-lip-ne obe-yêne bia sesegât my many irresponsible children
child-pl.-my necks-their (pl.) many children without

An adjective stem derived by suffixation of the adjectivizer -êne to a reduplicated verb root/stem exhibits the same sort of concord. In the following example concord exists in number between the noun manifesting the Actor tagmeme underlying the derived adjective and the number of the fillers of the Quant. and the H.

buku-lip-êne hâme-yêne mumuê sesegât his many unsociable friends
friend-pl.-his noses- dead many friends
their (pl.)
7.2.1.5 Quantifier Tagmeme (Quant.)

This tagmeme manifests the numerals (4.3.7, 5.4) or adjectival forms indicating quantity (4.3.1).

As a result of the influence of Neo-Melanesian, present day speakers rarely use a Selepet numeral higher than five in the Quant. tagmeme, and in isolated utterances they rarely use a numeral larger than ten, except perhaps for twenty or its multiples. Rather, Neo-Melanesian numerals are used or the speakers merely use an adjective meaning 'many, plenty'.

Also, probably as a result of Neo-Melanesian influence, the numeral or adjective indicating quantity may be permuted to a position preceding the Att. tagmeme. Such usage is rare and does not occur when the GNP. manifests tagmemes other than the Att. and H.

nobolân konok kilok six o'clock
amon kilok otmu (how much, time, it happens) what time is it...
kalibu wahap three things.

7.2.1.6 Indefinite (qualifier) Tagmeme (Ind.)

This tagmeme manifests the indefinite pronoun roots (4.3.5).

7.2.1.7 Demonstrative (qualifier) Tagmeme (Dem.)

This tagmeme typically manifests the demonstrative pronouns (4.3.4, 5.11) and infrequently manifests the regular personal pronoun roots (4.3.9) or contrastive pronoun stems (5.6).

7.2.1.8 Core Substitutions

The core of the GNP. is here defined as the Poss., Att. and H. tagmemes. The regular personal pronoun roots, the interrogative demonstrative pronoun wûân (4.3.4.2),
Transitive or Intransitive clauses (and therefore certain sentence types) Co-ordinate Noun Phrases (7.1.3), and names substitute for the GNP.core. Rules indicating deletion and co-occurrence restrictions are necessary; e.g., one such rule would specify that when the regular personal pronoun occurs in the embedded Co-ordinate noun phrase it would not occur in the Dem. tagmeme.

nen kalibu (GNP.core: we, Quant: three) we three
nen heleŋ yu (GNP.core: we, Qual: black, Dem: these) we black people here
wuån gogoŋe (GNP.core: what, Qual: bent) which bent thing

emelâk kara tuhuakminiwi (GNP.core:(indp.cl.: long ago they used to do sorcery to one another)) konok ya (Quant: one, Dem: that) bâleyingiminiop (tP: it used to harm them) Long ago, that one practice of performing sorcery upon each other used to be harmful to them.

O-CoNP: (kara otmu (sorcery, and) tebe ahominiwi otmu (bow, they used to fight, and) tep tetminiwi (excre­ment, they used to excrete)) kalibu ya (Quant: three, Dem: that) those three things of sorcery, battle with bows and arrows, and excretion.

When personal names occur in the GNP. core they are frequently qualified by a personal pronoun in the Dem.

Muneŋ Yigua yet-kât (Poss: Muneŋ Yigua them(du)-for) laín pato (H: lineage, Qual: big) Muneŋ and Yigua's large lineage
Ise Kâte Hulinân Waporâ ya ye-gât (Poss: Ise, Kâte, Hulinân, Waporâ their-for) opon (H: men's house) the men's houses of Ise, Kâte Hulinân and Waporâ.
7.2.2 Origin Noun Phrase (ONP.)

The ONP. is used exclusively to show origin of something in space or time. It is distinctive in that it has two obligatory tagmemes each manifested by a restricted range of fillers. The structure is + Origin Head^n + gâtṇe^2 one for ± Ind. ± Dem.

The Origin Head (oH.) may be manifested only by words or constructions denoting time or location. Up to four repetitions of the oH. have been observed.

7.2.2.1 Time Expressions

emelâk (before) gâtṇe one from out of the past, an aged person

kâdikum (at first) gâtṇe the one who started it

7.2.2.2 Locative expressions

The locative expressions include place names, regular personal pronoun roots and Loc.Ph.

(a) Place names:

koba (Komba) gâtṇe a person from the Komba tribe
GilaQ (village name) gâtṇe a person from GilaQ

(b) Regular personal pronoun roots:

yâk (them) gâtṇe one from among them
nen (us) gâtṇe one from among us

(c) Locative Axis-relator Phrase:

kalam-ân (Loc: garden-in) gâtṇe garden produce
nep hâgiQe-ân (loc: garden, old-in) gâtṇe something (to plant) from the old garden
Gâtok-gât teQi-ân (Loc: Gâtok-of, stomach-his-at) gâtṇe a descendant of Gâtok
mâni yu-pa (Loc: money, this-out of) gâtṇe some (more) of this money
7.2.2.3 Repetition of the tagmemes

The oH. tagmememe is repeated when the filler of the repeated oH. tagmememe is more general than that of the first oH.

nep-âbâ (Loc: garden-out of) ya-pâ (Loc: that-out of) gâtñe something from that (place), from that garden patro post Wasu (Loc: Wasu patrol post) ya-pâ (Loc: that-out of) gâtñe the patrol officer from there, from Wasu.

When gâtñe is repeated the meaning is each and every one from or all from as in yen gâtñe gâtñe all from over there.

7.2.2.4 Qualification of the ONP.

The ONP. is qualified only by the Ind. and Dem. tagmememes. Adjectival and numeral qualification is shown by the phrase occurring in collocation with a GNP.

koba gâtñe (Loc: Komba tribe; one for) lok sobo ya
(H: man, Qual: old, Dem: that) that old man from Komba
kâdikum gâtñe (T: starting out; one for) atânê (his elder brother) his first-born brother
hohetñe-ân gâtñe (Loc: its midst-at; one for) gasumñe yu (H: his side, Dem: this) the rib from his side here.

7.2.3 Co-ordinate Noun Phrases

The GNP. may be conjoined to form two types of Co-ordinate Noun Phrases, the Closed Co-ordinate Noun Phrase (C-CoNP.) and the Open Co-ordinate Noun Phrase (O-CoNP.). These two phrases differ in the following ways:
(a) The C-CoNP. has no more than two Head tagmemes; the O-CoNP. is open ended and theoretically has an unlimited number.

(b) The C-CoNP. manifests the 2-3d regular personal pronoun root yet as connector; the O-CoNP. has the connectors omu and me or.

(c) The C-CoNP. may not be interrupted by a verb root, a Locative Axis-relator Phrase or the word mâne and so forth, etcetera; the O-CoNP. may be so interrupted.

(d) The C-CoNP. Head tagmemes manifest only unqualified nouns, names or pronouns; the O-CoNP. manifests the GNP. with no apparent restrictions as well as clauses and sentences.

(e) As a corollary to (d) deletion rules are not operative on the C-CoNP. but are operative on the O-CoNP.

7.2.3.1 Closed Co-ordinate Noun Phrase (C-CoNP.)

The C-CoNP. consists of two Head tagmemes each manifesting a nominal form, name or regular personal pronoun root joined by a Connective tagmeme manifesting the regular personal pronoun root yet 2-3d. The fillers of the two Head tagmemes must be of the same semantic category; e.g., gå you does not occur with emet house; neither would bęa kåit taro cultigen occur with goka sweet potato (generic term).

When the Head tagmemes are manifested by names, the phrase usually occurs in substitution for the core of the GNP. and is qualified by the Dem. or it occurs in collocation with a GNP. in a repetition of the tagmeme
it manifests. This is particularly the case when the phrase occurs in tagmemes other than Subject or Object. When nouns occur in the Head tagmemes, however, the phrase may or may not occur embedded in the core of the GNP. before occurring in clause level tagmemes. The C-CoNP. has been observed filling the following clause and phrase level tagmemes:

(a) Actor of ICl:
Idum yet Hulinân (Act: Idum and Hulinân) gaowot
(P: they came) The inhabitants of the Idum and Hulinân men's houses came.

(b) Subject of TCl:
Yawo yet Yemet yâk-çe (S: (GNP.core: Yawo and Yemet, Dem: they) -sub.) kuowot (tP: they killed it) Yawo and Yemet killed it.

(c) Object of TCl:
aom ya (S: boy, that) Yawo yet Yemet (O: Yawo and Yemet) ekyotkomu (tP: he told them) that boy told Yawo and Yemet...

(d) Attributive of GNP:
Porom yet Lâpio ya kut-yetçe (Att:(GNP.core: Porom and Lâpio, Dem: that)) (H: names-their) Inân yet Wahapdâ (Inân and Wahapdâ) The names of Porom and Lâpio (are) also Inân and Wahapdâ.

(e) Possession of GNP:
Inân yet Wahapdâ yâkyet-kâ (Poss:(GNP.core: Inân and Wahapdâ, Dem: them-)for) sen pato (H: lineage, Qual:big) the big lineage of Inân and Wahapdâ.
(f) Locative Axis-relator Phrase:
Dumut yet Mâdì yâkyetkât-ân (Loc: (Poss:(GNP. core: Dumut and Mâdì, Dem: their)-for)-at) at Dumut and Mâdì's (place)
kaokao yet mâtuk-ân (Loc: cocoa and coconut-at) at (the work of) cocoa and coconut (raising).

(g) Accompaniment Axis-relator Phrase:
Âni yet Tumâŋ yâk orop (Acc: (GNP.core: Âni and Tumâŋ, Dem: them), with) with Âni and Tumâŋ.

(h) Benefactive Causal Axis-relator Phrase:
Selepet yet Kawum ye-gât (Bene:(GNP. core: Selepet and Kawum (villages), Dem: them)-for) for (the inhabitants of) Selepet and Kawum villages.

7.2.3.2 Open Co-ordinate Noun Phrase (O-CoNP.)
There are two subtypes of Open Co-ordinate Noun Phrases, the Additive Open Co-ordinate Noun Phrase (AddO-CoNP.) and the Alternative Open Co-ordinate Noun Phrase (AltO-CoNP.). Both types have the structure:
+ocH. + (± ocH... [± connector (otmu or me)] ± ocH...)
The O-CoNP. consists of two or more open co-ordinate Head tagmemes connected by either the connector otmu and or the connector me or.

No statement can be made regarding the regularity with which the connectors occur. Differing speakers insert or omit them at random.

Kaok, Amerîka otmu Austrelia otmu Japan yen White (people) Americans and Australians and Japanese you
Amerika Austrelia German otmu England otmu kaok topge
topge
Americans, Australians, Germans and British and every
nationality of Europeans

The two subtypes, AddO-CoNP. and AltO-CoNP, differ
in that in the additive sub-type the connector otmu and
is completely optional and so may not occur at all as
in:
Pebuŋ Peraru Kalasa Luam (village names) yane (they)
gam (came and...)
The people of Pebuŋ, Peraru, Kalasa and Luam came and...

In the alternative sub-type the connector me or must
occur at least once and in fact is rarely omitted.
lohibiliŋe me papatolipne awàŋ mâmâŋe (his people, or,
leaders, parents) ya yegât (those, theirs)
(that) which belongs to his people or leaders or
parents...

There appears to be no restriction as to the sorts of
constructions which may be connected.
baratyetŋe konok (GNP: (H: their-daughter, Quant: one))
ottmu (and) lohibi sobo yâhâp (GNP: (H: people, Qual:
old, Quant: two)) ya (Dem: those)
that one daughter (of theirs) and those two old people
kara (H: sorcery) otmu (and) tebe ahominiwi (TCl: (O:
bow, tP: they fought)) tep tetminiwi (TCl: (O: excre-
ment, tP: they excreted)) ya (Dem: that)
That sorcery and battle with bows and arrows and
excretion...

7.2.3.3. Interruptions

These phrases may be interrupted or terminated by
the word mâne and so forth, etcetera. When mâne occurs,
the connector is omitted at that point in the series.

lok topnenge (the origin of us men), Koba Tibe
Selepet mâne (Komba, Timbe, Selepet, etc.) Pinsapen pâto (the big Finschhafen area) otmu Siassi (and Siassi Islands) the origin of us men, (the men of) Komba, Timbe, Selepet etcetera--(including) the large Finschhafen area and the Siassi Islands...
sogo, hanangen takpanan dehom bahan dia mâne (kinds of animals) tâkpanan, dehom, bahan, dia, etc.

Frequently the O-CoNP. is interrupted by a Loc.Ph. or verb roots indicating movement. These most often occur when a speaker is giving a list of place names.

Waku Peko Kabip mâne ewaken Weke (the places of) Waku, Peko, Kabip and others, up there (the place of) Weke...

asawok gogoense eda (k. of tree, crooked, that) otmu yâhâ (and, going up) Hemnâk (place name) otmu yâhâ (and going up) Wainep Bâlân (Wainep, Bâlân places) that crooked asawok tree over there and going on up, Hemnâk, and going on further, Wainep and Bâlân...

7.2.4 Co-ordination and Deletion

When noun phrases are joined in co-ordinate constructions the Possession, Attributive or Demonstrative tagmemes may be deleted if they manifest the same fillers and qualify differing fillers of the Head tagmemes.

In a series of Possession tagmemes all but the first are deleted:

nâ-gât awâgne (Poss: me-of, H: my father) nâ-gât yâwutne (Poss: me-of, H: my uncle) nâ-gât seselipne (Poss: me-of, H: my grandfathers) becomes nâ-gât awɔnne yâwutne seselipne (Poss: me-of, H: my father,
H: my uncle, H: my grandfathers) my father, uncle and grandfathers.

In a series of Attributive tagmemes all but the first are deleted:

naom yio(Me- gåt (Bene: (Att: child, H: his-uncle)-for)
naom awâne-gât (Bene: (Att: child, H: his-father)-for) naom mâmâne-gât (Bene: (Att: child, H: his-mother)-for) becomes naom yio(Me- gåt (Bene: (Att: child, H: his uncle)-for) awâne-gât (Bene: his father-for) mâmâne-gât (Bene: his mother-for) for the child's uncle, father and mother.

In a series of Demonstrative tagmemes all but the last are deleted:


The Head tagmemes may be deleted when they manifest the same fillers, but the fillers of qualifying tagmemes are different.

egatyene-ân-gât tihitne (Poss: (Loc: their necks-on)-for, H: health) buwuripyene-gât tihitne (Poss: their napes-for, H: health) becomes egatyene-ân-gât (Poss: (Loc: their necks-on)-for) buwuripyene-gât tihitne (Poss: their napes-for, H: health) healing for the fronts of their necks and the napes of their necks

lok papato (H: man, Qual: very big) otmu (Conn: and) lok sihan (H: man, Qual: youthful) becomes lok papato (H: man, Qual: very big) otmu (Conn: and) sihan (Qual: youthful) big and young men.
7.3 The Adjectival Phrase

The Adjectival phrase is single-centered and consists of an adjective-Head tagmeme (ajH.) followed by an Intensifier tagmeme (Intens.). The function of the phrase is to show intensification of adjectival forms. The ajH. tagmeme manifests various adjective roots (4.3.1) and adjective stems derived by the adjectivizer -ŋe (5.3.1) or -dâ (5.3.5).

The Intens. tagmeme manifests four adjectival forms: âlipnə̱ good, bâleṇ̃e̱ bad, pato big, and dodâ much, many. If the adjective to be intensified represents a generally desirable quality it occurs with âlipnə̱ good as intensifier.

hîkinne âlipnə̱ very dry (of firewood)
maren âlipnə̱ very tame
salek âlipnə̱ very clean
sîhan âlipnə̱ very young, youthful

If the adjective represents a generally undesirable quality it occurs with bâleṇ̃e̱ bad:

kopa bâleṇ̃e̱ very handicapped
seduk bâleṇ̃e̱ very crazy

If the adjective represents a quality which in some cases may be considered good while in other cases it may be considered bad then either âlipnə̱ good or bâleṇ̃e̱ bad occurs depending upon which quality is in consideration.

kârîkne bâleṇ̃e̱ very strong (of wild animals)
kârîkne âlipnə̱ very strong (of strength as a virtue)
hewewen bâleṇ̃e̱ very light (of Japanese war currency)
hewewen âlipnə̱ very light (of a burden)
If neither the bad nor the good quality is in focus then the adjective may be intensified by either pato big or dōdâ many, much.

kālāp dōdâ very hot umatē dōdâ very heavy

When the adjectives ālip̣ẹ good and bâlẹẹ bad occur in ajH. tagmeme, they are intensified by dōdâ much, many:

ālip̣ẹ dōdâ very good and bâlẹẹ dōdâ very bad

When the noun occurring in the Head tagmeme of the GNP. is a plural count noun and is qualified by ālip̣ẹ, then ālip̣ẹ may be intensified by the suffix -āk only plus an optional occurrence of the adjective kerek all:

nimnaom ālip̣ẹāk kerek completely good children

7.4 Axis-relator phrases

All axis-relator phrases have the structure + Axis + Relator. The Axis tagmemes manifest nominal phrases, axis-relator phrases, clauses and sentences, as well as most root, stem and word classes. The Relator tagmemes manifest relator enclitics or roots which are generally diagnostic for the particular sub-type of axis-relator phrase and which correlate with the distribution of the phrases in clause level tagmemes. The following axis-relator phrases occur.

7.4.1 Subject Axis-relator Phrase


7.4.2 Benefactive/Causal Axis-relator Phrase

Bene./Cau.Ph. = Axis plus Relator:{-gât}. The Bene./Cau.Ph. occurs in the clause level Benefaction
and Cause allotagmas. There are two allomorphic variants of the enclitic: -kât occurs suffixed to the demonstrative pronoun roots (4.3.4), and -gât, which has morphophonemic variants, occurs suffixed to other forms.

7.4.3 Possessive Axis-relator Phrase

Poss.Ph. = Axis plus Relator: {-gât}. This enclitic is the same as that of the Bene./Cau.Ph. The Poss.Ph. differs from the Bene./Cau.Ph. in that it is relevant to a lower level of the grammatical hierarchy; the Bene./Cau.Ph. occurs in the Benefaction or Cause allotagmas at the clause level but the Poss. Ph. occurs in the Possession tagmeme of the GNP. This relevancy is evidenced by the dependence of the Poss. Ph. upon a following element of the GNP. of which it is a part. The Poss.Ph. always immediately precedes another element of the GNP. and if the clause level tagmeme manifesting the GNP. is permuted to another position in the clause the position of the Poss.Ph. within the GNP. is not affected. The Bene./Cau.Ph., however, is subject to clause level tagmeme permutations (8.3) and may precede any of the fillers of other clause level tagmemes.

Some general features relating to the occurrence of expansions within the Axis of the Poss.Ph. may be noted. When the GNP. occurs in the Axis of a Poss.Ph., the GNP. normally does not manifest more than three tagmemes. The most commonly manifested tagmemes are Head, Qual. and Dem.

(a) Head and Ind.

\[\text{mesîk (H: sickness) âlá (Ind: another) -gât (for)}\]
\[\text{sokî sokî (H: insects) germs which cause another illness}\]
(b) Head, Qual. and Dem.

lok (H: man) kutdâ (Qual: famous) ya (Dem: that)
-kaî (for) emet (H: house) the house of that
famous man.

When a GNP. consisting of the Att. and H. tagmemes
occurs in the Axis of the Poss.Ph., it usually occurs
substituted for the GNP. core and qualified by Dem.
kapam abône (GNP.core: (Att: stick, H: its owner))
yâk (Dem: him) -gât (for) kapai (H: village) the
village of the battle chief.

When a GNP. manifesting an embedded clause and a
demonstrative pronoun occurs in the Axis of a Poss.Ph.,
ambiguity occurs with a construction consisting of two
independent clauses conjoined by the conjunction yakât
therefore.

lok kâbukçe hawat kâmelop ya-kaî delem
man forbidden magic he planted that-for shell
it
âlâ hârewi
another they cut it

This construction may be interpreted as two clauses:
The practitioner planted the blessing. Therefore
(yakât) they prepared the payment. Or it may be
interpreted as a clause plus the demonstrative (ya)
manifesting the axis of a Poss.Ph. marked by the clitic
-kaî of: They prepared the pay of the practitioner
who planted a blessing. Phonological and grammatical
features resolve the ambiguity. In order for the
former interpretation to be correct, a potential pause
point occurs following kâmelop and yakât is commutable
with yañaâk therefore.
The occurrence of multiple Poss.Ph.'s in succession is possible although in text material such occurrences are extremely rare. In a sequence of Poss. Ph.'s the first qualifies the second, etc.


the essence of the New Guinean's method of fighting

The Poss.Ph., when manifesting regular personal pronoun roots in the Axis, serves the same purpose as the nominal possession-marking suffixes and is regularly used to show possession with those nouns which do not accept nominal possession-marking suffixes.

nen-gât den (us-for, language) = den-nenŋe (language-our) our language

kaok ye-gât (white, them-for) mesik (sickness) takamu (it came) the European's sickness came...

rather than

*kaok mesik-yeŋe (white, sickness-their) takamu (it came)

7.4.4 Locative Axis-relator Phrase

Loc.Ph. = Axis plus Relator: {-ân} to, at, in, into, upon, {-âbâ} through, by way of, out of, from among, {-âŋeŋ} to, towards, into, on, at, and {-âŋeɓâ} from.

These enclitics may be divided into two groups: the first group contains only {-ân} and occurs with any verb manifesting the Predicate tagmeme and the second group contains the remaining enclitics and generally occurs with verbs indicating motion. In addition to the verbs of motion given in 5.2.3 some other verbs which include the idea of motion are dâi to pull, hidâ to pull out, hangu to bury, descend, kion to fall over, wat to chase and yerâ to shoot. The enclitics have the following allomorphs.
7.4.4.1 {ân}: -ân follows consonants, vowels i, e, o, u and demonstrative pronoun root as in emetñe kamenân ki yâhâwuat you must not go into his empty house; kapaiân to the place, yan there; -an follows emet house as in emelan in the house; -en follows a, å or o as in toen in the water, abaein in the men's house, bârân in the bush.

These clitics do not occur following place names or regular pronouns.

7.4.4.2 {âbâ}: -âbâ follows adjectival forms, demonstrative pronoun roots won- where, nouns, Poss.Ph. and clauses as in saru patoâbâ by way of the big sea, wonâbâ by which way, sumâbâ through the graveyard; -bâ follows demonstrative pronoun roots ebu, edu, ewu; -pâ follows demonstrative pronoun roots eba, eda, ewa, ya, yu, yi and wosa.

7.4.4.3 {ângen}: -ângen follows adjectival forms ending in e, unpossessed nouns and Poss.Ph. as in kaliwângen into the distance, howângen on the ripening rack, yegâlângen to their place; -engen follows âlå another as in âlângen to another place; -gen follows nouns marked for possession, adjectival forms ending in e and names as in emetnehen in his house, bâlenehen at the bad (place), Bemtapgen at Bemtap; -ken follows demonstrative pronoun roots eba, eda, ewa, ya, yu, yi and wosa.

7.4.4.4 {ânegebâ}: -ânegebâ follows adjectival forms not ending in e, Poss.Ph. and clauses; -engebâ follows âlå another, âlâengebâ from another place; -hebâ/-gebâ follows possessed nouns, ajs. ending in e and names as in to sennehegebâ from the spring, Lâwingebâ from Lâwin;
kebâ follows demonstrative pronoun roots eda, eba, ewa, ya, yu, yi and wosa.

7.4.5 Manner Axis-relator Phrase

Man.Ph. = Axis plus Relator: {-âk}. There are three allomorphs of {-âk}: -âk occurs following vowels i, e, o, and u; -ok occurs following ya that; and -ek occurs following vowels a and å. The adverb stems of 5.5.3 may be regarded as simple Man.Ph.'s.

7.4.6 Accompaniment Axis-relator Phrase

Acc.Ph. = Axis plus Relator: -nâit with, orop with, bia without, or -dâ with. The suffix -dâ has morphophonemic variants. The relator bia follows all nominals; -nâit follows only animate nouns not marked by possessive suffixes; -dâ follows any noun not marked by possessive suffixes; and orop follows nouns which are marked by possessive suffixes. When -dâ occurs the phrase is usually embedded in the axis of the Man.Ph. as in itâ-dâek takap He came with a string bag (i.e., in the manner of carrying a string bag).

7.4.7 Instrument Axis-relator Phrase

Inst.Ph. = Axis plus Relator: kâdâk or -nê. The form kâdâk has not been observed following demonstratives and informants reject such constructions as not fully acceptable. The relator -nê, on the other hand, follows demonstratives when they are preceded by a clause as in example 15e (following Table B). When -nê follows a noun root, the resulting Inst.Ph. usually occurs embedded in a Man.Ph. as in tebe-nêak (i.e., -nê-âk) yerâwan with a bow I shot it.

7.4.8 There are certain limitations regarding the occurrence of particular subtypes of the higher level
constructions in the axes of the axis-relator phrases and these limitations are summarized in Tables B and C. Because a wide range of root, stem and word classes, as well as construction types, occurs in the axes of many of these phrases, attention is given primarily to those combinations which involve other axis-relator phrases and clauses occurring in the axes of a particular phrase because these are the most interesting.

It should be noted that particular combinations of different modes and/or tenses of the clause embedded in the axes and of the clause manifesting these phrases yield syntagmemes which seem to parallel particular sentence syntagmemes as analyzed for other New Guinea (NAN) languages. For example, the structures of the reason sentence and the thematic sentence in Kewa (Franklin, 1969) seem parallel to those of examples 1g and 5g following Table B. A comparison of the treatments of such dependent clauses in Telefol (P. M. Healey, 1966), Kewa (Franklin, 1969) and Selepet in this thesis seems to reveal primarily different emphases. Healey focussed on the different types of linkages between clauses; Franklin focussed on the kinds of relationships expressed by the two conjoined clauses (e.g., reason-result, thesis-antithesis); and the present writer focuses on relationships expressed between various modes and/or tenses of the verbal forms of embedded clauses and of the verbal forms occurring in the Predicate tagmeme of the clause manifesting these embedded clauses. Whereas Healey and Franklin treated these clausal relations as conjoining at levels above that of clause, the present writer treats them as embedding at the phrase level.
Table B: Clause manifestations in axis-relator phrases

The lettered columns represent the relators and the numbered rows represent tense and mode variations within the clauses manifesting the axes: \(x = \) occurrence; \(- = \) non-occurrence; other relevant information is given in an abbreviated form in the cells and commented on in the illustrative data. The number and letter combinations representing the cells of the table refer to the illustrative data.

<table>
<thead>
<tr>
<th>Indp.Cl. (tense/mode)</th>
<th>a</th>
<th>b</th>
<th>c</th>
<th>d</th>
<th>e</th>
<th>f</th>
<th>g</th>
<th>h</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Time</td>
<td>loc.</td>
<td>sub.</td>
<td>acc.</td>
<td>inst.</td>
<td>man.</td>
<td>bene./cau.</td>
<td>poss</td>
</tr>
<tr>
<td>1. ipt.</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x*</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x**</td>
</tr>
<tr>
<td>2. rpt.</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x*</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x**</td>
</tr>
<tr>
<td>3. rpt./ipt. hab.</td>
<td>use</td>
<td>dpcl.</td>
<td>x</td>
<td>x</td>
<td>*</td>
<td>x</td>
<td>x</td>
<td>x**</td>
</tr>
<tr>
<td>4. proh.</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>ya-(_)e</td>
<td>that-with</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>5. ctf.</td>
<td>sāp-(_)an</td>
<td>time-at</td>
<td>ya-(_)an</td>
<td>x</td>
<td>*</td>
<td>---</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>6. inch.</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>ya-(_)e</td>
<td>that-with</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>7. ift.</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x*</td>
<td>ya-(_)e</td>
<td>that-with</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>8. rft.</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x*</td>
<td>ya-(_)e</td>
<td>that-with</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>9. hbt.</td>
<td>---</td>
<td>---</td>
<td>x</td>
<td>*</td>
<td>ya-(_)e</td>
<td>that-with</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>10. Dp.Cl. hom. punct.</td>
<td>ya-(_)an (that-at)</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>x</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>11. homo. pro-(_)longed.</td>
<td>ya-(_)an (that-at)</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>12. hetero.</td>
<td>ya-(_)an (that-at)</td>
<td>ya-(_)an (that-at)</td>
<td>---</td>
<td>x</td>
<td>ya-(_)e</td>
<td>that-with</td>
<td>x</td>
<td>x</td>
</tr>
</tbody>
</table>

Verb Phrases

| 13. intent. | x  | --- | x  | x  | --- | x  | x  | **|
| 14. desid.   | x  | --- | x  | x  | --- | x  | x  | **|
| 15. Predicate-less Clause | --- | x  | x  | ya/yâk \(that/ him\) | ya-\(\_\)e | that-with | --- | x  | **|
The clause occurs followed by either ya/ya'k that/him or the nominalizer -ne.

** The clause occurs followed by ya which yields yak'at of that.

Loc.Ph.

When clauses occur embedded in the axes of Loc.Ph.'s the various locative enclitics specify either the location in space or time of the action or event stated by the embedded clause or they specify that the action or event of the final independent clause occurs in spite of that of the embedded clause. These differences in meaning of the enclitic are determined by the context. The meanings attributed to the enclitics are: -ân indicates location in space or time; -ângen and -ângebâ seem to indicate only location in space; and -âbâ indicates location in space as well as action which occurred in spite of another action.

Note that the tenses of the verbs in the embedded clause and the independent clause are the same in examples 1a and 2a. Also note that the modes of the verbs in the embedded clause and the independent clause are the same in examples 10a and 11a and that the verb in the independent clause is in a future tense in example 13a.

(a) Time

1a. arian-ân muap (I went-at, he died) He died when I went (this morning).

2a. ariwan-ân muop (I went-at, he died) He died when I went (yesterday).

5a. tuhubâm såp-ân (I should have built it, time-at) at the time (when) I should have built it
7a. ariwuat-ân when you will go
8a. ariwiop-ân when he will go (next month)
10a. sàm kinmâ ya-ân yahalop (speaking, standing, that-at, he arose) As he spoke he got up.
    sàm-ân kuko olol (speaking-at, anger, he did)
    When he spoke he was angry.
11a. sàma ya-ân koko tOtisâp (speaking on and on, that-at, anger, he will always do) Whenever he will speak he will be angry.
    sàma-ân kuko otomp (speaking on and on-at, anger he always does) He is always angry when he speaks.
12a. arimune ya-ân (I went, that at) When I went...
13a. ariwoman-ân welâmnân takawuap (I intend to go-at, to my place, he will come) When I am about to go, he will come to (take) my place.
14a. ariwe sàm oan-ân takap (I will go, saying, I do-at, he came) As I wanted to go he came.

(b) Location
1b. utun siap-ân ariwe (smoke, it burns-at, I must go)
    I must go to the smoke.
2b. utun siop-ân ariwom (smoke, it burnt-at, I will go)
    I will go to the place where there was smoke.
    Kadikum talon-âbâ tohowi (at first, you stayed-through, they came)
    They came through the place where you first stayed (when you came to live among us).
3b. sap âradânjak utun semap-ân ariwe (time, always, smoke, it always burns-at, I must go)
    I must go to the place where there is always smoke.
3b. Iok sobo âlâñe  Iok ñerek neyekmap-âbâ yet teteawot
man old an-sub. men all he devours-in you you were
them spite (du.) born
of
You (du.) were born in spite of that old man eating up
all the men.

mesik takamap-ângen arimu  benge mesik pato otmain
sick- it comes-to it then sick- big we do
ness  goes  ness
Whenever it goes to a place where sickness comes we
are very sick.

5b. ples balusi tuhubâi ya-ân ariwom (place, airplane,
they should have built it, that-at, I will go)
I will go to the place where they should have
built the airstrip.

7b. soroñ unomai-ân ariwom (old garden, they will burn
it-at, I will go)
I will go to the old gardens which they will burn.

8b. hobâñ kakñan sitesan tuhuwio1-ân manbom (holiday, on
top of it, European centre, they will build it-at, I
will live)
I will live at the European centre which they will
build after Christmas.

12b. kâlâp huhumu ya-ân ariwom (firewood, he smashed it,
that-at, I will go)
I will go to where he is chopping firewood.

15b. balusi ya bâlene-ân ariwom (airplane, that, bad-on,
I will go)
I will go on the airplane which is bad (i.e., old
and perhaps unreliable).
(c) Sub.Ph.

1c. yiwereŋe takap-ŋe arap (just now, he came-sub., he went)
The man who just came went away.

2c. mukan takaŋp-ŋe yuwu yap (yesterday, he came-sub., like this, he said)
The man who came yesterday said this.

3c. lokaŋ yasi Ariŋaŋ kuŋ otm PNG girawu tuhutap (man, that, time, always, anger, he always does-sub., like how, he did)
How did that man who is angry all the time behave?

5c. lokaŋ yasi Lae ariŋnap-ŋe yiwereŋe tetem takap (man, that, Lae township, he should have gone-sub., just now, appearing, he came)
That man who should have gone to Lae has just now arrived.

7c. Lae ariwuap-ŋe taka den sâm eknohom arap (Lae township, he will go-sub., come, words, speaking, telling me, he went)
The man who will go to Lae came, talked to me and went away.

8c. gâmâlâk Alâengen ariwuap-ŋe taka den sâm ekno hômu bi a sûmune kuŋ otmâ arap (later, at another (time), he will go-sub., come, words, speaking, he told me, no, I said, anger, doing, he went)
The man who will go at a later time came and talked to me; I said no and he was angry as he went away.

9c. bûkune yuân ibisâp-ŋe sûm ki eknohap (my friend, here, he will always sleep-sub., speaking, not, he told me)
My friend who will always sleep here did not tell me.
13c. ariwomap-ŋe tap (he will go-sub., he is here)
The one who will go is here.

14c. arlwe sâm oap-ŋe tap (I will go, saying, he
did-sub., he is here)
The one who wants to go is here.

15c. ya tep korokŋe-ŋe yongominiop (that, dung, its
odour-sub., it used to hit them)
That (which was the) odour of excrement used to
kill them.

(d) Acc.Ph.

Note that when a clause occurs in the Axis of an
Acc.Ph. it is always followed by a demonstrative or
regular personal pronoun root or it occurs with the
nominalizer -ŋə. The nominalizer -ŋə, when it occurs
with clauses with the final verbal form in rpt. or ipt.,
is also acceptable to Selepet informants. Preference
is shown, however, for the demonstrative ya that or
the personal pronoun root yâk he, she following the
clause. Note in examples 7d and 8d that the tenses
of the verb in the embedded clause and the verb of the
independent clause are the same.

1d. sot niap-ŋe orop arirom (food, he ate-nomzr.,
with, we(du.) will go)
I will go with the one who ate the food.

2d. mukan den kuop-ŋe orop arirom (yesterday, words,
he hit-nomzr., with, we(du.) will go)
I will go with the one who disobeyed the order
yesterday.

3d. den bâleŋe sâmap ya orop arirom (words, bad, he
always says, that, with, we(du.) will go)
I will go with that one who always speaks
vulgarisms.
5d. Pawiñe mukan kasañe kubâp yâk orop arirom (Pawi, yesterday, his enemy, he should have killed him, him, with, we(du.) will go)
I will go with Pawi who should have killed his enemy yesterday.

7d. arlwiap ya orop arirom (he will go, that, with, we(du.) will go)
I will go with the one who is going.

8d. âlâenâmâ ariwiop ya orop arirom (at another (time)-however, he will go, that, with, we(du.) will go)
Some other time (in the distant future) I will go with the one who is going.

9d. yuân ibisâp ya orop arirom (here, he will always sleep, that, with, we(du.) will go
I will go with that one who always sleeps here.

12d. arimu yâk orop arirom (he goes, him, with, we will go)
We(du.) will go with the one who is going.

13d. ariwomap ya orop arirom (he intends to go, that, with, we(du.) will go)
I will go with the one who is about ready to go.

14d. ariwe sâm oap ya orop arirom (I will go, saying, he does, that, with, we(du.) will go)
I will go with the one who wants to go.

15d. lok ya itâsukumñe orop (man, that, wealthy) ya orop arirom (that, with, we(du.) will go)
I will go with the man who is wealthy.
(e) Inst.Ph.

Note that two relators are used: the relator root kândâk as in examples 1-3e and the relator enclitic -ŋe which occurs suffixed to ya that as in examples 7-9e, 12e and 15e. The forms kândâk and yaŋe are not fully commutable since the informants rejected kândâk in examples 4e and 13e, but not in examples 7e or 15e. Nor was yaŋe rejected in examples 1-2e. The tense of the verb in the clause embedded in the Axis of the Inst.Ph. must not be future to that indicated by the verb in the independent clause.

1e. tebe yuân tap ya-ŋe yerâwom (bow, here, it is, that-with, I will shoot it)
I will shoot it with that bow there.

2e. unam talop kândâk kârâwan (axe, it was here, with, I cut it)
I cut it with the axe which was here.

3e. tatmap kândâk kârâwan (it is always here, with, I cut it)
I cut it with the one which remains here.

4e. unam ya kârâhekmâp ya-ŋe kâláp huhuwom (axe, that, it must not cut you, that-with, firewood, I will break it)
(Careful) the axe with which I will chop firewood must not cut you.

12e. hama yuân takamu ya-ŋe kubom (hammer, here, it comes, that-with, I will hit it)
I will hit it with that hammer which will come (i.e., be brought) here.
15e. hama ya kanqe kurluŋ ya-ne kubom (hammer, that, handle, red, that-with, I will hit it)
    I will hit it with the hammer with the red handle.

(f) Man.Ph.

The majority of the constructions consisting of an independent clause with its Manner tagmeme manifesting a Man.Ph. with another clause occurring in its Axis tagmeme yield interesting English glosses involving desire, cause and effect or indirect quote. With the exception of example 10f, all other final independent clauses manifest the verbs nágá to think, know or så to say in their Predicate tagmemes.

1f. Puketanŋ niap-âk nagan (Puketanŋ, she ate it-man., I thought)
    I was certain that Puketang ate it.

2f. Lae ariop-âk nagan (Lae township, he went-man., I thought)
    I was certain that he went to Lae.

3f. kiap ya takamap-âk nagan (patrol officer, that, he always comes-man., I thought)
    I thought that the patrol officer regularly comes here.

4f. gohomap-âk nagan (it must not hit you-man., I think)
    I am concerned lest you fall down; I was concerned lest he kill you.

    mesik otmâ muman-âk nagan (sickness, doing, I must not die-man., I think)
    I am concerned that I might become sick and die.
5f. mebaî-âk nagan (they should have held it-man., I think)
    I think that they should have got it.

6f. When the first person inch. occurs in the embedded clause, provided the number shown in the inch. verb of the embedded clause and the verb of the independent clause are in concord, the result is either desire or else concern which is the result of intense desire.

nebeâk nagan (I must eat it-man., I think)
    I very much want to eat it; I worry about not being able to eat it.

nedeâk nagaât (we(du.) must eat it-man., we(du.) think)
    We(du.) very much want to eat it.

When the person and number of the embedded inch. verb are different from the person and number of the independent verb the effect is that the subject of the independent verb wants the subject of the embedded inch. verb to perform the action denoted by the inch. verb.

arinjët-âk nagan (you must go-man., I think)
    I want you to go away.

mem hilipkuâk-âk nagan (holding, let him ruin it-man., I think)
    I want him to ruin it.

7f. ariwuap-âk nagan (he will go-man., I think)
    I am certain that he will go.
8f. hobaŋ kakgan kârikne ariwiop-âk nagan (holiday, on top of it, strong, he will go-man., I think) I am certain that after Christmas he will go and never return.

9f. yuân ibisân-âk nagan (here, you will always sleep-man., I think) I think that you will always sleep here.

10f. to kârikne nem-âk tap (water, strong, drinking-man., he is here) He is only (here) drinking alcoholic beverages.

12f. This construction is regularly used to show that one action in the past preceded another action. ki takamune-âk muop (not, I come-man., he died) He died before I had come; when I had not yet come, he died.

Note that this construction is used for past time and is equivalent to the use of irak not yet which only occurs with the future tense verbs as in irak ariwom I have not yet gone.

14f. ariwe sâm oap-âk nagan (I must go, saying, he does-man., I think) I think that he wants to go.

15f. lok ya orotmenêne âlipne dodâ-ek nagan (man, that, his manners, good, very-man., I think) I think that the manners of that man are very good.

(g) Bene./Cau.Ph.

When 1-3g, 7-9g or 12-15g occur, the phrase expresses cause; when 4g occurs it expresses negative purpose lest; when 5g occurs it expresses condition; and when 6g occurs it expresses either purpose or cause.
1g. gelâk takap-gât ki arian (rain, it came-because not, I went)
Because the rain came I did not go.

4g. ahomai-gât kiap takap (they must not fight-because, patrol officer, he came)
The patrol officer came lest they fight.

5g. When a verb with the ctf. mode occurs in the Bene./Cau.Ph. the verb in the final independent
Predicate also occurs with ctf.
tatbâm-gât ahobâin (I should have been here-because, we should have fought)
If I had been here we would have fought.

6g. yene bonnanâk nâhâlân wahap bâleâk-gât otbl
you truly to me thing let it turn you did
out badly-for
Truly you did it in order that things would turn
out badly for me.
kiap yiken takam ehâk-gât goronihiap (patrol
officer, here, coming, let him see it-because, it worries me)
I am worried because the patrol officer plans to
come here and see it.

(h) Poss.Ph.
In all the occurrences of clauses within the Axis
of the Poss.Ph., the clause is first embedded in the
GNP. core and qualified by a demonstrative pronoun.
The semantic relationship between the filler of the
Poss. tagmeme and the filler of the following Head
tagmeme is always possession. Some examples follow.
lo k yañe tuhuminio p ya-kát opon-ân (man, that(sub.), he used to do it, that-of, men's house-at)
At the men's house of that man who used to do it...
lo k muop ya-kát sum-ân (man, he died, that-of, grave-at)
At the grave of that man who died...

Table C
Embedding of axis-relator phrases
The numbers refer to illustrative data and/or comments which follow (--- = non-occurrence)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Loc. Ph.</td>
<td>1</td>
<td>---</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Sub. Ph.</td>
<td>---</td>
<td>5</td>
<td>6</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Acc. Ph.</td>
<td>7</td>
<td>8</td>
<td>9</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Man. Ph.</td>
<td>---</td>
<td>10</td>
<td>6</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Bene./Cau. Ph.</td>
<td>---</td>
<td>11</td>
<td>---</td>
<td>12</td>
<td>13</td>
</tr>
<tr>
<td>Poss. Ph.</td>
<td>14</td>
<td>11</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
</tbody>
</table>

(1) emelâk yuån nengât-ân-ñe yawu sâmîniwi (long ago, here, our(place)-at-sub., like that, they used to say)
Long ago those from here among us used to speak like that. (Note: at the current stage of analysis it is not clear whether or not the sub. clitic differs from the nominalizer (cf. 5.1.1.4)).

(2) emesënå gen-åk ek mâ tatminiop (moon-towards-man., looking at it, he used to be here)
He used to sit here with his eyes fixed upon the moon.
(3) emet lohotne-ân-gât sâm (place, weak-at-about, speaking)
speaking about the at-the-weak place (time) - i.e.,
the rainy season
(4) egatyene-ân-gât tihitne (their necks-at-of, health)
the sake (well-being) of their necks
(5) lok pato mukan takaop-ñe orop arirom (man, big, yestetday, he came-sub., with, we(du.) will go)
I will go with the important man who came yesterday.
(6) When -âk precedes orop or -gât or follows -ñe, it has been regarded as the unrestricted suffix meaning only. Whether or not this distinction between the two posited homophonous forms of -âk is fictitious is not clear at this stage of analysis.
(7) bukuñe orop-ân ariap (his friend, with-at, he went)
He went to (the place where he had been) with his friend.
(8) bukuñe orop-ñe takap (his friend, with-sub., he came)
The one who has his friend (staying) with him came.
(9) korokñe orop-âk giowân ariîetâ (its stench, with-man., on the road, they went)
As they travelled there was always a stench about them.
(10) yawu-âk-ñe biwi katmu (like that-man.-sub., insides, he put)
The one who (acted) in a manner like that made a decision.
(Note: alternatively, the -ñe may be regarded as a nominalizer).
(11) See Origin Noun Phrase (7.2.2).
(12) *sum-gât-âk kara tuhuyekminiwi* *(grave-for-man., sorcery, they used to perform upon them)*
They used to perform sorcery upon them in a deadly manner *(i.e., for the purpose of (putting them in) the grave).*

(13) *yawu-gat-gât topqê* *(like that-for-of, its reason)*
The reason for *(their behaviour) with respect to (events which happened) like that.*

(14) *Indum nen-gât-ân* *(Indum village, we-of-at)*
*at our (village of) Indum.*

**Notes**

1. These present comments represent a preliminary attempt to formulate collocational rules.

2. This observation must be regarded as tentative inasmuch as paragraph structure has not been investigated in detail.
Chapter 8

Clauses

8.0 Introduction

Two basic clause types may be posited for Selepet, the Transitive Clause (TCl.) and the Intransitive Clause (ICl.). These clause types are distinguished by different clause level tagmemes and different fillers manifesting the tagmemes. Table A indicates the clause level tagmemes which characterize each clause and their preferred order of occurrence. All tagmemes are regarded as optional, although of course one tagmeme must occur for a clause manifestation. The types of constructions which occur when the Predicate tagmeme is absent are discussed in 8.4.

Table A

(+ = possible occurrence, --- = non-occurrence)

<table>
<thead>
<tr>
<th>Clause type</th>
<th>T. S.</th>
<th>Act.</th>
<th>Acc.</th>
<th>Inst.</th>
<th>Loc.</th>
<th>(0_1)</th>
<th>(0_2)</th>
<th>Bene./Cau.</th>
<th>M.</th>
<th>Predicate</th>
</tr>
</thead>
<tbody>
<tr>
<td>ICl.</td>
<td>+</td>
<td>---</td>
<td>+</td>
<td>---</td>
<td>+</td>
<td>---</td>
<td>---</td>
<td>+</td>
<td>+</td>
<td>+ 1P.</td>
</tr>
<tr>
<td>TCl.</td>
<td>+</td>
<td>+</td>
<td>---</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+ tP.</td>
</tr>
</tbody>
</table>

Maximum expansions of the formulae (excluding tagmeme repetitions and embedding) allow for up to seven clause level tagmemes in the ICl. and up to ten in the TCl. In the text material, which includes narratives, memorized myths and conversations, clauses with five or more clause level tagmemes are rare and clauses of four
tagmemes are infrequent. Generally clauses averaged about two tagmemes and clauses of one or three tagmemes were quite common. A check of one narrative portion indicated that predicate tagmemes represented more than 25% of all occurring tagmemes. It should be noted, however, that whereas single clauses of long strings of clause level tagmemes are rare, the phenomenon of embedding is widespread.

8.1 Tagmemes
8.1.1 Time tagmeme (T.)

The T. tagmeme indicates the location in time of the action or event stated by the Predicate tagmeme. As such it manifests either time roots (4.3.12), time stems (5.13) or the Loc.Ph.

8.1.2 Subject tagmeme (S.)

The S. tagmeme indicates the performer of the action stated in the tP. tagmeme. As such it manifests the Sub.Ph. marked by the enclitic -ŋe. It may be noted, however, that in conversation some speakers frequently omit the subject-marking enclitic. This variation necessitates a statement that the fillers of the Sub.Ph. axis (particularly if an embedded clause is not part of that filler) may also directly manifest the S. tagmeme, i.e., without first being embedded in the Sub.Ph. It must be noted, however, that the preference is for the S. tagmeme to manifest the Sub.Ph. and many informants reject the absence of the subject-marking enclitic as not fully acceptable.
8.1.3 Actor tagmeme (Act.)

The Act. tagmeme indicates the performer of the action expressed in the iP. tagmeme. This tagmeme manifests the same fillers which are manifested in the axis of the 'Sub.'Ph. (7.4.1). That is to say, whereas the S. tagmeme is usually marked by the enclitic -ọe, in the Act. tagmeme the enclitic -ọe is obligatorily absent. Perhaps as a result of this absence a clause occurring in the Actor tagmeme is always qualified by the Dem. tagmeme (i.e., it occurs first embedded in the core of the GNP. (7.2.1.8)).

8.1.4 Accompaniment tagmeme (acc.)

The Acc. tagmeme typically indicates any performers which are secondary to those expressed in the S. or Act. in performing the action expressed in the Predicate tagmeme. Infrequently the Acc. tagmeme indicates the inanimate means by which an action is performed but this function is usually expressed by the Inst. tagmeme. The Acc. tagmeme manifests the Acc.Ph. (7.4.6).

8.1.5 Instrument tagmeme (Inst.)

The Inst. tagmeme indicates the inanimate means by which the action expressed in the tP. tagmeme is performed. It is manifested by the Inst.Ph. (7.4.7).

8.1.6 Location tagmeme (Loc.)

The Loc. tagmeme indicates location or direction in space of the action or event expressed in the Predicate tagmeme. As such it manifests the Loc.Ph. (7.4.4) or names.
8.1.7 Object₁ tagmememe (O₁)

The O₁ tagmememe indicates the recipient of the action expressed in the TP tagmememe. As such, it manifests the GNP and clauses. Note that quotations are regarded as manifestations of the O₁ tagmememe when the TP tagmememe manifests någå to think or sâ to say.

8.1.8 Object₂ tagmememe (O₂)

The O₂ tagmememe indicates the second object which occurs with particular ditransitive verbs: e.g., Ø (tv. II) to give someone something and tuhu (tv. I) to do something to someone. This second object tagmememe is distinct from the first in that it does not manifest personal pronouns nor does concord exist between its fillers of the TP tagmememe.

8.1.9 Benefaction/Cause tagmememe (Bene./Cau.)

There are two allotagmemes of this tagmememe: the Benefaction tagma and the Cause tagma. The former indicates the beneficiary of the action expressed in the Predicate tagmememe and the latter indicates the cause of that action. As such the tagmas manifest the Bene./Cau.Ph. (7.4.2).

8.1.10 Manner tagmememe (M.)

The M. tagmememe indicates the manner in which the action expressed in the Predicate tagmememe was performed. It manifests adverb roots (4.3.3), adverb stems (5.5), various adjective stems (5.3) and the Mån.Ph. (7.4.5).

8.1.11 Predicate tagmememes

There are two predicate tagmememes, the intransitive and the transitive, and the fillers of each are diagnostic of the Intransitive or Transitive clauses respectively.
The iP. tagmeme manifests verbal forms which indicate an emotion, a state or condition, or movement. The tP. tagmeme manifests verbal forms which indicate action which affects an object. As evidenced by the concord in person and number which exists between the subject-marking and benefactive-marking verbal affixes and the fillers of the Act., S. and Bene./Cau. tagmemes, the fillers of the predicate tagmemes share in the functions expressed by these other tagmemes. The fillers of the tP. tagmeme also occur with object-marking affixes which show concord in person and number with the fillers of the O₁. tagmeme and so also share in the functions expressed by the O₁. tagmeme.

A number of restrictive conditions apply to the concord of person and number which exists between particular verbal affixes of the filler of the Predicate tagmemes and the fillers of particular clause level tagmemes. Although an exhaustive detailed list of these is beyond the scope of the present study some general statements are possible. These conditions are stated for the Act./S. tagmemes but they also seem to apply to the other tagmemes in concord with verbal affixes.

Firstly 3rd person plural subject frequently is regarded as a collective unit in which case the subject-marking suffix indicates 3rd singular.

kâi-yênte kârâŋ kârâŋ sâop (Act: legs-they're (du.), iP: it trembled) they're (du.) legs trembled
bât-yeŋe kerek kikok kikok sâop (Act: arms-their, all, iP: it blistered) all of their arms became blistered
kalibu ya-ŋe bâleop (S:three, that-sub., tP. it ruined it) three things turned out badly

Secondly, a noun in the singular may be regarded as a plurality, in which case the subject-marking suffix indicates 3rd plural. This frequently occurs with names representing social groups occurring in the S. tagmeme.

idum weke-ŋe kigitne orop ahowi (Indum, Weke-sub., fiercely, they fought) the people of Indum and Wekae villages fought fiercely

Thirdly, the number of the filler of the Acc. tagmeme affects the number of the verbal subject-marking suffixes by adding its number to that of the filler of the S. or Act. tagmemes. When a homopersonal dependent verb intervenes between the S. or Act. tagmeme and the Predicate tagmeme manifesting the subject-marking suffixes, the effect of the filler of the Acc. tagmeme is frequently negated.

yâk ibiŋâit takawot (Act:he, Acc:with wife, iP: they(du.) came) he came with his wife
orop netŋiâk ya newin (Acc:with, us(du.) alone, O:that, tP:we ate it) he ate that with only the two of us
ibihe orop bam gam yawu otbuat (Acc:your wife, with, iP:going, iP:coming, M:like that, tP: you(sg.) will do) you will go about with your wife like that
Fourthly, it is important to note that concord in person and number between the fillers of the Bene./Cau. tagmeme and the benefactive-marking verbal suffixes exists only between these suffixes and the fillers of the Bene. allotagma; i.e., the fillers of the Cau. allotagma do not show any concord. Moreover, it should be borne in mind that both the benefactive-marking suffixes and the Bene. allotagma have optional occurrences. Note the following examples:

ya ye-gât heronge ot-yingi-mini-wi (Bene: those, them-with, M: pleasantly, tP: do-for them-hab.-2-3p(rpt.)) They used to be pleased with them.

ye-gât nâgâ-ñetâ (Bene: them-for, tP: feel-they (hetero.)) They were concerned for them.

yuwu nâgâ-yingi-wi (M: thus, tP: feel-for them-2-3p(rpt.) They were thus concerned for them.

Co-occurrence restrictions apply between the fillers of the Time tagmeme and the tense-marking suffixes of the verbal forms manifesting the Predicate tagmeme. Fillers of the Time tagmeme may be divided into two groups: those subject and those not subject to these co-occurrence restrictions. The latter include the time stems derived by the temp. suffix -dâñe (5.13.9) and certain of the stems based upon Loc.Ph.'s; e.g., omoñanâk morning. The former include emelâk before, long ago, and such restrictions are listed with particular entries in the Selepet-English Dictionary (McElhanon and McElhanon, 1970).
8.2 Tagmeme repetition

Theoretically clause level tagmemes are subject to infinite repetitions although only very rarely are they repeated more than four times. In general, when non-predicate tagmemes are repeated the referent of the initial filler is either defined more generally by the subsequent fillers of the repeated tagmeme or all of the fillers represent a list of diverse referents. A repetition of the Predicate tagmeme usually indicates a continuous or prolonged action in which case the verbal form is unchanged. An exception is that when the verbal form occurs with the future tense, the repetition indicates worry or concern.

Tibe kapai-an ewa-ân (Loc: Timbe village-at, Loc: that up there-at) at the Timbe village, that one up there
lokne-ñe awâ-ñe dâbia ya kârâowot (S: her husband-sub., S: her father-sub., O: sago, that, tP: they(du.) cut it) Her husband and father cut down that sago.
kerek kerek âsilop âsitmâ ariop ariop ariop (M: sound of 'scratch', 'scratch', tP: he scratched it, tP: scratching, 1P: he went, 1P: he went, 1P: he went) He scratched it noisily. He scratched on and on.
isem yâhâm yâhâm serâ um nem nem nem (1P: weeping, 1P: ascending, 1P: ascending, O: feast of mourning, tP: cooking, tP: eating it, tP: eating it, tP: eating it) they wept on and on, and cooking a feast of mourning they ate on and on...
gira otbe otbe (M: how, tP: must I do, tP: must I do) What can I possibly do?

wosapâ ariwe ariwe (Loc: which way, iP: must I go, iP: must I go) Which way can I possibly go away?

8.3 Tagmeme permutation

Relative linear order of non-predicate clause level tagmemes is quite free, and in view of the paucity of non-predicate clause level tagmemes occurring in a single clause, the order appears to have little importance. General tendencies however, are statable.

a) The Predicate tagmemes always occur clause finally. On occasion, however, a clause level tagmeme follows the Predicate tagmeme, but this tagmeme is apparently added as an afterthought and may be regarded as a separate truncated sentence.

b) The S. and Act. tagmemes, particularly when not manifesting embedded clauses or axis-relator phrases, occur early in the clause. The S. tagmeme rarely follows the object tagmemes.

c) The T. tagmeme usually occurs initially in a clause and has never been observed preceded by more than two other clause level tagmemes. Occasionally the S., Act. or object tagmemes precede it, and rarely the Loc. tagmeme precedes it.

d) When a clause occurs embedded in any of the clause level tagmemes, this tagmeme generally occurs clause initially. When embedded clauses occur in more than one tagmeme of a clause the tagmeme order is little affected.
8.4 Tagmeme optionality

In many, if not most, analyses of Non-Austronesian languages the analysts have stated that the clauses, particularly the Transitive, Ditransitive or Intransitive clauses (if so identified), manifest an obligatory Predicate tagmeme which is usually diagnostic of the clause type.

In this treatment of Selepet clauses, however, the writer suggests that just as no tagmeme of the General Noun Phrase is regarded as obligatory, so also no tagmeme of the TC1 or the IC1 be considered as obligatory. This is not much different than stating as Franklin did for Kewa (Franklin, 1969) that all Predicate tagmemes are obligatory but that those in the Complement Clauses are either not expounded or are capable of being deleted (i.e., they are optional). One may state regarding clauses in Selepet, that when the Predicate tagmemes occur, the resulting constructions are either Transitive Clauses or Intransitive Clauses, but when the Predicate tagmemes are absent the resulting constructions are either independent predicateless clauses, dependent truncated (semi) sentences or ungrammatical utterances. These predicateless clauses are analogous to the so-called Equational Clauses as posited for Kewa by Franklin. Although the writer would concur with Franklin that the function of a Predicate tagmeme is obligatory to the definition of a clause, he would not state that because of this a Predicate tagmeme must be obligatory. Just as the Inst. and object tagmemes are said to be relevant in a Transitive Clause but are optional, so also may the Predicate tagmeme be relevant but also be optional.
The difference between predicateless clauses and Truncated Sentences is one of dependence. The predicateless clause is independent but the Truncated Sentence does not constitute an independent construction but rather is dependent upon contiguous elements. If there are no contiguous elements the construction is likely to be rejected as not fully acceptable.

Formal distinctions between posited independent predicateless clauses and Truncated Sentences cannot be exhaustively formulated at present. It does seem clear, however, that for an independent clause to result from predicate deletion it is necessary for at least two clause level tagmemes to remain.

Beyond the recognition of the necessity for two clause level tagmemes to remain, only a few general observations are possible. Firstly, it is evident that the tagmemes which remain give clues to the nature of the deleted verb. This is to be expected since in the case of locative enclitics particular enclitics occur primarily with verbs of motion (cf. 7.4.4). Thus a remaining tagmeme which manifests one of these enclitics would suggest that the deleted verb is a motion verb. Similarly a remaining Inst. tagmeme suggests that the deleted verb is not a motion verb.

It is also evident that the majority of predicates manifesting the verb of *to do, become, happen* may be deleted with the remaining tagmemes still constituting a grammatically independent construction. This is probably related to the fact that when other verbs are deleted and then the resulting construction presented
to an informant for him to supply a verb, the verb most frequently supplied is ot. It also appears that a deletion of ot would be almost always recoverable. For example, if the predicate in emelâk wuân bâleap (already, what, it became bad) what has already rotted is deleted, an informant would likely respond with oap as a replacement, what has already happened.

In text material it is not uncommon to find in the narrative material clauses which differ only in the absence of a predicate: kapai kütne Selpet (otmap) (village, its name, Selpet, (it always is)) the name of the village (is) Selpet.

The following observation may be stated regarding the deletion of the Predicate: when the Predicate of a clause manifesting two other clause level tagmemes is deleted the remaining tagmemes often constitute a grammatically independent construction of which the tagmeme furthest to the right may be said to supply what is often referred to as the comment and the tagmeme(s) to its left may be said to supply what is referred to as the topic. In the following examples the deleted verb is in the parentheses.

nen lok heleŋ tâŋåt (oain) (S: we, O: men, black, useless, (tP: we are))
We (are) useless black men.
yapâ ise ise âlå bia (teteap) (Loc: from there, Act: weeping, another, M: not (iP: it appeared))
There (was) no weeping from there.
nengârâmâ sotgâ sâpne bia (katmain) (Cau: regarding us on the other hand, O: time for food, M: not (tP: we set it)) regarding us, on the other hand, there (is) no time for eating.
That kind of sorcery, however, (is done by) just (blowing) through the mouth.

(There are) plenty of pigs at the seacoast.

(It is) impossible for us to destroy ourselves.

Special conditions and/or limitations will have to be stated to determine what structural features need be present for the resulting predicateless construction to be regarded as an independent clause, a Truncated Sentence, or an ungrammatical utterance. Predicate deletion in the following clause yields an apparent Truncated Sentence: hewukñan gâtñe giowân (miap) (O: one from the forest, Loc: on the road, (tP: he held it)) (He found) the wild animal on the road. In the following example, however, predicate deletion yields an unacceptable (ungrammatical) construction:

lok sedukñe emet (mem bâfeap) (S: man, crazy-sub., O: house, (tP: holding it, ruin it)) the crazy man (destroyed) the house.

One would expect such special conditions to relate to particular tagmeme occurrence after the deletion of the predicate since the Truncated Sentence above manifests
O. plus Loc. but the ungrammatical utterance manifests S. plus O. Moreover, tagmeme order may be important so that permutation rules may be necessary before the predicate may be deleted.

Very frequently predicateless clauses manifest constituents which are the same as those of the GNP. except that their order is permuted. At the present stage of analysis it is not clear which of three possible approaches is preferable:

(a) The predicateless clause is derived directly from the GNP. by tagmeme permutation.
(b) The predicateless clause represents the deletion of the predicate and then permutation of the GNP. tagmeme order if the GNP. is the only constituent of a lone remaining tagmeme.
(c) The predicateless clause represents the deletion of the predicate with the remaining constituents showing a chance resemblance to the GNP. manifesting tagmeme permutation.

The third solution would necessitate special condition rules similar to those which distinguish predicateless clauses from Truncated Sentences. It appears that such rules would be exceedingly complex in terms of collocation rules. The derivation of predicateless clauses by a permutation of the tagmeme order of the GNP., however, requires one simple rule. The GNP. tagmeme order as given in 7.2.1 is + (± Poss. ± (± Att. + H.) ± Qual. ± Quant. ± Ind. ± Dem.).

Note that the occurrence of the Att. is dependent upon the occurrence of the H. with the result that no tagmeme may intervene. To derive a predicateless
clause from the GNP., permute the tagmeme(s) occurring farthest to the right to any position previous to the other tagmeme(s) of the manifested GNP. As in the case of predicate deletion, the tagmeme(s) on the right may be said to supply what is often referred to as the 'comment' and the tagmeme(s) to its left may be said to supply what is referred to as the 'topic'. Some examples follow:

yu ki orôô (Dem: this, Qual: impossible) This (is) impossible.
kapâl yu tipîne (H: village, Dem: this, Qual: small) This village (is) small.
âlâ Kara (Ind: another, H: sorcery) Another (is) sorcery.
âlââ tebe ahominîwi kapam ahominîwi ya (Ind: others, GNP. core: bows, they used to fight, sticks, they used to fight, Dem: that) Others (were) that they used to fight with bows and sticks.
yâ nâhât emet (Dem: that, Poss: my, H: house) or emet ya nâhât (H: house, Dem: that, Poss: my) That (is) my house.
yâ tep korokône (Dem: that, Att: dung, H: its odour) That (is) the odour of the dung.

Notes

1. The verb ot is regarded as a transitive verb because it has all the formal characteristics of transitive verbs. Note, however, that it also belongs to the group of auxiliary verbs.
A definition of a sentence at the present stage of analysis cannot be regarded as entirely satisfactory for a number of reasons. Firstly, levels higher than that of the sentence have not been analyzed. Therefore the defining features of a sentence have to be limited to those features which distinguish the sentence from the lower levels posited in this grammar. To define a sentence in terms of its constituent clauses is not at all an easy task. It would be a relatively simple matter to list the various ways that two clauses may be conjoined to indicate such dependency relations as cause-effect, thesis-antithesis, condition-consequence (protasis-apodosis) and then to assign labels to identify such clause collocations. Such a description of Selep et, however, yields too simple an analysis and in some cases would probably obscure the true nature of some clausal relationships. For example it has already been mentioned that clauses manifesting the axes of particular axis-relator phrases often are in a relation of cause-effect or condition-consequence (7.4.8). Moreover, many clauses commence with a particle (conjunction) which often signals a dependent relationship although there is no occurrence of another clause upon which the clause in question is dependent. In these cases these conjunctions may be said to function as sentence introducers. More important is the occurrence of chains of clauses which are lengthy and involve a number of differing conjunctions serving to link the clauses or sentences together. Note
the following sample of text relating an event which is reported to have occurred during World War II.

(1) ibi sobo kopa yan emelan tatmu ya kum woman old handi- there in she that kill-
capped house stayed ing her

ya newi

that they ate her

They killed and ate that handicapped old woman who stayed there in the house.

otmu and

(2) loknenne nebaingat dopne bia

our person that we should its no

eat him/her mark

It is impossible that we should eat a person.

yamâ but

(3) yâku lok ya newi

they person that they ate her

They ate that person.

otmu and

(4) senne âlâlâ ki ehekne bâlene sâmain ya newi things not visible bad we always that they a

say it

They ate those things which we pronounce as not worthy of being looked at.

(5) nem yuân gam arïwi ya yekmunne kaok towat eating here coming they those we saw white face went them

âlâ ki olop

a not it was

We saw those who ate her (and) passed here (and) their faces were not those of Europeans.
On the other hand, they were cannibals...

Thus doing coming they when-cargo went however

When they did like that and passed here they

commanded, 'You all carry our cargo!'

(And) they (New Guineans) carried their cargo for them...

On Sundays they never used to fight a heavy battle.

The foregoing are presented to illustrate that a number of clauses may be chained together with the subsequent clauses simply extending the story in various ways: (2) amplifies (1); (3) presents the antithesis of (1) and (2); (4) amplifies the antithesis presented in (3); (5) continues the comment of (1) and amplifies it; (6) presents an antithesis of the second half of (5) but includes implied information; (7) continues the comment of (1) and amplifies it; (8) concludes the added
comment of (7); (9) presents contrastive information and begins an extended parenthetical comment.

In (6) the implied information is that one would not expect them to look like Europeans because they were cannibals and Europeans are not cannibals. (9) interrupts the thought of (8) and adds a lengthy digression of five sentences explaining that some of the Japanese were in the habit of running away when the battle was heavy. Then the story picks up again with the New Guineans carrying cargo, the allies dropping bombs and the Japanese fleeing. The やま but introducing (9) does not function as introducing an antithesis but rather as changing the subject for the moment. It is evident from this text that no satisfactory analysis of the sentence level can precede that of the higher levels. In the analysis of the lower levels of the grammatical hierarchy, e.g., word morphology, analysis is uncomplicated because the selection of forms is often from a restricted class and the linear order of the forms is quite fixed. At the level of clause and sentence, however, the selection of forms is not so limited and the linear order is not fixed and indeed may be interrupted by inserted material as in (9) above. Context and assumed knowledge are important in the development of clause relationships and are sometimes influential in quite subtle ways. Neither is it always clear that patterned dependency of clauses (cf. Longacre, 1964: 128) represents a particular sentence type rather than just an interesting collocation of clauses manifesting certain features; e.g., verb morphology (cf. examples 1g, 4g, 5g, 6g, under Table B, Chapter 7).

The level of sentence may be defined as that level immediately above the level of clause in the grammatical
hierarchy and presumably below such levels as paragraph and discourse. It has been noted in 3.1.1 that the narrative type of rhetorical period is regularly closed by the word yawu like that. It is clear that these rhetorical periods reflect a grammatical level which is higher than that of the sentence, but the description of this higher level is reserved for future study.

9.1 Sentence types

Because the levels above that of sentence have not been studied in detail, this present preliminary description of sentences describes the ways in which clauses are conjoined and the types of semantic relations which exist between the conjoined clauses. Although such conjoining is most easily described by examining two conjoined clauses at a time, it should not be assumed that the structure of a sentence is reflected by two Bases manifested by clauses conjoined by a Linkage tagmeme manifested by various conjunctions.

For the moment it is convenient to distinguish two broad sentence types in Selepet, the Dependent Truncated Sentence and the Independent Sentence.

9.1.1 Dependent Truncated Sentence

This sentence type represents predicateless clauses which are dependent in some sense on other units in the linguistic context but which do not have formal linguistic features (e.g. relators, conjunctions or particular morphologies) which relate them to these other units. Some comments relevant to the Truncated sentence have been made in 8.4 and no further comment is made here.
9.1.2 Independent Sentence

A single composite sentence formula may be posited for Selepet. As to be expected certain special conditions are necessary and these are only imperfectly understood. The nature of some of these conditions however is specified in the ensuing description. The structure of the independent sentence may be posited as $\pm (\pm \text{Base-1} + \text{Linkage})^n + \text{Base-2} \pm \text{Mode}$.

The Base tagmemes manifest both Transitive clauses and Intransitive clauses. Whereas the clause manifested in Base-1 may occur with either dependent or independent verb morphology the clause in Base-2 may occur with only independent verb morphology. Note that the occurrence of the Base-1 tagmeme is dependent upon that of the Linkage tagmeme. Moreover the Base-1 and Linkage tagmemes are theoretically subject to infinite repetitions. It must be noted however that the Linkage tagmeme alone is not subject to infinite repetition; rather, no more than three conjunctions have been observed in succession and there appears to be definite restrictions on the co-occurrence of conjunctions.

The Mode tagmeme manifests a limited number of forms which indicate interrogative, dubitative, permissive, etc. There are probable co-occurrence restrictions which exist between the fillers of the Mode and Linkage tagmemes.

The Linkage tagmeme manifests conjunctions which state the relationship which exists between the conjoined clauses.

Note that the formula allows for an Independent sentence to consist of simply a clause or a clause
followed by a form indicating mode. When the Linkage
tagmeme occurs only with the Base-2 tagmeme, its fillers,
if they are not subordinators, serve as sentence intro-
ducers and mark the sentence onset.

9.1.2.1 Mode tagmeme

The fillers of the Mode tagmeme represent a closed
class. It is important to note that some of the fillers
also occur as either conjunctions or relator enclitics
and so a re-examination of these forms may lead to a
re-analysis of the function of this posited tagmeme. A
list of the fillers of the Mode tagmeme with examples
follows:

(a) -å. This suffix occurs optionally following the ctf.
mode of the verb when another clause manifesting a verb
in the ctf. mode occurs embedded in a Bene./Cau.Ph.

tatbâm-gåt ahobâin-å

If I had been here we would have fought

(b) -âbâ. This suffix is either homophonous with the
locative enclitic meaning out of or represents another
use of that enclitic. It has been observed following
verbs with ipt. hab. suffixation.

nå den yu ki någåman-âbâ

I language this not I always
hear it

I have never heard this language before.

(c) -âke. This suffix indicates disbelief or surprise
on the part of the speaker. It has been observed
following all tenses/modes except inch. and perm.

mat takat-âke (well, you came)

What a pleasant surprise that you have come!
(d) -âyâ. This suffix seems to indicate disgust on the part of the speaker. As such it follows verbs in the inch., ctf. and proh.

(inch.) ariâk-âyâ All right, then, let him go!
(ctf.) aribâp-âyâ Phooey, he should have gone.
(proh.) gohomâp-âyâ Watch out, you might be killed.

(e) -gât. This suffix is either homophonous with the bene./cau. enclitic for or represents an extension of its use. It has been observed on all tenses and modes except inch., proh. and ctf. and indicates that the statement of the speaker is certainly true.

nemain-gât Of course we eat it.

(f) me. This root is the interrogative marker. It has not been observed following the proh. or ctf.

ariwuap me Will he go?

(g) -mon/-mân. This suffix is the dubitative marker and has not been observed following the inch. or perm.

tosa mewanmon Perhaps I did wrong.

When me occurs in the posited Mode tagmeme, the Base-2 plus the Mode tagmeme in fact appears to be the Base-1 plus the Linkage tagmeme with all subsequent tagmemes deleted. Note the following:

puluhuap me Did he buy it?
puluhuap me bia Did he buy it or not?
puluhuap me girawu Did he buy it or what (did he do)?
kirim otnom me gira gira otnom
dance we shall or how how we shall do it
do it

Shall we dance the kirim or what shall we do?

An alternative approach may be to simply regard puluhuap me Did he buy it? as being a deleted form of puluhuap me ki puluhuap He bought it or he did not buy it.
Similarly the occurrence of the forms -âbâ and -gât suffixed to the verb may be regarded as a Truncated sentence resulting from deletion of all other clause level tagmemes except the Loc. or Bene./Cau. tagmemes.

Any future investigation of these questions raised here might proceed along the lines of what co-occurrence restrictions may be present between the fillers of the Linkage and Mode tagmemes. It is also clear that the problem of clause conjoining and subsequent deletion is also involved.

9.1.2.2 Linkage tagmeme

The fillers of the Linkage tagmeme include various forms which serve as conjunctions. Some of these forms, e.g., bene then (consecutive action) or yañak therefore (resultant action) appear to represent a class of particle roots. Other forms, however, appear to be fossilized forms which may be shown to be derived from axis-relator phrases or dependent verbs (cf. 5.14).

The fact that such semantic relations as cause-effect and condition-consequence are expressed by axis-relator phrases has been noted. The main components of these clauses are a clause level tagmeme manifesting an axis-relator phrase plus other clause level tagmemes, one of which is the Predicate tagmeme. The axis-relator phrase manifests another clause in its axis. Examples follow:

\[ \text{gelâk gap-gât ki arian} \]
\[ \text{rain it came- not I went because} \]
\[ \text{I did not go because it rained.} \]
lok kerek neyekmap-âbâ. yet teteawot
men all it-always you you
eats them-out (du.) appeared of
You (du.) were born in spite of his always
eating all the men.

These examples consist of Bene./Cau. + M. + iP. in
the former and Loc. + S. + iP. in the latter. More
generally, however, they may be regarded as clause +
elcitic + clause and then their similarity to Base-1 +
Linkage + Base-2 becomes clearer.

Some of the fossilized forms which are derived from
phrases are exemplified in the following:
yawu tøtemu yapâ sabe otbi
thus it appeared out of plenteous they became
that
As a result of (the food) producing like that they
became plenteous.
ibi meyelehowot ya-pâ-gât yâkyetgâlâbâ sabe
women they(du.) held that out- out of plenteous
them(du.) of-for those (du.)
tetewi
they appeared
They married those two women. So as a result, from
those two (women) were born many people.

Although the forms yapâ and yapâhât are regarded as
conjunctions manifested in the Linkage tagmeme, these
forms plus the words preceding them could be analyzed as
follows: the former as (Axis: thus, it appeared, that,
Rel: -out of) and the latter as (Axis: (Axis: women,
they(du.) held them(du.), that, Rel: -out of), Rel: -for).
Such an analysis treats these constructions as clauses embedded in the GNP. core plus the demonstrative pronoun that which is in turn embedded in an axis-reator phrase.

Another conjunction yapâ gâtøane as a consequence represents a fossilized Origin Noun Phrase with the structure oH: yapâ out of that plus gâtøe one from plus -øe nominalizer (?) as in

```
sabe otøetâ yapâ gâtøane nobotøane hioøakmå
plenteous they that which some separating
became originates off
from that
```

They became plenteous (and) as a consequence some broke off and...

These examples are presented to show some of the problems of analysis. It is probable that some of the constructions now regarded as conjoined clauses have been formed by fossilization of clauses embedded in axis-reator phrases. No further comments are made regarding analytical problems; rather the various methods of conjoining clauses are simply listed and comments are made regarding the semantic relations between the conjoined clauses.

(a) Conjoining by parataxis. A paratactic union is a union between a clause manifesting a dependent (homo. or hetero.) verb in its Predicate tagmeme and a following clause. The primary role of parataxis is to indicate attendant action. Any reference to a point in time, coincident, antecedent or conditional action is inferred from the context. In the structural formula a paratactic linkage is indicated by Ø (cf. P. M. Healey, 1966: 7). Dependent verb morphology is described in 6.2.2.
They gathered trash. Gathering it, they kindled it and it lit. It lit and...

(b) Alop all right, alop benë all right then, ârait all right, ârait benë all right then, bâni that is all, bâti that is all and benë then. All of these forms function as syntactic neutralizers; i.e., they neutralize any syntactic influence or function of the utterance preceding them. In this way they function as sentence introducers and signal the beginning of a new syntactic unit.

What will we do? All right, now I am talking about money.

(c) The unrestricted contrastive suffix -âmâ however occurs suffixed to both dependent and independent verbs when they occur in the Base-1 tagmeme. As such it signals that these verbs are in a dependent relation to the verb manifested in the Base-2 tagmeme. If the verb in the Base-1 tagmeme manifests homo. suffixation the effect of -âmâ is to indicate a change of subject (i.e., heteropersonal) although the person and number is not stated.
pig that he gave he ate it- there go he lived
him               (contrast)
He gave him that pig, and the recipient ate it, and
the giver went over there and lived.
sâop         sâop-ama   sâwan
he spoke       he spoke     I spoke
               (contrast)
He spoke. He spoke and (then) I spoke.
inâk         tatbin       inâk     tatmâ-âmâ    benêge   kum    arîgetâ
just we stayed just staying- then killing they went
We stayed here doing nothing. We stayed here doing
nothing and then they killed him and went away.

Note in the last example that the dependent verb
morphology in tatmâ is clearly homopersonal yet it is
clear that tatmâ represents the dependent form of tatbin.

When the verb manifesting the Predicate of the
clause in Base-1 indicates future tense and the verb in
Base-2 indicates prohibitive mode the clausal relation-
ship is that of condition-consequence.
mâmêne   ekuwat-âmâ   ge   gâwârenenekmâ nongom nemap
his    you will   des-   sweeping us   killing it must
mother tell her-if cend   up us   not de-
vor    us

If you tell his mother, it might descend, sweep us up,
kill us and devour us.

(d) When the suffix -âne occurs in the Linkage tagmeme
the clause of Base-1 is in an antecedant-subsequent
relation with the clause of Base-2. There appears to
be no difference between the suffix -âne and the con-
junction benêge then except that -âne occurs only follow-
ing a verb manifesting dependent hetero. or homo. punct.
suffixation.
ekdå-âne    sâm    ekgohowom
you     see     it-     speak-     I     will
then    ing     tell    you

First you look at it and then I will tell you.

(e) Ben¤e then, next. The action or event expressed by
the verb manifesting the Predicate tagmeme of the clause
in Base-1 is antecedent to that expressed in Base-2.

hawat yawuªk kâmetbagiªetâ ben¤e àlipºeªk manmå
magic thus they planted then well living
it for him

ari sobo otmå
go    old    becoming
They performed (planted) magic for him and then he
lived well into old age...

Occasionally some speakers use ben¤e in hesitation
or to change the subject (syntax neutralization).

ewun ben¤e Amerika hânången
above then America at the ground
Above, uh, in America...

(f) Gârâmå however, moreover, furthermore, gârâmå ârait/
gârâmå bâiª/ gârâmå bâti allright but, gârâmå ben¤e
however then, yawu gârômå like this however. When
these conjunctions occur in the Linkage tagmeme the
clause in the Base-1 tagmeme is the thesis and the
clause in the Base-2 tagmeme is the antithesis. Note,
however, that the contrast between thesis-antithesis is
sometimes weak and occasionally absent with the result
that the clause of Base-2 simply carries on the thought
expressed by the clause of Base-1. In this latter use
gârâmå is best translated as furthermore, moreover.
They fled to the forest; however, (they) chased them, searched for them and caught them...

I have not spoken (about) one (thing). And so I will conclude and you take note!

Frequently gârâmâ is used in hesitation while the speaker collects his thoughts.

There is no noise. It just, uh, does nothing.

(g) Gâtqâne after (temporal), gâtqâne benê after which then. In gâtqâne benê the benê reinforces the antecedent-subsequent relation expressed by the clauses in Bases 1 and 2. The clause manifested in the Base-1 tagmeme usually occurs with dependent verbal suffixation.

(h) When the conjunction mâne occurs in the Linkage tagmeme, the relations between the clauses manifesting the Base tagmemes vary depending upon the suffixation of the final verbs of these clauses.

When the verb manifested in the clause of the Base-2 tagmeme occurs with ctf. suffixation and the
verb of Base-1 does not occur with inch., perm. or proh. suffixation, the relationship is condition-consequence.

ariop mâne nebâin (he went, if, we would have eaten)
If he had gone, we would have eaten.

ariwuap mâne nebâin (he will go, if, we might eat)
If he goes away we will eat.

lok heleg mâne kubâm (man, black, if, I would hit him)
If he were a child of a New Guinean, I would have hit him.

When the verb manifested in the clause of Base-1 occurs with inch. suffixation and the verb of Base-2 does not occur with inch., perm. or ctf. suffixation, the relationship is purpose-(of the) event

kaunsoi teteâk mâne yain (council, let it appear, in order that, we talk)
We are talking in order that the council will be formed.

When the Base tagmemes manifest clauses with verbs not in the ctf., perm., proh. or inch. the clause in Base-1 indicates action which is not fulfilled (or only intended) and the clause in Base-2 indicates the reason for the action not being fulfilled. Context determines the various nuances in the nature of this lack of fulfillment, viz., attempted (but thwarted action), intended or imminent action.

Intended action:

eksan mâne yahalop (I see it(ipt.), intending, he ascended (rpt.))

Intending to see it, he went up (the mountain).
in tain mâne Amerikañe bom pilâwi (just, we stay, intending, Americans, bombs, they threw)
We intended to stay there doing nothing, but the Americans dropped bombs.
Imminent action:

Puleŋ ahoakŋan gian mâne ewaken ehop (Puleng River, at the fork, I went down (ipt.), being about to, upwards, he looked at it (rpt.))

When he was about to descend to the fork of the Puleng River he looked above.

Attempted action:

yeran mâne kiliop (I shot (ipt.), but, he missed it (rpt.))

He shot (at) it but missed it.

Further study is necessary to determine whether the tense sequence of ipt. in the Base-1 and rpt. in the Base-2 is relevant to the meaning of mâne. Note that although the verb suffixation of the verb in Base-1 indicates first person, the person indicated is sometimes third person. It is possible that in some contexts the person of the verb in Base-1 is irrelevant and the verb in Base-2 determines the person for the verbs in both Base tagmemes. Note in the following example that the persons of the verbs in the Base tagmemes are different:

\[
\begin{array}{lll}
\text{pâŋe} & \text{tânâmŋan} & \text{mebe mâne habe ya pâŋanak} \\
\text{its'} & \text{at its'} & \text{I being snake that only at} \\
\text{middle} & \text{middle} & \text{must about its} \\
\text{must} & \text{hold to} & \text{middle} \\
\text{it} & \text{it} & \text{it} \\
\end{array}
\]

âwil umgumu

it raised

up

When he was about to grasp it at its middle, the snake raised up.
(i) The conjunction me or conjoins clauses in which the clause of Base-2 represents an alternative to that in Base-1.

```
mem hâmenan tuhuwuat me mem koko salek tuhunihiwuat
holding at my you will or hold-producing you will do
nose do it ing tively it for me
You must find things for me or you must give me
productivity.
```

(j) The conjunction otmu and conjoins clauses in which the clause of Base-2 is simply added to that of Base-1. It frequently functions as a sentence introducer.

```
Amerikaŋe sot mem ga hâwuruwi otmu Amerikaŋe
Americans food hold-coming they and Americans
ing collected it

kapamèn ariwi
to they
battle went

The Americans collected and brought food and the
Americans went to battle.

otmu orotmeme âlâ emelâk yawu memanbi
and custom another long ago thus they practiced
And they practiced another custom long ago.
```

(k) The conjunctions yakât and yañak, both meaning therefore, because of that, conjoin two clauses in a reason-result relationship. Yakât represents a fossilization of ya that plus the bene./cau. clitic -kât for and is homophonous with the latter. The conjunction may be distinguished from the Bene./Cau.Ph. manifests yakât for that one because it is commutable with yañak (cf. 7.4.3).
They used to steal a woman. Therefore, they used to speak about the woman, become angry and perform sorcery on one another.

Because (a man) stole a woman they used to fight.

(1) The conjunctions yapâ as a consequence, consequently, and yapâhât so, as a consequence conjoin two clauses in cause-effect relationship. Both of these represent fossilization of axis-relator phrases; the former representing a Loc.Ph. ya that plus -pâ out of and the latter representing a Loc.Ph. embedded in a Bene./Cau.Ph. yapâ out of that plus -gât for.

(The food) thus appeared and consequently they became many.

As a consequence of them marrying those two women, the ones who came from Weleki became numerous.
The conjunction yapâ gâtnâne as a consequence is a fossilization of an Origin Noun Phrase plus the nominalizer -ne: yapâ out of that plus gâtnâne one from plus -ne.

Gitua yan taka tatmâ âdeowot yanak yapâ gâtnâne

Gitua there came stay- they con- there- as a consequence continued fore quence

ekmu houmâk olop

he very it was looked close

They came and stayed there at Gitua village and (then) continued on. Therefore as a consequence he looked (away) and it (another place) was very close by.

(m) The conjunction yamâ but usually conjoins two clauses in a thesis-antithesis relationship. This form is a fossilization of ya that plus the unrestricted suffix -âmâ however.

wahap yu ya otmâ âlipnę otmâ hegemguwi yamâ

thing this that doing well doing they cor- but rected it

kalibuñe yañe bâleop

third that (sub.) it was evil

They did this thing and that thing well and correctly, but that third (thing) was evil.

Frequently yamâ occurs simply conjoining clauses in which the clause of Base-2 is simply added to that of Base-1. It also functions as a sentence introducer with the meaning: furthermore, moreover.

yan arl manbin yamâ Amerika yegâlâbâ sot

there go we more- from (the place food lived over of) the Americans

topâne topâne takaop

many kinds it came We went and lived there.

Moreover, from the country of the Americans came all kinds of food.
9.1.3 Unrestricted suffixes

At least two suffixes may be regarded as suffixes occurring at the sentence level. These suffixes are unrestricted in the sense that they have been observed suffixed to roots, stems and words as well as to the final constituent of higher level syntagmeme.

The suffix {-âk} only seems to indicate emphasis or exclusiveness. Note that it is homophonous with the manner enclitic (7.4.5) and in fact may simply represent an extension of the use of the manner enclitic. Evidence for regarding it as a distinct but homophonous form is found in the fact that it occurs on words which are internal (i.e. non-initial, non-final) constituents of phrases.

bau-âk álálâ ya hekum mem gaop (pigs-emphasis, many, those, tying, holding, he came)
He brought those many PIGS.

kewân yan-âk ariwom (to the dance, there-only, I will go) I will go only to the dance.

The suffix -âmâ however indicates comparison or contrast. Note that -âmâ occurs following -âk but not vice versa.

emelâk-âmâ pâli tuhuminwi âun yukât-âmâ tewesenże
long ago- shells they now for this- money
however used to however

yuâne tuhuap
with he does
that it

Long ago (in contrast to the present time) they used to do it (buy it with) shells; at this present time, however, he does (buys) it with money.

sâp yan-âk-âmâ (time, there-only-however)
At THAT time, however .......
Chapter 10
Towards a typology of the Finisterre-Huon Languages

10.0 Introduction

In chapter two, on the basis of degrees of lexicostatistical relationship, sixty-five languages were included within a proposed Finisterre-Huon microphyllum (FHP.). It was asserted that, although the lexicostatistical method was not suitable for producing an adequate subclassification of these languages, it could be relied upon to indicate genetic relationship. Thus if language a evidences a high lexicostatistical relationship with language b, say 45% or more, one could more or less safely conclude that there exists a genetic relationship, although the exact nature of this genetic relationship could not be determined by statistical methods alone. Extreme cases of lexical borrowing do occur and so this factor cannot be entirely discounted.

As in all lexicostatistical classifications which include a significantly large number of languages, there exists in the FHP. languages a chaining phenomenon in which lexicostatistical relationships generally decrease as the number of languages separating the two compared languages increases. Thus the languages at the extremities of the group show very low percentages of relationship. Moreover, the lower percentages of relationship among the languages of the FHP are in some cases lower than some of the percentages of relationship between these languages and languages of other groups; e.g., the Kovai language isolate has in some cases quite low percentages of
shared vocabulary with the languages of the Finisterre Stock (e.g., Munkip (ERA) at 3%).

As mentioned in chapter two the languages of the Rai Coast Stock of the Madang Phylum are generally 4-8% related to the languages of the Finisterre Stock, but they are separated from the latter because of differences in a few lexical items which are quite stable throughout the FHP. languages and because of different typological features.

Although the writer has considerable data showing the grammatical features of the twenty-one Huon Peninsula languages, it appears that it will be a number of years before a comparable corpus of data will be collected in the forty-three Finisterre languages. Therefore, one could not expect detailed grammatical comparisons of the majority of these languages for many years, perhaps decades, to come.

Of the Finisterre languages, however, three languages from separate lexicostatistical families have been studied in detail by members of the Summer Institute of Linguistics: Rawa (Rw., GUS.) by O. R. and M. F. Claassen, Wantoat (Wn., WAN.) by D. R. and L. Davis and Uri (ERA.) by T. and G. Webb. Moreover, the writer has considerable data in the Kewieng language (Kw., YUP.). Thus languages from four of the five families in the Finisterre Stock have been studied in more or less greater detail. Combining these four languages with five from the Huon Peninsula Stock plus the Kovai (Kv.) language yields a group of languages which may be said to be representative of the phylum as a whole. The five from the Huon
Peninsula Stock are: Kâte (Kt., EHF.), Ono (WHF.), Selepet (Sl., WHF.), Nabak (Nb., WHF.) and Kube (Kb., indeterminate). Verb paradigms for Nabak, Kube, Uri, Kewieng, Rawa and Kovai are given in Appendix A. For the other languages see Davis, 1964 (Wantoat); Pilhofer, 1926-27a, 1933 (Kâte); Wacke, 1930-31 (Ono); and Chapter six, Appendix A (Selepet).

In comparing these languages, particular attention is given to those features which are similar throughout the languages compared. Thus, strictly speaking, a typology is not the goal of this comparison; rather the goal is to show that the languages share enough features to allow one to conclude that they are genetically related. A secondary goal is to provide features which may be sought for in other posited groups of languages (e.g., the East New Guinea Highlands Stock posited by Wurm, 1960 and the Ok Family established by Healey, 1964).

In comparing these ten languages a certain amount of restatement of the analyses of other researchers was necessary. These restatements do not imply that the other analyses were incorrect, nor even that they are inferior; rather they were necessary to highlight points of similarity and to make the comparison easier. For example, Davis (1964) posited verb stem classes on the basis of allomorphic variation and described the morphology by charting the affixes outward from the stem and stating co-occurrence restrictions. In the writer's restatement the division of verbs into intransitive roots or stems, and transitive stems, as well as the distinction between dependent and independent verb morphology is followed.
10.1 Phonology

10.1.1 Phonemes

Table A presents a tabulation of the phonemes which have been tentatively identified in each of the ten representative languages.¹ A question mark indicates that the phonemic status of that phone is in doubt.

Note that all of the languages indicate a contrast between voiceless stops and voiced (often prenasalized) stops at the labial, alveolar and velar positions. Only Rawa has a contrastive series of voiced prenasalized stops in distinction to voiced stops. All of the languages except Rawa (which has open syllables) have final unreleased variants of the voiceless stops (except the labio-velar stop). The labio-velar series of stops include both labialized velar variants, \([k’w]\) and \([g’w]\) and double stops, \([kp]\) and \([gb]\). This series has not been established in Kovai although a few phonetic labialized velar stops have been observed.

All of the languages evidence nasals at the labial, alveolar and velar points of articulation but only Wantoat has a labio-velar nasal \([ŋ’w]\).

There are two series of fricatives, flat and grooved. The former includes \(w, f, y\) and \(h\) whereas the latter includes the \(s\) and \(z\). The \(z\) includes a voiced affricate variant \(dz\) and may also include \(ts\) as a variant.

A six vowel pattern predominates although the number of languages with a five vowel pattern is not insignificant. Vowel length is not a common feature and consonant length is even less common.
Table A: Phonemes

| p | t | k | kp | b | d | g | gb | m | n | η | w | f | y | s | z | h | l | r | i | e | a | â | o | u |
| Kt. | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| Ono | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| Sl. | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| Kb. | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| Nb. | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| Uri | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| Wn. | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| Kw. | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| Rw. | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| Kv. | x | x | ? | x | x | ? | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |

In addition Wantoat has ηw and æ; Rawa has mb, nd, ηg; Kube and Nabak evidence probable phonemically lengthened consonants; Kâte and Kewieng evidence phonemically lengthened vowels as also do Wantoat and Uri, but not in the full series; Kewieng has a possible phonemically distinct ts.

10.1.2 Syllable structure

The syllable structure is quite simple throughout the representative languages. In all the languages, apparently any consonant may commence a syllable, although there is a usual restriction that r does not occur word initially (except in Kovai). Syllables are commonly closed by p, t, k, m, n, or η (except in Rawa with only open syllables), and occasionally (Kewieng and Kovai), z or s (Kovai).

Each language has its peculiarities regarding which consonants may occur contiguously at syllable boundaries within the word. Syllable nuclei are either simple or complex in that they may manifest
single vowels or vowel clusters. Where vocoid or vowel clusters do occur there are usually restrictions on their sequence.

10.1.3 Morphophonemics

Morphophonemic processes vary from the very simple (e.g., Rawa) to the very complex (e.g., Wantoat). Most of the languages which evidence syllables closed by p, t, and k also evidence a common morphophonemic rule which operates on morpheme-final unreleased stops and initial voiced stops. The rule generally is that when a morpheme which ends with a final voiceless unreleased stop or begins with an initial voiced stop occurs contiguous to a vowel, the voiced or voiceless stop is replaced by a flat fricative (or lateral) phoneme at the corresponding point of articulation. Initial b, d or g is replaced by w, r or h and final p, t or k is replaced by w, r/1 or h.

These morphophonemic processes are illustrated by the following data (C indicates the occurrence of a consonant or a pause contiguous to the affected phoneme; V indicates the occurrence of a vowel):

<table>
<thead>
<tr>
<th>Sl.</th>
<th>C</th>
<th>V</th>
<th>final p → k</th>
<th>final t → r/1</th>
<th>final k → h</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>nep</td>
<td>new-ân</td>
<td>work</td>
<td>hat</td>
<td>nak</td>
</tr>
<tr>
<td></td>
<td>work-at</td>
<td>work-at</td>
<td>work-at</td>
<td>forest</td>
<td>tree</td>
</tr>
<tr>
<td></td>
<td>sip</td>
<td>siw-åk</td>
<td>blood</td>
<td>tat</td>
<td>tâk</td>
</tr>
<tr>
<td></td>
<td>woman</td>
<td>blood-only</td>
<td>only</td>
<td>Stay!</td>
<td>rope</td>
</tr>
<tr>
<td></td>
<td>bomit-ne</td>
<td>bomit-ne</td>
<td>short</td>
<td>(no change)</td>
<td>observed</td>
</tr>
<tr>
<td></td>
<td>bomil-e</td>
<td>bomil-e</td>
<td>shorten-to</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
final p → w  final t → r/ı  final k → h
Kb. C  kic-na  eye-my  kpac-na  name-my  oruc-na  head-my
V  kiw-a  eye-his  kpar-a  name-his  oruh-a  head-his
Kt. C  pitic-ne  small  hesic-ne  bent  (no change observed)
V  pitiw-a  to  become  small  hesir-e  to  become  bent
Kw. C  (no change observed)  (no change observed)  anąk-gamitsak  he  called  you
WN.  Final p, t, or k → u unless  the  initial phoneme  of  the  following  morpheme  is  z  or  unless  the following  morpheme  is  of  a  particular  class
(Davis, 1968: 9-10).
Kv. C  lap  water  (no change observed)  ilsik-ınon  joined  together
V  lab-on  water-ıts  ilsig-e  to  join  s.th.
Sl. C  kat-be  I  will put  it  kat-de  we(du.)  will  put  it  bät-ge  hand-your
V  ari-we  I  will  go  ari-re  we(du.)  will  go  hâme-he  nose-your
Nb. C  tat-bi  I  must  stay  (no change observed)  âkŋen-gät  them-for
V  sa-wi  I  must  give  him  nâ-hât  me-for
Ono  C  okan-be  I  must  do  it  doku-ruku  slimy  (no change observed)
V  ari-we  I  must  go
When the preceding morpheme ends in a vowel, the initial stops of the following morpheme undergo the following changes: t or k reduce; d becomes t or remains d; and g become k.

10.2 Noun phrase structure

There are certain features of the Noun Phrase structure which are found throughout the Finisterre-Huon languages here compared. A basic General Noun Phrase formula which incorporates only those tagmemes shared by these languages may be posited as follows:

± Possession ± Attributive ± Head ± Qualifier ± Numeral ± Demonstrative. Generally none of these tagmemes is obligatory but of course one must occur to have a manifestation of the phrase. The regular personal pronouns substitute for a portion of the phrase, which in Selepet includes only the Possession, Attributive and Head tagmemes, but which in Wantoat includes the whole noun phrase.3

The Possession tagmememe is manifested by a Possession Axis-relator Phrase. The axis may be manifested by a variety of word classes or construction types and the relator is manifested by a clitic.

Examples given below in each language include the
axis manifested by (a) a clause, (b) a noun and (c) a regular personal pronoun. A fourth example (d) illustrates the emphatic personal pronoun occurring in the tagmeme.

Sl. (a) mukan ariop-gât senße âlålâ (yesterday, he went-of, things) the things of the one who went yesterday
(b) biolipyêña-gât opon (their bros-in-law-of, men’s house) the men’s house of their brothers-in-law
(c) nâ-gât emet (me-of, house) my house
(d) nine emet my own house

Nb. (a) a gekin-gêren bo (man, he died-of, pig) the pig of the man who died
(b) Awe toṇaŋ-gât bo (Awen, owner-of, pig) the pig of a man of Awen village
(c) nâ-hâ datn (me-of, my brother) my brother
(d) nen datn (my own, my brother) my own brother

Ono (a) pamaïke-wane aboŋ (e + w → ū) (he sleeps-of, things) the things of the one who sleeps
(b) ņei-wane don (men-of, words) messages for men (to come)
(c) na-ŋane urum (me-of, men’s house) my men’s house
(d) nene ñauk my own tabacco

Kb. (a) koposic wandzu-ac ama (wrong, they did-of, village) the village of those who did wrong
(b) kebu-ac koa (important man-of, mouth) an important man’s message
(c) no-ac opoc (me-of, hat) my hat
(d) nena ama my own village
Kt. (a) râenarewec-te furine (he put it for me-of, pay) the payment of the one who put it for me
          (b) yacgon-te moneŋ (corn-of, money) money for (buying) corn
          (c) go-re hae (you-of, village) your village
          (d) no nahacne sâkpe (me, my own, knife) my own knife

Kw. (a) kalup apgut-do tagal (long ago, he came-of, house) the house of the one who came long ago
          (b) kpeŋgok-do gen-ŋi (knife-of, tooth-its) the knife's edge
          (c) ñk-do tagal (me-of, house) my house
          (d) ñkŋa tagal my own house

Wn. (b) naga-tâni kamun (your father-of, dog) your father's dog
          (c) nâ-tâni yot (me-of, house) my house
          (d) niŋa yot my own house

Rw. (c) no-ro se (me-of dog) my dog

The Attributive tagmeme is generally manifested by a noun which qualifies the noun manifested in the Head. The examples are Attributive-Head constructions.

Sl. nâi den-ŋe (bird, talk-its) the sound of a bird

Nb. bim ḳt-ŋeŋ (neck, stone-its) goitre

Ono medep sam-ine (son, sack-his) uterus

Kb. tofac sir-a (shin, bone-its) shinbone

Kt. upe hândâŋ-ticne (neck, seed-its) larynx

Uri fen kane garden work

Kw. tap ḳlap (sea, animal) fish

Wn. gwânâm kopap cassowary story

Rw. sono ngusî water bamboo

Kv. gilin pum-on (neck, knot-its) larynx
10.3 Word formation

The problem of root class identification which exists in the Selepet language also occurs in the other languages of the FHP., although perhaps in a lesser degree. In Selepet, for instance, it is difficult to assign any class identification to some roots because they occur in the nuclei of various word types and in higher level constructions. In this regard it may be appropriate to posit a 'word base' such as has been posited for some Austronesian languages. Word classes are then formed by different methods of word formation or derivation which include affixation and/or reduplication. Some word bases, however, occur with certain syntactic functions without any processes of word formation; i.e., an unaffixed or unreuplicated word base functions as an adjective, adverb, etc. It would, however, be incorrect to identify the word base as an adjective root or adverb root.

By way of illustration consider the Selepet root bet. As a free root it occurs as an adverb later as in bet gawuap he will come later; as a reduplicated form it occurs as either an adverb backwards as in betbet gawuap he will come backwards or a noun grub as in betbet kind of grub (which is said to walk upside down on its backside); as an adjunct in the Complement Tagmeme of an Auxiliary Verb Phrase it means to follow as in bet såwe I will follow; as suffixed by a transitive verb object marker it occurs as a transitive verb root to turn one's back on s.o. as in betnohoap
he turned his back on me; with nominal possessive markers it is a noun root s.th.'s backside as in betnêhen behind it (lit. at its backside).

The fact that one cannot always assign a class identification to a root form without ambiguity is based upon certain phenomena. The first phenomenon is the occurrence of particular roots with functions associated with differing syntactic (i.e., distributional) classes. In Selepet the root helen occurs as both an adjective meaning black and as a noun meaning firehood (i.e., the drying rack that hangs over the fireplace). The second phenomenon is that when a root form occurs with only one syntactic function it is presumptuous to assume that it could not occur in another syntactic function. Thus in Selepet before European contact, the form kuriq occurred as a free root only as an adjective meaning red. But after European contact it was used as a noun meaning rust. The third phenomenon is that a root may occur as a free form with any syntactic function normally associated with a particular class, and then, after being affected by derivational processes, it may occur as a different syntactic class or as the same class but with a different meaning. Thus, e.g., some free roots occur as adjectives and are derived to transitive or intransitive verb stems, whereas other roots occur as transitive or intransitive verb roots and are derived to adjective stems. As a result of these phenomena, it seems preferable in comparing the languages to concentrate on the processes of derivation and word formation rather than to concentrate on the kinds of classes.
The following processes of word formation have been observed to occur in most of the languages here compared.

10.3.1 Intransitive verbs derived by a verbalizer suffix. Note that the verbalizer suffix is apparently cognate for all the languages (cf. 10.11).

*Sl.* kârîh-ê *to become strong* from kârik *strong*
- lohol-ê *to become weak* from lohot *weak*
- ono bomîl-ê *to draw near* from bomit *short*
- sasa-ê *to ripen* from sasa *red*
- kâb. gbaor-î *to ripen* from gbaoc *yellow*
- kât. âhesir-ê *to become bent* from hesic *bent*
- afec-ke *to become light* from afec *light* (*not heavy*)
- uri kumak-ê *to die* from kumak *dead*
- wn. kekek-å *to become strong* from kekek *strong*
- rw. sanga-we *to spear s.th.* from sanga *spear*
- daone-te *to look* from daone *eye*
- kv. salalap-î *to be dry* from salalap- *dry* (*of wood*)

10.3.2 Transitive verbs derived by addition of bound object markers which act as transitive verbalizers:

*Sl.* kâlâp-ku-ap *(arouse-him-it)* *it aroused him* from kâlâp *fire*
- nb. ne-sek-êp *(me-carry-he)* *he carried me* from sek *skin*
- ono kpesin-ka-maike *(help-him-he)* *he helped him* from kespîn *support*
- kâb. sf+c-g+-tsac *(spit-him-he)* *he spat upon him* from sf+c *spittle*
- kât. aŋac-nu-kac *(please-me-he)* *he pleased me* from aŋac *sweetness*
10.3.3 Intransitive verbs derived by the addition of the verb peripheral suffixes. In these cases the root usually occurs with a different syntactic function as well.

Sl. girin-ban I laughed from girin laughter
Nb. gundu-n it bent over from gundu bent

Ono pin make it is stretched from pin stretch
Kb. selic-tsac it is strong from seli strength
  efi-tsac it is light from efe light (not heavy)
Kt. hu-kac it descended from hu down
Kw. bληλ-tsak it is bad from bληλ bad
  ληνto-tsok he forgot from ληνtok mind

Wn.⁵ tokŋa-gak it is hot from tokŋa hot
Kv. asul-pe he urinated from asul urine

10.3.4 Adjectives which are derived by an adjectivizer meaning with or from an Association Axis-relator Phrase marked by a relator clitic or root meaning with.

Sl. to-ne orop (water-its, with) juicy
Nb. tip sip-bek (dung, blood-with) dyssentery, bloody stools

Ono ɲet-ne-rop (tooth-its-with) sharp
Kb. doku-a-guc (water-its-with) juicy
Kt. soc-hec (blood-with) bloody
10.3.5 Adjectives derived by an adjectivizer suffix. The adjectivizer is apparently cognate in all languages compared, and significantly, for all the languages it is either identical or nearly identical with the 3s nominal possessive marker in the particular language. For each language in the examples below the adjective stem is followed by the root and then by the noun with the 3s possession marker.

Sl. kârik-ñe strong from kârik strength, kâi-ñe leg-his bâle-ñe bad from bâle bad, sen-ñe eye-his

Nb. kêtik-ñen strong from kêtik strength, sek-ñen skin-his

Ono bomit-ne short from bomit short, ket-ne ear-his ñei-ne male from ñei man, botik-ine nasal mucus-his

Kb. gbaor-a yellow from gbaoc yellow, kpar-a name-his

Kt. afec-ne light (not heavy) from afec light, sahac-ne skin-its

Uri timi-ni old from tim before, dee-ni eye-his

Kw. mep-ma cold from mep wind, binap-ma waist-his

Wn. kekek-ñå strong from kekek strength, katak-ñå hand-his

Rw. kuri-mi old from kuri before, (3s marker is -me)

Kv. gur-ñon washed from gur wash, dzi-ñon eye-his

10.3.6 Nouns by reduplication. Usually the nouns are derived by reduplication from a verbal form.

Sl. ise-ise weeping from ise to weep

Nb. gâki-ki death from gâki to die

Ono seu-seu death from seu to die

Kb. ne-ne food from ne to eat

Kt. nâ-nâ taro from nâ to eat
Uri kuŋ-kumak death from kumak death
sa-suk thought from suk to think
WN. na-nam food from na to eat
Rw. ne-ne eating as in one nene cannibal from ne to eat
Kv. ŋu-ŋi-on picture-its from ŋi- (?)

10.3.7 Adverbs derived by reduplication with or without heterophonic reduplication (i.e., a reduplication of the total word but with a vowel and/or consonant shift).

Sl. lohot lohot weakly from lohot weak
   hätik mitik in a crosswise manner from hätik cross over
Nb. buzak buzak quietly from buzak
tiŋ taraŋ widely spaced
Kb. beaŋ beaŋ carefully from bea good
   heri biri in a bad manner from biri bad
Kt. banac banac reservedly
   oren gören in a crosswise manner
   ifi aifi wantonly
Kw. waiŋ waiŋ quivering
Kv. lalon lalon in pairs from lalon two
   kongele kongele in a careening manner
   piri para in a crosswise manner

10.3.8 Adjectives by reduplication. Often these forms occur with an adjectivizer suffix (see 10.3.5).

Sl. kewere kewere swollen, fat from kewere to swell
Nb. kikipmaŋ hot
Ono piŋ piŋ-ine stretched from piŋ stretch
Kt. hehesic bent from hesic bent
Kw. tsəmbok tsəmbok-ŋə joined together from tsəmbok to join
10.4 Nouns

There are two subclasses of nouns found throughout the languages of the FHP. The first subclass includes body parts and kinship terms and occurs with obligatory possession-marking suffixes. The second subclass includes other nouns and the possession-marking suffixes are optional. In most of the Huon Peninsula languages (Nabak and Momolili excepted) the first subclass of nouns has the structure + nucleus + number + possession with the morphemes occurring in the number tagmeme indicating singular, dual and plural. The morphemes indicating dual are related to the numeral two and are cognate in many languages. The languages of the Finisterre Stock and the Kovai language apparently do not indicate number in this manner although Rawa has a plural marker occurring between the nucleus and the possession-marking suffixes. A vowel shift in the possession-marking suffix indicates singular or plural number in Uri.

Sl. sg. atá-Ø-ne (el.br.-sg.-my) my elder brother
du. atá-yâhât-ne (el.br.-du.-my) my two elder brothers
pl. atá-lip-ne (el.br.-pl.-my) my elder brothers
num. yâhâp two

Ono sg. tat-Ø-ne (el.br.-sg.-my) my elder brother
du. tat-etke-ne (el.br.-du.-my) my two elder brothers
pl. tat-ekop-ne (el.br.-pl.-my) my elder brothers
num. etke two
Kb. sg. dac-Ø-na (el.br.-sg.-my) my elder brother
du. dac-gehec-na (el.br.-du.-my) my two elder brothers
pl. dac-foc-na (el.br.-pl.-my) my elder brothers
num. gehec two
Kt.6 sg. hahac-Ø-nane (el.br.-sg.-my) my elder brother
du. hahac-yahec-nane (el.br.-du.-my) my two elder brothers
pl. hahac-fâc-nane (el.br.-pl.-my) my elder brothers
num. yahec two
Uri sg. saba-na my son
pl. saba-ne my sons
Kw. sg. pe-no my elder brother
du. pe-no boron my two elder brothers
pl. pe-no-i my elder brothers
num. boron two
Wn., Kv. For Wantoaat and Kovai number is shown by numerals on the phrase level.
Rw. sg. dâbâ-Ø-ne my friend
du. dâbâ-ne eraya my two friends
pl. dâbâ-guri-ne (friend-pl.-my) my friends
10.5 Distinctions in person and number

All of the representative languages evidence a distinction in person between first, second and third, and a distinction in number between singular, dual and plural. The maximum fulfillment of these distinctions yields a nine cell person-number matrix with each cell manifesting a distinct form. Only a small number of languages evidence a matrix with the
maximal number of distinctions so that the larger number of languages evidence matrices in which two or more cells are manifested by identical forms. It is the occurrence and distribution of these matrices with partial fulfillment of distinctions which are interesting.

The distinctions in person and number are found in the following morpheme classes.

(1) Personal pronouns. In most languages this category includes all the free pronoun series, but in a few languages particular pronoun series, e.g., emphatic or contrastive pronouns, have distinct patterns.

(2) Nominal possessive suffixes.

(3) Verbal object-marking affixes in transitive verb morphology.

(4) Independent verbal person-number composites indicating subject. Many languages evidence different distinctions in different tenses and/or modes.

(5) Dependent (heteropersonal) verbal person-number composites indicating subject. (Note that Uri lacks the heteropersonal subject-marking person-number composites).

10.5.1 Matrix A is the most common and is found to varying degrees in all of the representative languages.

<table>
<thead>
<tr>
<th>Matrix A</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td>S</td>
</tr>
<tr>
<td>1.</td>
</tr>
<tr>
<td>2.</td>
</tr>
<tr>
<td>3.</td>
</tr>
</tbody>
</table>
The occurrence of Matrix Type A is given in Table B: \((x = \text{occurrence}, --- = \text{non-occurrence}; \text{limitations (if any) are stated in the cells})\).

**Table B: Occurrence and distribution of Matrix A**

<table>
<thead>
<tr>
<th></th>
<th>Personal pronouns</th>
<th>Nominal suffixes</th>
<th>Object markers</th>
<th>Indep. per. num. composites</th>
<th>Dep. per. num. composites</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sl.</td>
<td>(x^7)</td>
<td>(x)</td>
<td>(x)</td>
<td>(x)</td>
<td>(x)</td>
</tr>
<tr>
<td>Nb.</td>
<td>---</td>
<td>(x)</td>
<td>(x)</td>
<td>rpt., interp., ctf.</td>
<td>---</td>
</tr>
<tr>
<td>Ono</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>(x)</td>
<td>(x)</td>
</tr>
<tr>
<td>Kb.</td>
<td>(x)</td>
<td>(x)</td>
<td>(x)</td>
<td>(x)</td>
<td></td>
</tr>
<tr>
<td>Kt.</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>(x)</td>
<td>(x)</td>
</tr>
<tr>
<td>Uri</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>(x)</td>
<td>lacking</td>
</tr>
<tr>
<td>Kw.</td>
<td>(x)</td>
<td>(x)</td>
<td>---</td>
<td>(x)</td>
<td>(x)</td>
</tr>
<tr>
<td>Wn.</td>
<td>regular</td>
<td>---</td>
<td>---</td>
<td>rpt., ipt., future</td>
<td>---</td>
</tr>
<tr>
<td>Rw.</td>
<td>---</td>
<td>(x)</td>
<td>---</td>
<td>inch., ctf.</td>
<td>---</td>
</tr>
<tr>
<td>Kv.</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>(x^8)</td>
<td>---</td>
</tr>
</tbody>
</table>

10.5.2 Matrix B occurs in only four of the 10 representative languages. Three of these four are from the Huon Group and the fourth is Kovai.

**Matrix B**

<table>
<thead>
<tr>
<th></th>
<th>S</th>
<th>D</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>a</td>
<td>d</td>
<td>g</td>
</tr>
<tr>
<td>2</td>
<td>b</td>
<td>e</td>
<td>h</td>
</tr>
<tr>
<td>3</td>
<td>c</td>
<td>f</td>
<td>i</td>
</tr>
</tbody>
</table>
It is distributed among these four languages as follows:

**Nabak**: regular personal pronouns. The third person dual and plural forms may be a compound involving the 3s form which yields forms distinct from the second person dual and plural forms. If this distinction were lacking these pronouns would evidence the pattern of Matrix A.

**Ono**: personal pronouns and nominal possessive suffixes. Note that the 3s and 3p regular pronoun forms are identical. Because the emphatic pronouns do not evidence such identical forms, this feature is regarded as not representing a significant pattern.

**Kâte and Kovai**: personal pronouns, nominal possessive suffixes and verbal object-marking suffixes.

10.5.3 Matrix C is found in three languages of the Finisterre Group: Uri, Kewieng and Wantoat. For each of these languages it is found only in the verbal object-marking affixes. A variant of this matrix occurs in Uri nominal possessive suffixes where the 3s form is identical to the 1st person dual and plural forms. This phenomenon may be attributable to chance and so would not warrant a distinct matrix type.

Matrix C

<table>
<thead>
<tr>
<th></th>
<th>D</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>a</td>
<td>d</td>
</tr>
<tr>
<td>2</td>
<td>b</td>
<td>e</td>
</tr>
<tr>
<td>3</td>
<td>c</td>
<td>f</td>
</tr>
</tbody>
</table>
The remaining twelve matrix types are peculiar deviations of these basic types involving various neutralizations of distinctions in person or number. All but two of these twelve types occur in the Uri, Wantoat or Rawa languages.

Wantoat, with five different matrix patterns, evidences the largest number of peculiarities.

10.5.4 Matrix D occurs in Wantoat nominal possessive suffixes. This matrix evidences an extension of the neutralization of number in the 3d-p (Matrix C) to include the singular as well.

\[
\begin{array}{ccc}
S & D & P \\
1 & a & d & f \\
2 & b & e & e \\
3 & c & c & c \\
\end{array}
\]

10.5.5 Matrix E occurs in Wantoat emphatic pronouns and independent verb (obligative mode). In the latter, however, the 1s form is the same as the 2-3d-p form, but this phenomenon is probably a chance occurrence and does not reflect a significant pattern.

\[
\begin{array}{ccc}
S & D & P \\
1 & a & d & d \\
2 & b & e & e \\
3 & c & e & e \\
\end{array}
\]
10.5.6 Matrix F occurs in the Wantoat independent verb (inchoative mode) and the dependent hetero-personal verb.

Matrix F

<table>
<thead>
<tr>
<th></th>
<th>S</th>
<th>D</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>a</td>
<td>d</td>
<td>g</td>
</tr>
<tr>
<td>2</td>
<td>b</td>
<td>e</td>
<td>e</td>
</tr>
<tr>
<td>3</td>
<td>c</td>
<td>f</td>
<td>f</td>
</tr>
</tbody>
</table>

10.5.7 Matrix G occurs in the Wantoat independent ctf. verb.

Matrix G

<table>
<thead>
<tr>
<th></th>
<th>S</th>
<th>D</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>a</td>
<td>d</td>
<td>g</td>
</tr>
<tr>
<td>2</td>
<td>b</td>
<td>e</td>
<td>h</td>
</tr>
<tr>
<td>3</td>
<td>c</td>
<td>f</td>
<td>f</td>
</tr>
</tbody>
</table>

Rawa, with four different matrix patterns, evidences the second largest number of peculiarities.

10.5.8 Matrix H occurs in Rawa verbal object pronoun affixes.

Matrix H

<table>
<thead>
<tr>
<th></th>
<th>S</th>
<th>D</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>a</td>
<td>d</td>
<td>d</td>
</tr>
<tr>
<td>2</td>
<td>b</td>
<td>d</td>
<td>d</td>
</tr>
<tr>
<td>3</td>
<td>c</td>
<td>d</td>
<td>d</td>
</tr>
</tbody>
</table>
10.5.9 Matrix I occurs in Rawa dependent heteropersonal verbs.

Matrix I

<table>
<thead>
<tr>
<th>S</th>
<th>D</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>a</td>
<td>b</td>
</tr>
<tr>
<td>2</td>
<td>a</td>
<td>b</td>
</tr>
<tr>
<td>3</td>
<td>a</td>
<td>b</td>
</tr>
</tbody>
</table>

10.5.10 Matrix J occurs in Rawa independent verbs, ipt. and rpt., and in the Kovai independent verb (ctf. mode) and heteropersonal dependent verb.

Matrix J

<table>
<thead>
<tr>
<th>S</th>
<th>D</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>a</td>
<td>c</td>
</tr>
<tr>
<td>2</td>
<td>b</td>
<td>d</td>
</tr>
<tr>
<td>3</td>
<td>b</td>
<td>d</td>
</tr>
</tbody>
</table>

10.5.11 Matrix K occurs in Rawa personal pronouns.

Matrix K

<table>
<thead>
<tr>
<th>S</th>
<th>D</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>a</td>
<td>d</td>
</tr>
<tr>
<td>2</td>
<td>b</td>
<td>e</td>
</tr>
<tr>
<td>3</td>
<td>c</td>
<td>e</td>
</tr>
</tbody>
</table>

10.5.12 Matrix L occurs in Uri regular personal pronouns.

Matrix L

<table>
<thead>
<tr>
<th>S</th>
<th>D</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>a</td>
<td>d</td>
</tr>
<tr>
<td>2</td>
<td>b</td>
<td>e</td>
</tr>
<tr>
<td>3</td>
<td>c</td>
<td>c</td>
</tr>
</tbody>
</table>
Nabak shows peculiarities which also result in two matrices.

10.5.13 Matrix M occurs in Nabak independent verbs (ipt., pres., ift., rft., and hetero.)

\[
\begin{array}{ccc}
S & D & P \\
1 & a & d & e \\
2 & b & d & f \\
3 & c & d & f \\
\end{array}
\]

10.5.14 Matrix N occurs in Nabak independent verb (inchoative mode).

\[
\begin{array}{ccc}
S & D & P \\
1 & a & d & f \\
2 & b & e & e \\
3 & c & e & e \\
\end{array}
\]

One may surmise that the ideal matrix, i.e., Matrix B with each cell represented by a peculiar form, was present in the earliest stage of development in these languages. Tendencies toward a neutralization of distinction in persons developed at an early stage, and this is evidenced by Matrix A (in which the distinction between second and third person in both the dual and plural was neutralized) occurring in all the languages. This process continued in Matrix J where the distinction between second and third person was also lost in the singular.
This loss of distinction included the first person in the dual (Matrix M) and the first person in all numbers (Matrix I).

After the division into two groups (the Finisterre and the Huon) occurred, tendencies toward a neutralization of distinction in number developed in the Finisterre group. This neutralization is present for three Finisterre languages in Matrix C in which the distinction between dual and plural is lost in all three persons. In Matrix F this loss of distinction between dual and plural is found in the second and third persons and in Matrix G it is found only in the third person. In Matrix D, however, it included the singular number as well, but only in the third person.

A number of matrices reflect both types of tendencies. In Matrix K the distinction between second and third person was lost in the dual and plural number, and the distinction between dual and plural was lost in the first person. In Matrix H, the lack of any distinction of person in the non-singular forms (i.e., dual and plural are not distinguished) may be regarded as the result of both tendencies affecting identical cells of the matrix. Such may also account for the fact that Uri does not distinguish person or number in the dependent heteropersonal forms.

Also note that Matrices E and N, in which second and third person are represented in the dual and plural number by a single form, include Wantoat
forms and the Nabak independent (inch. mode). The fact that Nabak is included here does not force one to conclude that the tendency towards neutralization of distinction in number is also present in the Huon Peninsula group of languages, because this single case could be an isolated instance of forms falling together. Moreover, of all the peoples speaking Huon Peninsula languages, the Nabak people have had the greatest amount of contact with the peoples speaking Finisterre languages, so that influence from the Finisterre languages is not unlikely. The fact that this loss of distinction is so prevalent among the Finisterre languages represented in this comparison and almost totally absent among the Huon Peninsula languages lends some support for the division of the FHP. into two subgroups.

In general, the languages of the Finisterre group evidence more irregularities in their matrix patterns and this irregularity may be the result of both types of tendencies toward neutralization being operative.
10.6 Regular personal pronouns

Table C: Regular personal pronouns

<table>
<thead>
<tr>
<th></th>
<th>1s</th>
<th>2s</th>
<th>3s</th>
<th>1d</th>
<th>2d</th>
<th>3d</th>
<th>1p</th>
<th>2p</th>
<th>3p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sl.</td>
<td>nā</td>
<td>gā</td>
<td>yāk</td>
<td>net</td>
<td>yet</td>
<td>yākyet</td>
<td>nen</td>
<td>yen</td>
<td>yākyen</td>
</tr>
<tr>
<td>Nb.</td>
<td>nā</td>
<td>gā</td>
<td>âk</td>
<td>net</td>
<td>it</td>
<td>âknet</td>
<td>nen</td>
<td>in</td>
<td>âknen</td>
</tr>
<tr>
<td>Ono</td>
<td>na</td>
<td>ge</td>
<td>e</td>
<td>nere</td>
<td>nire</td>
<td>ere</td>
<td>nene</td>
<td>nine</td>
<td>e</td>
</tr>
<tr>
<td>Kb.</td>
<td>ni</td>
<td>gi</td>
<td>i</td>
<td>niri</td>
<td>iri</td>
<td>iri</td>
<td>nini</td>
<td>ini</td>
<td>ini</td>
</tr>
<tr>
<td>Kt.</td>
<td>no</td>
<td>go</td>
<td>e</td>
<td>nâhe</td>
<td>nôhe</td>
<td>yahe</td>
<td>nâhe</td>
<td>nôhe</td>
<td>yahe</td>
</tr>
<tr>
<td>Uri</td>
<td>na</td>
<td>ga</td>
<td>a</td>
<td>d</td>
<td>indi</td>
<td>sidi</td>
<td>adi</td>
<td>indi</td>
<td>sidi</td>
</tr>
<tr>
<td>Kw.</td>
<td>nāk</td>
<td>gāk</td>
<td>uŋun</td>
<td>nit</td>
<td>dzil</td>
<td>dzil</td>
<td>nin</td>
<td>dzi</td>
<td>dzi</td>
</tr>
<tr>
<td>Wn.</td>
<td>nā</td>
<td>gā</td>
<td>an</td>
<td>nit</td>
<td>git</td>
<td>git</td>
<td>nin</td>
<td>gin</td>
<td>gin</td>
</tr>
<tr>
<td>Rw.</td>
<td>no</td>
<td>ke</td>
<td>ŋu</td>
<td>nâre</td>
<td>yari</td>
<td>ŋu</td>
<td>nâre</td>
<td>ye</td>
<td>ŋu</td>
</tr>
<tr>
<td>Kv.</td>
<td>non</td>
<td>gok</td>
<td>i</td>
<td>it</td>
<td>ŋot</td>
<td>yot</td>
<td>in</td>
<td>ŋon</td>
<td>yon</td>
</tr>
</tbody>
</table>

The regular personal pronouns (Table C) show strong stability, and cognate forms occur throughout the languages of the FHP. The formatives making up the pronoun person-number composites are significant in their stability. An analysis of the pronoun composite yields the structure + person + number + number, in which the person formative is manifested by a consonant, the first number formative by a vowel and the second number formative by a consonant. This formula holds for Selepet, Nabak, Uri, Kewieng and Wantoat.

For the proto-language (p-FH) of these languages the field structure and proto formatives may be posited as in Matrix 0.9
### Matrix 0: Regular Personal Pronoun Formatives

<table>
<thead>
<tr>
<th></th>
<th>sg.</th>
<th>sg.</th>
<th>non-sg. du.</th>
<th>non-sg. pl.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st per.</td>
<td>(*n)</td>
<td>n</td>
<td>a</td>
<td>k</td>
</tr>
<tr>
<td>2nd per.</td>
<td>(*ŋ)</td>
<td>ŋg</td>
<td>a</td>
<td>k  ŋg</td>
</tr>
<tr>
<td>3rd per.</td>
<td>(*y)</td>
<td>y</td>
<td>a</td>
<td>k</td>
</tr>
</tbody>
</table>

For the proto-FH forms as given above, the vowel *a* indicating 'singular' represents a back vowel as opposed to a front vowel (represented by *i*) indicating 'non-singular' number. At an earlier stage the vowels may have been identical but a shift to a front vowel occurred in the 'dual' and 'plural' number. The *k* formative indicating 'singular' has been lost in the 'first' and 'second' person forms in all the Huon languages and remains in the 'third' person form in only a few languages. The formative *t* indicating 'dual' is found throughout most of the languages as either *t* or as one of its possible morphophonemic variants. Thus in Kube, Ono and Rawa, the addition of a final vowel necessitates a change from *t* to *r*. In Uri of the Erap family of languages the *t* is represented by either *nd* or *d*, the latter reflecting a loss of prenasalization. In Kewieng and a couple of the Uruwa languages the final *t* has occasionally weakened to a final *l*, often accompanied by slight friction. The formative *n* indicating 'plural' is found in all those languages which distinguish 'dual' and 'plural'. In Uri and most of the other languages of the Erap family the plural forms are absent and
their function has been taken on by the dual forms. Note in Kate that the 'dual' is indicated by h and the 'plural' by n. Throughout the languages of the Eastern Huon Family, here represented by Kate, the syllable final p, t and k phonemes were neutralized to glottal stop and the final m, n and η phonemes were neutralized to η. The distinction, however, is normally maintained in the morphophonemic variants which occur when the glottal stop (here represented by c) or η is followed by a vowel initial suffix. Thus if c represents a neutralization of final p, t or k and it is followed by a vowel initial suffix, the c is replaced respectively by w, r or h. This neutralization may have been followed by an addition of a vowel to the form, but the addition of the vowel did not yield the original morphophonemic variants; rather c → h and η → η. Note that in a few languages (e.g., Kewieng and Rawa) the formative *n indicating plural was lost in the 'second' and 'third' person forms.

The formative *n indicating 'first person' is found throughout the Finisterre-Huon languages although in a few languages (e.g., Nabak, Kube, Uri and Kqvai) it is lost in the dual and plural forms. In the Ono dual and plural forms the formative is identical to the second person formative η and it may be theorized that the distinction between first and second person was lost in the consonantal formatives because the distinction was present in the vowel formatives e 'first and third person' and i 'second person'.
The second person formative \(*\eta g\) has a variety of reflexes. In the second person singular form of most of the languages it is \((\eta)g\) with the prenasalization absent in some languages or sub-phonemic in others. In the dual and plural forms the reflex \(\eta\), representing the velar prenasalization of the proto forms, is found in a number of the Huon Peninsula languages (e.g., Nabak (only in third person forms), Ono and Kâte) and in Kovai. The reflexes \(dz\) in Kewieng, \(s\) in Uri and \(y\) in most other languages may reflect a process of palatalization of the \(g\) after the vowel change from a back vowel to a front vowel took place (see McElhanon and Voorhoeve, 1970 on the item you (plural)).

10.7 Emphatic personal pronouns

For all of the languages (except Rawa and Kovai) a series of emphatic personal pronouns has been observed. These are given in Table D.
The 1s and 2s forms are the most stable forms and apparent cognates are easily recognizable. Certain morphological similarities in the formation of this series are recognizable in a number of the languages. Firstly, these pronouns are formed by reduplication and/or the addition of a suffix which in many cases is homophonous with the adjectivizer. Secondly, the forms in some languages probably occur with an obligatory suffix meaning only, alone (e.g., Kâte -ac), while the forms in other languages occur with this suffix optionally present (e.g., I myself alone as in Selepet nini-âk, Nabak nen-ak, Kube nena-oc, Wantoat nina-gân; you yourself alone as in Selepet giki-âk, Nabak git-ak, Kube gênga-oc, Wantoat gika-gân (?)).
Reduplication is most evident in the 1s and 2s forms but in some languages it occurs in other persons and numbers as well: e.g., Selepet ni-ne, gi-ke; Kube ne-na, ge-ŋa; Wantoat ni-na, gi-ka; Kewieng i-yì 3s, dsitsil 2-3d and dzitsi 2-3p. It is also evident in some of the compound forms: e.g., Kewieng nitda nit 1d, ninda nin 1p; Kâte nâhe nâhâc 1p and Kube niri nekaŋ 1d, nini neŋaŋ 1p.

Where reduplication does not occur the occurrence of the adjectivizer-like suffix is found: e.g., Selepet ik-ŋe 3s, Nabak Ik-ŋaŋ 3s, and Kewieng nák-ŋa 1s, gâk-ŋa 2s.

10.8 Possessive suffixes

Table E: Nominal possessive suffixes

<table>
<thead>
<tr>
<th></th>
<th>1s</th>
<th>2s</th>
<th>3s</th>
<th>1d</th>
<th>2d</th>
<th>3d</th>
<th>1p</th>
<th>2p</th>
<th>3p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sl.</td>
<td>ne</td>
<td>ge</td>
<td>ne</td>
<td>netne</td>
<td>yetne</td>
<td>yetne</td>
<td>nenne</td>
<td>yene</td>
<td>yene</td>
</tr>
<tr>
<td>Nb.</td>
<td>n</td>
<td>di</td>
<td>ŋaŋ</td>
<td>nit (ŋ)it (ŋ)it n** (ŋ)in (ŋ)in</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ono</td>
<td>ne</td>
<td>ñone</td>
<td>ine</td>
<td>se</td>
<td>ňitne</td>
<td>etne</td>
<td>dze</td>
<td>ňine</td>
<td>ene</td>
</tr>
<tr>
<td>Kb.</td>
<td>na</td>
<td>ga</td>
<td>a</td>
<td>nira gira gira nina gina gina</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kt.</td>
<td>nane ge ticne</td>
<td>nâhec ňekic yekic nâhec ňenic yenic ne</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Uri</td>
<td>na</td>
<td>ga</td>
<td>ni</td>
<td>ni</td>
<td>sic</td>
<td>sic</td>
<td>ni</td>
<td>sic</td>
<td>sic</td>
</tr>
<tr>
<td>Kw.</td>
<td>no</td>
<td>go</td>
<td>ŋi</td>
<td>nit</td>
<td>dzil</td>
<td>dzil</td>
<td>nin</td>
<td>dzi</td>
<td>dzi</td>
</tr>
<tr>
<td>Wn.</td>
<td>na</td>
<td>ga</td>
<td>na*</td>
<td>nit</td>
<td>sâ</td>
<td>nâ</td>
<td>nin</td>
<td>sâ</td>
<td>nâ</td>
</tr>
<tr>
<td>Rw.</td>
<td>ne</td>
<td>ge</td>
<td>ŋo</td>
<td>nare</td>
<td>yari</td>
<td>yari</td>
<td>nane</td>
<td>ye</td>
<td>ye</td>
</tr>
<tr>
<td>Kv.I</td>
<td>in</td>
<td>ok</td>
<td>on</td>
<td>uwit</td>
<td>uŋot</td>
<td>uwot</td>
<td>uwin</td>
<td>uŋon</td>
<td>uwon</td>
</tr>
<tr>
<td>Kv.II</td>
<td>nong</td>
<td>goŋ</td>
<td>on</td>
<td>tong</td>
<td>neton</td>
<td>yoton</td>
<td>inŋon</td>
<td>ňenon</td>
<td>ŋonon</td>
</tr>
</tbody>
</table>

* allomorphic forms observed
** n represents a reduction or contraction of nin
The nominal possessive suffixes show striking similarities throughout. For each language, with the exception of the 3s form, all forms are either identical to or similar to the regular personal pronoun forms. The 3s form is always identical to or similar to the adjectivizer suffix (see 10.11). It has been noted in 6.1.1 that the Selepet possessive suffixes probably represent a fusion of the noun with a following adjective which was derived from the regular personal pronoun suffixed by the adjectivizer. These fossilized adjectivizers are evident in the possessive suffixes for Selepet, Ono, Kube and Kovai (II). As with the regular personal pronouns, cognate forms are found throughout the languages. The Kovai series I forms evidence considerable vowel harmony with the preceding stem/root vowels.

10.9 Demonstrative pronouns

The demonstrative pronouns are quite stable throughout the languages of the Finisterre-Huon microphylum. These demonstratives denote five positions relative to the speaker and hearer: this (near the speaker), that (near the hearer), that over there (removed from both speaker and hearer), that up there (removed from both speaker and hearer) and that down there (removed from both speaker and hearer). The demonstratives are given in Table F.
The form which is most stable is that for *that over there* which is cognate in all the languages. Second in stability is the form meaning *which* with a common element (underlined in Table F) occurring in most languages. This element occurs compounded with another element *wo* in Selepet, and apparent cognates of *wo* occur in Kâte and Kovai. Note that the forms meaning *this* and *that* are often involved in semantic shifts; viz., the form meaning *this* in one language will have a cognate form meaning *that* in another language and vice versa. Moreover, some languages evidence a vowel difference which in Selepet reflects nearness or remoteness but which in the other languages may not have any distinction.

The demonstrative pronouns occur in the axis of Locative axis-relator phrases and the resultant forms (demonstrative and clitic) function as locative words.

<table>
<thead>
<tr>
<th>Sl.</th>
<th>what</th>
<th>this</th>
<th>that</th>
<th>there</th>
<th>up</th>
<th>down</th>
<th>which</th>
</tr>
</thead>
<tbody>
<tr>
<td>wuân</td>
<td>yu</td>
<td>ya</td>
<td>eda</td>
<td>ewa</td>
<td>eba</td>
<td><em>wosa/ [enda]</em></td>
<td><em>woda [emba]</em></td>
</tr>
<tr>
<td>kureki</td>
<td>pi</td>
<td>ke</td>
<td>inda</td>
<td>gwa</td>
<td>ba</td>
<td><em>de</em></td>
<td></td>
</tr>
<tr>
<td>ono(ka)</td>
<td>i</td>
<td>ye</td>
<td>eri</td>
<td>we(ti)</td>
<td>gbe(ti)</td>
<td><em>di</em></td>
<td></td>
</tr>
<tr>
<td>nemac</td>
<td>yo(mi)</td>
<td>i(mi)</td>
<td>eri(mi)</td>
<td></td>
<td></td>
<td><em>di</em></td>
<td></td>
</tr>
<tr>
<td>wemo</td>
<td>dzi</td>
<td>i</td>
<td>ocni</td>
<td>faic</td>
<td>yuwi</td>
<td><em>wени</em></td>
<td></td>
</tr>
<tr>
<td>naasit</td>
<td>i/ya</td>
<td>u/wa</td>
<td>do</td>
<td></td>
<td></td>
<td><em>inde</em></td>
<td></td>
</tr>
<tr>
<td>ni</td>
<td>o</td>
<td>ya</td>
<td>asto</td>
<td>kwe</td>
<td>mok-(?)</td>
<td><em>dzi</em></td>
<td></td>
</tr>
<tr>
<td>dâsi</td>
<td>a</td>
<td>u</td>
<td>ato</td>
<td>e</td>
<td>amu</td>
<td></td>
<td></td>
</tr>
<tr>
<td>nda</td>
<td>ṣa</td>
<td>ṣu</td>
<td>ande</td>
<td>awe</td>
<td>ame</td>
<td></td>
<td></td>
</tr>
<tr>
<td>muk</td>
<td>ye</td>
<td>ya/i</td>
<td>dri</td>
<td></td>
<td></td>
<td><em>awon</em></td>
<td></td>
</tr>
</tbody>
</table>

*Table F: Demonstrative pronouns*
The word meaning *why* is an occurrence of the word *what* in the axis of the Causal axis-relator phrase and marked by the clitic *for*. A sampling of the various occurrences of the demonstratives with these and other clitics as observed in the different languages is given below. This feature is more pronounced in the Huon Peninsula languages than in the Finisterre languages.

**Sl.**: yu-ân (*this-at*) here, ya-ken (*that-towards thither*, eda-kebā (*that over there-from*) hence, wosa-kebā (*which-from*) whence, ya-kât (*that-for*) therefore, wuân-gât (*what-for*) why.

**Nb.**: pi-en (*this-at*) here, ba-en (*that down there-at*) down below, gwa-en (*that up there-at*) up there, inda-enen (*that over there-towards*) thither, de-en (*which-at*) where, ke-yet (*that-for*) therefore.

**Ono:** iwa-o (*this-at*) here, eriwa-o (*that over there-at*) over there, dia-o (*which-at*) where, onoka-o (*what-at*) where, okoka-wane (*what-for*) why, iwa-rôp (*this-with*) together with this one, dia-ŋo (*which-sub.*) which one.

**Kb.**: yo-mu (*this-at*) here, yo-mucgeŋ (*this-towards*) hither, eri-munec (*that over there-from*) hence, nemac-niŋ (*what-for*) why, nemac-ŋa (*what-sub.*) which one, yo-muc (*this-like*) like this.

**Kt.**: dzi-ra (*this-at*) here, i-rec (*that-from*) hence, ocni-rec (*that over there-from*) hence, wemo-cte (*what-for*) why.
Throughout the languages of the Finisterre-Huon Micro-phylum the verb structure may be described by positing a verb nucleus as opposed to a verb periphery. The nucleus manifests either a transitive verb stem or an intransitive verb root/stem. The transitive verb stem consists of a root form plus an object marking affix (see object affixes under section 10.10.4). Most intransitive verbs thus far observed are roots although intransitive verb stems are not totally absent;
e.g., in Selepet, intransitive verbs may be derived from roots by the suffixation of -e as in lohole-
to become weak from lohot weak. Verbs may generally be divided into two structural subclasses, independent and dependent. The independent verbs manifest a number of tenses and/or modes, and the independent verb periphery manifesting these tenses and/or modes may be divided into two subtypes on the basis of linear order of suffixal tagmemes, one subtype involving the inchoative future tense. The dependent verb periphery may also be divided into two subtypes on the basis of linear order of suffixal tagmemes, heteropersonal and homopersonal.

10.10.1 Independent Verb Peripheries

Generally speaking there are two distinctive subtypes of independent verb peripheries. There is some variation among the languages as to which tenses and/or modes fall within each periphery. For all the languages, however, the inchoative future tense with or without other tenses occurs in one periphery and the past and present (indicative) tenses occur in a second periphery.

10.10.1.1 Verb periphery subtype I generally has the following structure:

+ bene. + num. + mode/tense + per.(num.) + mode/tense

The distinguishing features of this subtype of periphery are the occurrence of a separate tagmeme indicating number and the occurrence of only one tagmeme indicating mode/tense. Note that the
mode/tense tagmeme has two possible positions; either word final or between the number tagmeme and the tagmeme manifesting the person(number) composites.

The tagmeme indicating number manifests morphemes which have consonantal formatives which are cognate throughout the Finisterre-Huon languages. These formatives are highly stable in the first person forms and are given for comparison in Table G.21 The vowels in these forms apparently indicate tense.

Table G: Number formatives in first person forms

<table>
<thead>
<tr>
<th></th>
<th>singular</th>
<th>dual</th>
<th>plural</th>
</tr>
</thead>
<tbody>
<tr>
<td>Selepet</td>
<td>-be</td>
<td>-de</td>
<td>-ne</td>
</tr>
<tr>
<td>Nabak</td>
<td>-bi</td>
<td>-di</td>
<td>-ne</td>
</tr>
<tr>
<td>Ono</td>
<td>-be</td>
<td>-te</td>
<td>-ŋem</td>
</tr>
<tr>
<td>Kube</td>
<td>-ba</td>
<td>-tsi</td>
<td>-ni</td>
</tr>
<tr>
<td>Kâte</td>
<td>-pe</td>
<td>-nac</td>
<td>-naŋ</td>
</tr>
<tr>
<td>Uri</td>
<td>-wak</td>
<td>-dam</td>
<td>-nam</td>
</tr>
<tr>
<td>Kewieng</td>
<td>-wo</td>
<td>-do</td>
<td>-no</td>
</tr>
<tr>
<td>Wantoat</td>
<td>-wa</td>
<td>-ta</td>
<td>-na</td>
</tr>
<tr>
<td>Rawa</td>
<td>-we</td>
<td>-re</td>
<td>-ye</td>
</tr>
<tr>
<td>Kovai</td>
<td>-ip</td>
<td>-et</td>
<td>-en</td>
</tr>
</tbody>
</table>

Note that singular number is marked by a labial stop or fricative.22 Dual is marked by an alveolar obstruent and plural by an alveolar nasal. Except for Kâte and Kovai these formatives are syllable initial. Kovai is one of the most divergent of the Finisterre-Huon languages and in these morphemes the consonant and vowel has metathesized. Kâte represents an abberant family of languages and the structure
of the 1st person dual and plural forms appears to be based by analogy upon the structure of the 2nd and 3rd person, dual and plural forms. Most of these languages have complex person-number composites in the 2nd and 3rd person, dual and plural. The analysis of these forms must await the collection of more data in those languages which are represented only by basic vocabulary lists and ultimately it must await an application of the comparative method and reconstruction.

Structural variants of this verb perifery are determined by whether or not there is another mode/tense perifery identical in structure to the inchoative future tense perifery, and if there is one, then whether this other mode/tense is signaled by a change of a phoneme or by a separate suffix added to the inchoative forms.

For two languages, Kube and Nabak, there is no other mode/tense sharing the verb periferal structure with the inchoative so that one cannot posit with certainty any separate mode/tense tagmeme. That is to say, a single suffix may be regarded as a composite form indicating mode/tense, person and number.

In Selepet the inchoative future tense has the same structure as the immediate future tense. The Wantoat inchoative future has structure similar to the future tense, the contrary-to-fact mode, the obligatory mode and the interrogative mode. The inchoative perifery of these two languages has the structure: ± benefactive + number + mode/tense + person-number.
The Rawa language has contrary-to-fact forms which are very similar to the inchoative forms, the only difference being found in the first person dual and plural forms which are respectively -re and -ye in the inchoative future and -woro and -woto in the contrary-to-fact. If one were to posit that the form -wo indicates 'contrary-to-fact' mode then the verb periferal structure would be the same as that for Selepet and Wantoat. Such an interpretation, however, would assume too much and it is better to reserve analysis until more data are available and the analysis of Rawa is beyond its initial stages.

The inchoative and remote future tenses in Uri share the same verb periferal structure. In the Kewieng language the inchoative future tense occurs with the immediate future tense and the contrary-to-fact mode in a single verb perifery. In Ono the inchoative future and contrary-to-fact mode occur in the same perifery. For these three languages the perifery has the structure ± bene. + num. + per.-num. + mode.

Kâte is peculiar in clearly indicating an order of + person + number in the dual and plural forms of the inchoative verb. Although the first person singular form is apparently cognate with the 1s forms of the other languages, the Kâte structure is regarded as an aberrent type: ± bene. + per. + num. + tense/mode.

Another possible shared feature among several of the languages here compared is the phonemic shape of
the 3s inchoative future tense form. Note the following probable cognates: Selepet -âk, Nabak -êk, Kâte -oc, Uri -ôt, Wantoat -yok and Kovai -o. The glottal stop c in Kâte may represent phoneme k in word final position (see 2.4 and 10.6). In Uri the phoneme t represents the glottal stop in word final position.

The person-number composites of the inchoative future verb in all of these languages make the same distinctions in person and number, viz., that of Matrix A (10.5.1) which has separate forms indicating 1s, 1d, 1p, 2s, 3s, 2-3d and 2-3p. In many of these languages the suffixation indicating the inchoative future verb is identical with or similar to the suffixation indicating the heteropersonal dependent verb.

(1) Selepet: the two sets show resemblances in 2-3p.
(2) Nabak: the two sets are diverse and the forms for the heteropersonal verb are peculiar.
(3) Ono: the forms for the two sets are identical except in 3s where the heteropersonal form is -ki and the inchoative form is -kep.
(4) Hube: the two sets are identical.
(5) Kâte: the two sets show identical forms only in 1s; all other forms show no resemblances between the two sets.
(6) Uri: the heteropersonal verb morphology does not distinguish person nor number so no comparison is possible.
(7) Kewieng: the two sets differ only in the forms indicating 2s, 3s, 2p and 3p.
(8) Wantoat: the two sets are identical.
(9) Rawa: the heteropersonal forms distinguish only number and are identical to the 3rd person forms of the inchoative verb.
(10) Kovai: the two sets are identical.

10.10.1.2 Verb perifery subtype II is quite regular throughout all the languages compared and usually includes two past tenses or one past tense and one present tense. The structure is ± bene. + mode + tense + per.-num. The distinguishing features of this perifery are that the order of the tagmemes is generally fixed and that the mode tagmeme is distinct from the tense tagmeme and is manifested by 'habitutive mode' morphemes which may be shown to be derived from verb compounding. Generally there is little difficulty in identifying the constituent morphemes of this subtype of verb perifery.

Some languages, viz., Kube, Nabak, Ono and Rawa, have apparently additional suffixal morphemes occurring after the person-number composites. In Kube the contrary-to-fact forms are formed by the addition of a suffix to the prohibitive forms. In Rawa the additional morphemes indicate 'remote past tense' and in Nabak they possibly indicate various aspects or temporal states such as 'remote past time', 'near past time', 'present to future time' and 'unreal or imaginative time' (i.e., contrary-to-fact mode). In Ono the prohibitive forms are formed by the addition of a suffix to the remote past tense forms. In some of these cases these extra suffixal morphemes are
similar in phonemic shape to clitics and further analysis may indeed show them to be clitics and as such not part of the basic verb structure. A listing of the languages and the respective tenses and modes occurring within the structure of independent verb periphery subtype II follows:

\textit{Sl.}: remote past tense, immediate past tense, contrary-to-fact mode and future tenses (punctiliar and habituative).

\textit{Nb.}: remote past tense, intermediate past tense, immediate past tense, present tense, immediate future tense, remote future tense and contrary-to-fact mode.

\textit{Ono}: remote past tense, immediate past tense, future tense and prohibitive mode.

\textit{Kb.}: remote past tense, immediate past tense, immediate future tense, contrary-to-fact mode and prohibitive mode.

\textit{Kt.}: immediate past tense, present tense, remote future tense and remote inchoative future tense.

\textit{Uri}: remote past tense, immediate past tense, present tense and immediate future tense.

\textit{Kw.}: remote past tense and immediate past tense.

\textit{Wn.}: remote past tense and immediate past tense.

\textit{Rw.}: remote past tense, immediate past tense, present tense and future tense.

\textit{Kv.}: remote past tense and immediate past tense.

The habituative mode (hab.) morphemes of these languages may be shown to be related to the verbs meaning \textit{to do} or \textit{to live} and to have a historical
basis in verb compounding. In the historical development of these forms fusion has taken place so that some of the current hab. morphemes in some of the languages bear only slight resemblance to the original verb forms from which they developed. 28

Selpet

In Selpet the identification of the hab. mode morpheme with the verb m- to live is only evident with the immediate past tense suffixes. The only similarity between the hab. mode morpheme -mini occurring with the remote past tense and the verb m- to live is the initial m. In the future hab. the only possible evidence may be the fact that in the future tense hab. morpheme -bisâ the initial phoneme b is not replaced by a corresponding fricative phoneme w when the morpheme occurs following a vowel. This replacement of b by w in this environment is a common morphophonemic change. Thus the phoneme b in this environment is prenasalized [mb] and this prenasalization may be evidence for breaking the morpheme up into constituents -m 'hab. mode' and -bisâ 'future tense'. 29

Present (verb root/stem) + m- (verb periphery in Hab. ipt.) as in ari-m-ap (to go-hab.-3s ipt.) he habitually goes.

Past (verb root/stem) -mini- (verb periphery in Hab. rpt.) as in ari-mini-op (to go-hab.-3s rpt.) he used to go.

Future (verb root/stem) -m- (verb periphery in Hab. future tense) as in ari-m-bisâp (to go-hab.-3s future) he will habitually go.
Nabak

The Nabak hab. morphemes also show similarities with the verbs ma- to live and tat- to stay. The compounding of these verbs to yield hab. forms is peculiar in Nabak and the structure is \( + \) verb root ma- to live + (verb root/stem) ± to live/to stay.\(^{30}\)

Present ma- + (verb root/stem-verb perifery Hab. in pres.) as in ma-ma-zin (to live-to go-3s pres.) he always goes.

Past ma- + (verb root/stem) + tat- (verb Hab. perifery in interpt.) as in ma-kotap-mayan (to live-to come-hab.-3s interpt.) he used to come.

Future ma- + (verb root/stem) + ma- (verb Hab. perifery in rft.) as in ma-we-ma-be (to live-to sleep-hab.-3s rft.) he will always sleep.

Ono

Two verbs, \{ma-\} ma- ~ mai- ~ maŋ- to do and ge- to live are compounded with the verb root/stem to yield the habituative forms.\(^{31}\)

Present (verb root/stem) + mai- (verb perifery Hab. in ipt.) as in ari-mai-ke (to go-hab.-3s ipt.) he always goes.

Past (verb root/stem) + maŋ- (verb perifery in Hab. rpt.) as in ari-maŋ-kole (to go-hab.-1s rpt.) I used to go.

Future (verb root/stem) + maŋ- (verb perifery Hab. in fut.) as in ari-maŋ-kale (to go-hab.-1s fut.) I will always go.
Inchoative (verb root/stem) + ma- + ge- (verb
Hab. perifery in inch.) as in ari-ma-ge-we (to go-hab.-hab.-1s inch.) I
must always go.

*Kube*

The hab. mode morphemes are derived from the verbs
an- to do and kec- to live.

Present (verb root/stem) + an- (verb perifery in
Hab. ipt.) as in ke-an-zac (to go-hab.-3s
ipt.) he always goes.

Past (verb root/stem) + ker- (verb perifery in
Hab. rpt.) as in ke-ker-ec (to go-hab.-3s rpt.)
he used to go.

*Kate*

The habituative mode morphemes are derived from
the verbs e- to do and yu- to live.

Present (verb root/stem) - e- (verb perifery in
Hab. pres.) as in ra-e-kac (to go-hab.-3s
pres.) he always goes.

Past (verb root/stem) - yu- (verb perifery in
Hab. ipt.) as in ra-yu-yec (to go-hab.-3s ipt.)
he used to go.

*Uri*

The hab. mode in Uri is indicated by a second
order suffix and this suffix appears to have been
derived by compounding the verb with another verb which
was cognate with the Rawa verb ârâ-/âru-/ara- to live.
This verb may have had the form *ar- in Uri, but after
the form had an established place in signaling habitu-
ative, the free verbal form was lost. The compound
assumed the phonological characteristics of a single word and the second member of the compound, i.e., *ar- assumed the character of a suffix. The following data are illustrative:

Present tense: (verb stem/root) + ar- (verb perifery in pres.) as in ka-Ø-r-ik [karik] I am going and ka-ar-r-ik [kaatik] (to go-hab.-pres.-ls) I always go (note: r + r → t).

Past tense: (verb stem/root) - ar- (verb perifery in past.) as in ka-Ø-ag-uk [kaaguk] I went and ka-ar-ag-uk [karaguk] (to go-hab.-past.-ls) I used to go (note: a + a → a).

Fut. tense: (verb stem/root) + ar- (verb perifery in fut.) as in ka-Ø-o-t-ìk [kaotìk] I shall go and ka-ar-o-t-ìk [karotìk] (to go-hab.-fut.-ls) I shall always go

Kewieng

The writer has a limited amount of data in the Kewieng language and although the hab. mode morphemes may be isolated they are not yet clearly identified with any verb. The hab. morpheme -e in the past tense is similar to the verb ^- to do.32 The data collected with the hab. in the present tense involve apparently irregular verb stems so that the hab. morpheme can only be tentatively identified as ^- in the dual and plural and ^ata sa in the singular.

Present (verb root/stem) + (^)- (verb perifery Hab.33 in ipt.) as in k^-tsak (to go-hab.-3s ipt.) he always goes.
Past (verb root/stem) + e- (verb periphery in Hab. rpt.) as in kâ-e-gâk (to go-hab.-3s rpt.)

he used to go.

Wantoat

The writer has not found a verb root in Wantoat which is suspect as being the basis for the development of the Wantoat hab. morpheme -ga. The position of this morpheme in the Wantoat verb periphery, however, is analogous to that of the related languages, so that one may surmise that a similar development occurred in Wantoat.

Rawa

In the Rawa language the development of the hab. morpheme may be traced to a compound involving {ârâ-} to live.

Present (verb root/stem) -ro (homo.) + ârâ-
Hab. (verb periphery in pres.) as in âro-ro-
râ-te (to go-homo.-hab.-3s pres.) he always goes.34

Past (verb root/stem) -ro (homo.) + âru- (verb Hab. periphery in past.) as in âro-ro-ru-wo (to go-homo.-hab.-3s past.) he used to go.35
he used to speak and as in gap I will go, ga-gap I will always go.

10.10.2 Dependent Verb Peripheries

All of the languages of the Finisterre-Huon micro-phylum have a distinction between homopersonal and heteropersonal verb peripheries. As expected there are minor variations among the languages with respect to the structure of these peripheries but some general features may be identified.

In regard to the heteropersonal forms comment has already been made to the fact that similarities exist between the heteropersonal forms and the inchoative future tense forms (see 10.10.1.1). Moreover, the tagmeme order in the heteropersonal periphery is generally as follows: ± benefactive + mode + person-number + time. The mode tagmeme distinguishes between punctililiar action (frequently represented by a zero) and prolonged action (frequently represented by the same morpheme indicating habitual action in the independent verb peripheries). A number of languages do not distinguish prolonged action, viz., Kewieng, Rawa and Selepet, and in the latter two the morpheme manifested in the mode tagmeme may be described as a heteropersonal marker.36 Two languages, Kâte and Wantoat, manifest a time tagmeme before the person-number composites. The morphemes in this tagmeme distinguish whether the action of this verb is simultaneous with or antecedent to the action of the following verb.37
A number of these languages exhibit a time tagmeme following the person-number composites but the morphemes occurring in this posited tagmeme need to be compared for similarities with the clitics of not only the language in question but also of related languages. In Kube the simultaneous action morpheme is homophenous with the accompaniment clitic and so the time tagmeme may be omitted if this could be regarded as a heteropersonal clause filling the axis of an Accompaniment Axis-relator Phrase: e.g.,

\[
\text{me-gic-guc ne-yec (hold it-they(pl.)-simul.,}
\]

\[
eat\ it\-he(rpt.))\ \text{while they held it, he ate it (lit. in association with them holding it, he ate it).}
\]

Moreover, in the closely related Mape language simultaneity is indicated by the morpheme \(-\text{kuc}\) which, although not homophenous with the Mape accompaniment clitic, may be shown to be cognate with the Kube accompaniment clitic. Similarly in Selepet a morpheme \(-\text{ane}\), analyzed by the writer as a suffix only occurring following dependent clauses, indicates that the action of the verb is antecedent to the action of the following verb. This morpheme is an apparent cognate with the Kâte locative clitic \(-\text{onec from}\).

The Uri language is peculiar among the languages here compared in that it does not distinguish either person or number in the dependent heteropersonal verb morphology.

The dependent homopersonal verb periphery generally has the structure \(\pm\) bene. + mode + identity \(\pm\) time.
The remarks made above relating to the mode and time tagmemes also apply here. In Wantoat, and perhaps in other languages as well, the benefactive markers are obligatorily absent, probably due to their presence in the morphology of the following heteropersonal or independent verb.

**Selepet**

The Selepet dependent verb morphology is described in 6.2.2 and a summary is presented here. Two subtypes of verb periphery were posited. The first was the heteropersonal verb with the structure + nucleus ± bene. + identity + number + person.

$$\text{tuhu-Ø-yingi-mu-t-dâ (build-it-for them-hetero.-}$$
$$\text{du.-2-3 per.) you/they(du.) built it for them}$$
$$\text{and...}$$

The second was the homopersonal verb with the structure + nucleus ± bene. + identity + mode.

$$\text{tuhu-Ø-yingi-m-Ø (build-it-for them-homo.-}$$
$$\text{punct.) building it for them and...}$$

The nucleus may be manifested as in the independent verb morphology.

**Nabak**

There are two subtypes of dependent verb periphery in Nabak; the homopersonal and the heteropersonal. The homopersonal verb has the structure + nucleus ± bene. + mode + homopersonal marker.

$$\text{n-at-sa-n-at-di (go-for him-hab.-homo.) always going}$$
$$\text{for him and...}$$
$$\text{n-di (eat-homo.) eat and...}$$

.
The heteropersonal verb has the structure + nucleus + bene. + mode + number + person.

+ mode + numb er + pe r. -num. ± time.

The mode slot is manifested by mage continuative or prolonged action from the compound ma- to do and ge- to live. When the person-number composites are absent the verb is homopersonal but when they occur the verb is heteropersonal. The time slot indicates whether the action of the dependent verb is simultaneous with or antecedent to the action of the following verb. When the action is simultaneous no time morpheme occurs; when it is antecedent the morpheme {-mo} -mo ~ -so occurs. The person-number composites are identical to the person-number composites of the verb periphery type I except that the 3s form is -ki.

kpe-∅-gin-mage-we-so (hit-it-for you-hab.-ls-
ante.) I was hitting it for you and then
someone else...
kpe-∅-we (hit-it-1s) when I hit it, someone
else...
ne-∅-so (eat-it-ante.) eat and then...
Kube

The Kube dependent verb has the usual two contrasting types of periferies, viz., the homopersonal and the heteropersonal. The homopersonal verb has the structure + nucleus ± bene. + mode + identity + time.

\[ \text{kpe-}\overline{0}-\text{mi-}\overline{0}-\text{ma-}\overline{0} \quad (\text{kill-it-for him-punct.-homo.-ante.}) \text{ kill it for him and then...} \]

\[ \text{kpe-}\overline{0}-\text{mi-kec-}\overline{0}-\text{na-}\overline{0} \quad (\text{hit-it-for him-hab.-homo.-simul.}) \text{ while hitting it for him...} \]

The heteropersonal verb has the structure + nucleus ± bene. + mode + per.-num. + time.

\[ \text{kpe-}\overline{0}-\text{mi-kec-}\overline{0}-\text{ni-}\overline{0}-\text{guc} \quad (\text{hit-it-for him-hab.-lp-simul.}) \text{ when we were hitting it for him, someone else...} \]

\[ \text{kpe-}\overline{0}-\text{mi-kec-}\overline{0}-\text{ni-}\overline{0} \quad (\text{hit-it-for him-hab.-lp-ante.}) \text{ we were hitting it for him and then someone else...} \]

Kate

Two contrasting types of dependent verb periphery are found. The first is the heteropersonal dependent verb with the structure + nucleus ± bene. + mode + time + person + number

\[ \text{kpa-}\overline{0} \quad \text{yare-} \quad -\text{ku} \quad -\text{ha} \quad -\text{pe} \quad -\text{ne} \quad \text{kill-it for them habit. simul. first plural} \]

while we(pl.) used to kill it for them(pl.)

\[ \text{kpa-}\overline{0} \quad -\text{yare} \quad -\overline{0} \quad -\text{ha} \quad -\text{pi} \quad -\text{e} \quad \text{kill-it for them punct. simul. 2-3 plural} \]

while they(pl.) killed it for them(pl.)
The homopersonal dependent verb structure is:

+ nucleus ± bene. + mode + time

The homopersonal structure is + nucleus ± bene. + identity.

The form indicates prolonged or continuous action by a form of stem reduplication:

- au-ŋa going  au-wuut going on and on
- abu-ŋa coming  aba-buut coming on and on
- ti-ŋa doing  ti-tiit doing it on and on

The heteropersonal verb structure is + nucleus ± bene. + mode + identity.

The homopersonal verb morphology has the structure + nucleus ± bene. + identity. No evidence was found for either the punctiliar/prolonged distinction or the
simultaneous/antecedent distinction.

ya-ŋek owi-tak *(speak-ing, come-he (ipt.) while
speaking he came, he spoke and then came.*

The heteropersonal verb morphology has the structure
+ nucleus + benefactive + mode + person-number.

ya-ŋap-do aŋak-dak *(speak-hab.-we(du.), hit
him-he (ipt.)) we spoke on and on, and (then)
he hit him.*

ka-do ɣəkdak *(go-we(du.), speak-he (ipt.)) we
went and (then) he spoke.*

Wantoat

The Wantoat homopersonal forms are quite complex
and have a probable structure of + mode + identity. The
mode is manifested by -Ø 'punctiliar' or -ga 'prolonged'
and the identity is manifested by a number of morphemes:
-ɣuk 'punctiliar simultaneous', -ku 'punctiliar antecedent', -ken 'punctiliar antecedent' and -sikan 'pro-
longed antecedent'.

According to Davis all of these morphemes may
occur with the morpheme -ga 'prolonged' occurring in
the mode tagmeme. It is not immediately apparent
whether these morphemes may be divided into constituent
morphemes indicating 'punctiliar', 'prolonged',
'antecedent', or 'simultaneous'. If one were to split
sikan into -si 'prolonged' and -kaŋ 'antecedent' and
then to posit a zero morpheme indicating 'punctiliar'
occurring before the other morphemes, it appears that
numerous phoneme changes have to be explained in
terms of allomorphs or morphophonemic changes.
Rawa

Rawa dependent verb morphology combines the homopersonal and heteropersonal forms and may be described by positing a single structure: \*bene. \* identity \* mode \* per.-num. The identity tagmeme manifests either -ro 'homopersonal' or -to 'heteropersonal'. When -to occurs then the person-number markers occur also.

\*\*\*\*\*

Kovai

Only a limited amount of data is available in the Kovai language and on the basis of this data the following dependent verbal suffixal structures may be posited: homopersonal, viz., + verb root/stem + identity; and heteropersonal, viz., + verb root/stem + person-number.

\*\*\*\*\*

10.10.3 Desiderative verb constructions

The concepts of desire, intent, purpose and inception of action are often not formally distinguished in some of the languages of the Finisterre-Huon micro-phylum, and thus a single utterance in a vernacular may be rendered equally well by the English glosses I am about to, I want to, I intend to, or I purpose to. There are a number of different constructions which are used to indicate these concepts, and when a language
has more than one construction type usually one of the types has a much higher frequency of occurrence.

Some languages do distinguish one or more of these concepts in different ways and it may well be that in languages where several construction types are found these concepts are distinguished by the indigenous speakers but not by the European analysts. This section of the study only concerns those constructions which are purported to indicate 'desire'. These construction types are:

(1) (verb root/stem in the inch.) + to say (homo.) + to do. This construction is by far the most common although there are minor variations particularly with regard to the occurrence of concord.

(2) (verb root/stem/special derived form) + to do with benefactive marker and also a 3s subject marker. The benefactive marker expresses the person-number forms which are best rendered as the subject of the English gloss. For example from Kâte:

ra-tso  e-nare-kac
go-suffix do-for-me-it(ipt.)
I want to go (lit. it dies to go for me)
ra-tso  e-gare-kac
  go-suffix do-for you-it(ipt.)
  you want to go (lit. it does to go for you)

(3) (noun derived by verb root/stem reduplication) + bene./cau. clitic + to do with the benefactive markers and 3s subject marker. From Kâte:
I want to go (lit. it does to me for going)
you want to go (lit. it does to you for going)

Selepet

The desiderative verb in Selepet is described in chapter 7, Phrases, and is analyzed as a clause manifesting at least one embedded clause and having the phonological characteristics of a word. The structure is:
Desiderative verb = + inchoative future + såm + ot-

Concord exists between the number indicated in the inchoative verb and the number indicated in ot-. The inchoative future verb is an independent clause functioning as the object of the dependent verb såm. Other independent verbs may substitute for ot-, although when such substitution does occur, the total construction no longer has the phonological characteristics of a single word. In all the examples in this section the examples are written to show the grammatical structure rather than the phonological structure.

ari-we så-m o-a-an (go-must I, say-ing, do-ipt.-I) I want to go.
ari-re så-m o-a-it (go-must we(du.), say-ing, do-ipt.-we(du.)) We(du.) want to go.
ari-re så-m o-a-wot (go-must we(du.), say-ing, do-ipt.-you/they(du.)) You-they(du.) want to go.
The structure of the desiderative verb in Nabak appears to be quite peculiar and the resemblances to those of other languages are slight. The structure is:

Desiderative = + verb stem/root + -sât + independent verb

The independent verb is usually manifested by nâ- to think, zâ- to say, mi- to do, or -mbâ to cause to like. The construction has the phonological characteristics of one word. If indeed the construction of the desiderative verb represents a widely divergent development from a proto-form common to the Finisterre-Huon languages, then one may hypothesize that the inchoative future tense suffixes were lost on the first (dependent) verb and that the morpheme -sât is cognate with the Selepet morpheme sâ- to say.

mâ-sât nâ-ya (go-sât, think-ipt.-I) I want to go.
mâ-sât nâ-nik (go-sât, think-ipt.-you) You want to go.
mâ-sât nâ-rut (go-sât, think-ipt.-we/you/they(du.)) We/you/they(du.) want to go.

The following utterances are tentatively analyzed as + verb stem/root + -sât + mi- to do (in present tense):
Data supplied by Rev. A. Flathmann of the Kalasa mission station indicate that apparently there are at least two desiderative constructions in Ono. The first is + verb root/stem + noun derived by reduplication + from ra- to say bene./cau. clitic + simin-(b.pr.)-(3s s.m) it is agreeable to someone.

ari rara-ane simin-nan-maike
go speaking-for agreeable-me-it(ipt.)
I want to go
ari rara-ane simin-gan-maike
go speaking-for agreeable-you-it(ipt.)
you want to go.

The second is + wetneŋ + verb (fut.) as in wetneŋ ariake he wants to go and wetneŋ arikene you want to go. The form wetneŋ consists of two morphemes. The first, wet, as a noun root means insides and occurs meaning feeling in the compound wet-borik (feeling-bad) sadness, pity. The second is -neŋ which cannot be identified but which might be equivalent to Kâte -tso.

Kube

There are three desiderative constructions in Kube which involve the verb to say and all of these constructions are quite similar. In all of them there are two phonological words of which the latter is always the verb to do with or without the benefactive markers. The
Desiderative Verb I has the structure + verb (homo.) + ze to say + wan- to do.

ke-ma-nze wan-zua (go-ing-say, do-I(ipt.)) I want to go. ⁴²
ke-ma-nze wan-zac (go-ing-say, do-he(ipt.)) he wants to go.

Desiderative Verb II has the same structure as above except that the verb to do occurs with a 3s subject marker and benefactive markers. These latter markers are rendered in the English gloss as the subject. The structure is + verb (homo.) +ze to say + wan- (b.pr.)- (3s s.m.).

ke-ma-nze wan-nen-zac (go-ing-say, do-to me-it (ipt.)) I want to go.
ke-ma-nze waŋ-gen-zac (go-ing-say, do-to you-it (ipt.)) you want to go.

Desiderative Verb III has the same structure as number II except that the verb to say occurs in the homopersonal dependent form.

ke-ma-nze-ma wan-nen-zac (go-ing-say-ing, do-to me-it(ipt.)) I want to go.
ke-ma-nze-ma waŋ-gen-zac (go-ing-say-ing, do-to you-it(ipt.)) you want to go.

A fourth desiderative construction in Kube involves a noun derived from a verb by reduplication. This noun occurs in the axis of the Bene./Cau. Axis-relator Phrase and is followed by the verb to do as in the Desiderative Verb Types II and III.

keŋken-ŋ-ac wan-nen-zac (going-for, do-to me-it (ipt.)) I want to go.
Kâte

Two types of desiderative constructions in Kâte have been already mentioned in the introduction to this section; viz., (1) ra-tso e-nare-kac (go-suffix, do-to me-it(ipt.)) I want to go, which is the most common, and (2) rara-re e-nare-kac (going-for, do-to me-it(ipt.)) I want to go. One other type occurs and involves a homopersonal dependent form of the verb to say and has the structure + verb (inch.) + murâ to say + e- (b.pr.)-(3s s.m.) it does to s.o. Concord exists in person and number between the benefactive markers and the subject markers of the inchoative future verb.

ra-pe mu-râ e-nare-kac (go-I(inch.), say-ing, do-to me-it(ipt.)) I want to go.
ra-c mu-râ e-gare-kac (go-you(inch.), say-ing, do-to you-it(ipt.)) you want to go.
ra-oc mu-râ e-cné-kac (go-he(inch.), say-ing, do-to him-it(ipt.)) he wants to go.

Uri

The desiderative verb in Uri has a structure + verb stem + -oŋa + ta- to do. When the verb ta- is in the immediate past tense the idea is that of a thwarted desire or a frustrated purpose.

ka-oŋa ta-ŋat (go-oŋa, do-he(ipt.)) he wanted to go (but was unsuccessful).
ka-oŋa ta-ŋak (go-oŋa, do-I(ipt.)) I wanted to go (but was unsuccessful).

When the verb ta- occurs in the present tense the idea is that of inception of action.
ka-on'o taa-rik (go-on'o, do-I(pres.)) I am about to go.
ka-on'o taa-rat (go-on'o, do-he(pres.)) he is about to go.

The dependent form of this construction involves the bene./cau. clitic -gat for and the verb to- to say. The structure is + noun derived from verb + -gat + niŋ like + toŋa saying + indep. verb.

guu galaap-gat niŋ toŋa aba-rik
you seeing you-for thus say-ing come-I(pres.)
I came wanting to see you.
guu nanaak-gat niŋ toŋa aba-rik
you knowledge-for thus say-ing come-I(pres.)
I came wanting you to know.

Kewieng

The only form for the desiderative which was obtained in the Kewieng language involves the bene./cau. clitic -do for. The structure is + verb stem/root + -do + nandi- to think or a- to do. When the verb a- occurs, the total construction tends to have the phonological characteristics of a single word, but with the verb nandi- there are two phonological words, the first ending with the clitic -do.

kok-do nandi-itsat (go-for, think-I(pres.)) I want to go.\(^{43}\)
kok-do nandi-itsaI (go-for, think-you(pres.)) you want to go.
kok-do-a-itsat or kok-d∧-itsat (go-for-do-I(pres.)) I want to go.\(^{44}\)
kok-do-a-itsaI or kok-d∧-itsaI (go-for-do-you (pres.)) you want to go.
In his analysis of Wantoat Verb Morphology, Davis (1964) noted the occurrence of a morpheme -nage which denotes 'subjunctive of desirability'. A significant feature of this morpheme is that it may occur as the last morpheme of the verb and signal a 'dependent clause construction of purpose, conditional desire, or non-conditional (stative) desire' (p. 162). In this latter usage the form is followed by an independent verb. Moreover, Davis (1964: 164) stated that a transition vowel i occurs between -nage and any higher order suffix. These phenomena, plus the possibility of dividing -nage into constituent morphemes, suggest that -nage may in fact have historical connections with the desiderative phrase. The writer suggests the following structure: + verb in 1p inch. + -ge for + independent verb. One may note that the resulting construction has the phonological characteristics of a single word. Note that the construction involving an inchoative future verb in the first person plus the bene./cau. clitic occurs in Selepet: the only structural difference being that in Selepet there is concord between the number of the inchoative verb and the independent verb but in Wantoat the inchoative verb only occurs in first person plural. The occurrence of the transition vowel i is evidence for positing an independent verb in the structure. What the independent verb may have been is not clear although it may be conjectured that the i represents an allomorph of the form yu- to live, be.45 When the independent verb is some verb other than i there are two phonological words, the former ending with the bene./cau. clitic -ge and being dependent upon the latter, i.e., independent verb.
In the preliminary analysis of Rawa verb morphology, the Claassens (1968) list a morpheme -wero 'intentional' which does not occur with higher order suffixes. The morpheme is similar to the morpheme -nage in Wantoat when the latter occurs as a dependent form. The writer suggests that the Rawa morpheme -wero probably represents a fusion of the 1s inchoative future morpheme with the homopersonal dependent form of the verb e-to do. The suggested structure is + verb + -we (1s inch.) + e-ro do-ing + dependent/independent verb. The verb + -we + ero occurs with the phonological characteristics of a single word and the adjacent e vowels reduce to a single e. Concord does not occur between the number expressed in the inchoative verb and the number expressed in the following dependent or independent verb.

yure-we e-ro âbu-te (kill them-I(inch.), do-ing, came-he(ipt.)) he came intending to kill them.
yure-we e-ro âbu-tero (kill them-I(inch.), do-ing, came-we(du.) (ipt.) we(du.) came intending to kill them.

Kovai

The concept of desire or intention in Kovai is expressed by the lexicon rather than the grammar.

10.10.4 Bound object and benefactive markers

These markers include those object-marking affixes which occur as part of the transitive verb stem manifested in the verb nucleus and the benefactive marking suffixes which occur in the benefactive tagmeme immediately following the verb nucleus.
A comparison of these markers clearly shows the genetic relationship of the representative languages, although it is necessary to compare whole paradigms in order to recognize the relationship. Most of the languages evidence bound object marker allomorphs and all the transitive verb roots of these languages may be divided into subclasses on the basis of their occurrence with the particular object marker allomorph paradigm. For example, in Selepet there are three paradigms of object marker allomorphs. The first person singular allomorphs are -nek 'subclass one', -nihi 'subclass two' and -noho 'subclass three' (see 5.2.2 for a detailed treatment of these). Examples of subclass one verb roots are: gâi-nek-sap (cut-me-he(ipt.)) he cut me, me-nek-sap (hold-me-he(ipt.)) he held me, kat-nek-sap (put-me-he(ipt.)) he dismissed me. Examples of subclass two verb roots are: mewale-nihi-ap (defraud-me-he(ipt.)) he defrauded me, mabot-nihi-ap (await-me-he(ipt.)) he awaited me, pene-nihi-ap (join-me-he(ipt.)) he joined me. Examples of subclass three verb roots are: tân-noho-ap (bone-me-he(ipt.)) he helped me, kâlâp-noho-ap (fire-me-he(ipt.)) he aroused me, kâdât-noho-ap (back-me-he (ipt.)) he turned his back on me. In some of the languages these object marker allomorphs are mainly suffixal (e.g., Selepet) while in others they are mainly prefixal (e.g., Wantoat). In a number of languages neither the suffixal nor the prefixal forms appear to predominate (e.g., Nabak). In general the languages of the Huon Peninsula Stock show a predominance of suffixal forms while the languages of the Finisterre Stock show a predominance of prefixal forms.
In many of the languages one or more of the verb subclasses contain a verb root morpheme represented by zero and these roots are distinguished by the object marker allomorph. Thus, in Selepet the relevant forms are Ø-nek-sap (see-me-he(ipt.)) he saw me, Ø-nihi-ap (give/bite-me-he(ipt.)) he gave it to me or it bit me, and Ø-noho-ap (hit-me-he(ipt.)) he hit me. This phenomenon is most developed in the Huon Peninsula Stock, particularly in the Ono language. In the Finisterre Stock, the phenomenon has historical importance in the diachronic study. Various synchronic studies (e.g., Wantoat by Davis (1964), Uri by Webb (1967) and Rawa by the Claassens (1968) have not noted the possible occurrence of any verb root zero morpheme.

For most of these languages a basic number of verb roots are usually found to represent all of the object marker allomorphs. These verb roots are those meaning to hit/kill s.o., to give to s.o., and to see s.o. In some synchronic studies (Davis, 1964; the Claassens, 1968; and Webb, 1967) these verb roots are described as being the lone members of individual verb classes while in others (Pilhofer, 1926-27a, 1933; Wacke, 1930-31) they are described as object verbs. Other verb roots which are also important to various languages are those for to bite s.o., to burn s.o., to cause s.o. to do s.th., to chase s.o., to copulate with s.o., to cut s.o., to hold s.o., to name s.o., to pass by s.o., to put/dismiss/leave s.o., to shoot s.o., to show s.o., to take s.th. away from s.o., and to tell s.o. As
would be expected there is a great diversity among the languages regarding the number of object marker allomorph subclasses ranging from a single class in Wantoat to several subclasses in Ono.

A comparison of these allomorph subclasses with their verb roots yields evidence for forming a hypothesis explaining this diversity in the number of object marker allomorph subclasses. It has been noted that for many of the languages it is necessary to posit a zero morpheme for one verb root with each allomorph subclass. This phenomenon is most developed among the Huon Peninsula languages, particularly so in Ono which has the largest number of allomorph subclasses. Data are complete in only four of the diagnostic verbs given above, viz., *to bite s.o.*, *to give s.o.*, *to hit s.o.*, and *to see s.o.* The comparison of the various object marker allomorphs and the verb roots reveals that the forms are intricately related and that these relationships extend throughout the languages of the FHP. and perhaps into other phyla. 47 A definitive statement will therefore have to await future study. In the following data one may posit a zero morpheme for each of the object marker allomorph subclasses in Ono. 48
### Table H: to hit

<table>
<thead>
<tr>
<th>Sl.</th>
<th>noho goho ku</th>
<th>notko yotko yotko nongo yongo yongo</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nb.</td>
<td>no go ku</td>
<td>nndi itdi itdi ndi indo indo</td>
</tr>
<tr>
<td>Omi</td>
<td>neku geku</td>
<td>ñetku ñitku ñitku ñengu ñengu engu</td>
</tr>
<tr>
<td>Kb.</td>
<td>nu gu kpe</td>
<td>nuru uru uru nunu unu unu</td>
</tr>
<tr>
<td>Kt.</td>
<td>nu gu kpå</td>
<td>nåfo yofa yofa nåpo yopa yopa</td>
</tr>
<tr>
<td>Uri</td>
<td>nuk guuk</td>
<td>uk indif indif indif indif indif</td>
</tr>
<tr>
<td>Kw.</td>
<td>ñak ñak</td>
<td>nindåp ñåk ñindåp ñåk ñåk</td>
</tr>
<tr>
<td>Wn.</td>
<td>nanu gagu</td>
<td>tånu nisi dasi yesi nisi dasi yesi</td>
</tr>
<tr>
<td>Rw.</td>
<td>nutå gutå</td>
<td>utå yutå (same as ld)</td>
</tr>
<tr>
<td>Kv.</td>
<td>gon gog o</td>
<td>goit goñet goyot goin goñon goyon</td>
</tr>
</tbody>
</table>

### Table I: to see

<table>
<thead>
<tr>
<th>Sl.</th>
<th>nek gek ek</th>
<th>nelek yelek yelek nenek yek yek</th>
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<tbody>
<tr>
<td>Nb.</td>
<td>niga giga</td>
<td>aga ndi- itdi- itdi- ndi- indi-</td>
</tr>
<tr>
<td>Omi</td>
<td>nan gan ka</td>
<td>ñot ñut ot ñon ñon ñun on</td>
</tr>
<tr>
<td>Kb.</td>
<td>nin gin kan</td>
<td>irii irii irii ninii inii inii</td>
</tr>
<tr>
<td>Kt.</td>
<td>hone hone-</td>
<td>hone- hone- hone- hone- hone-</td>
</tr>
<tr>
<td></td>
<td>nu gu Ø</td>
<td>nåfo yofa yofa nåpo yopa yopa</td>
</tr>
<tr>
<td>Uri</td>
<td>naab gaab ka</td>
<td>niib saab yaab niib saab yaab</td>
</tr>
<tr>
<td>Kw.</td>
<td>namda gamda</td>
<td>ko nimdå damdå damdå nimdå damdå</td>
</tr>
<tr>
<td>Wn.</td>
<td>nadu gadu ka</td>
<td>ntidu dadu ka ntidu dadu ka</td>
</tr>
<tr>
<td>Rw.</td>
<td>neyå geyå</td>
<td>keno yeyå (same as ld)</td>
</tr>
<tr>
<td>Kv.</td>
<td>amal- amal-</td>
<td>amal- amal- amal- amal- amal-</td>
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<td>amal- amal- amal- amal- amal-</td>
</tr>
<tr>
<td></td>
<td>ne ge</td>
<td>te ñete yete inye ñene yene</td>
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### Table J: to bite

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<th>2d</th>
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<th>1p</th>
<th>2p</th>
<th>3p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sl.</td>
<td>nihi</td>
<td>gihi</td>
<td>ihi</td>
<td>nitki</td>
<td>yitki</td>
<td>yitki</td>
<td>ningi</td>
<td>yingi</td>
<td>yingi</td>
</tr>
<tr>
<td>Nb.</td>
<td>ni</td>
<td>gi</td>
<td>i</td>
<td>ndi</td>
<td>itdi</td>
<td>itdi</td>
<td>ndi</td>
<td>indi</td>
<td>indi</td>
</tr>
<tr>
<td>Ono</td>
<td>ni</td>
<td>rott</td>
<td>girot</td>
<td>ki</td>
<td>ṣetot</td>
<td>ṣitot</td>
<td>etot</td>
<td>ṣedot</td>
<td>ṣidot</td>
</tr>
<tr>
<td>Kb.</td>
<td>ni</td>
<td>gi</td>
<td>ki</td>
<td>niri</td>
<td>iri</td>
<td>iri</td>
<td>nini</td>
<td>ini</td>
<td>ini</td>
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<tr>
<td>Kt.</td>
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<td>kicgu</td>
<td>ki</td>
<td>kic-</td>
<td>kic-</td>
<td>kic-</td>
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<tr>
<td>Kt.</td>
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<td>ṣofa</td>
<td>yofa</td>
<td>nâpo</td>
<td>ṣopa</td>
<td>yopa</td>
<td></td>
<td></td>
<td></td>
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<td>Uri</td>
<td>ni</td>
<td>gi</td>
<td>si</td>
<td>indi</td>
<td>sidi</td>
<td>idi</td>
<td>indi</td>
<td>sidi</td>
<td>idi</td>
</tr>
<tr>
<td>Kw.</td>
<td>inzi</td>
<td>(other forms were not elicited satisfactorily)</td>
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### Table K: to give and benefactive markers below

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<th>3s</th>
<th>1d</th>
<th>2d</th>
<th>3d</th>
<th>1p</th>
<th>2p</th>
<th>3p</th>
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<td>Sl.</td>
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<td>gihi</td>
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<td>yitki</td>
<td>yitki</td>
<td>ningi</td>
<td>yingi</td>
<td>yingi</td>
</tr>
<tr>
<td>nihi</td>
<td>gihi</td>
<td>wagi</td>
<td>nitki</td>
<td>yitki</td>
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<td>yingi</td>
<td>yingi</td>
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<td>Nb.</td>
<td>na</td>
<td>ga</td>
<td>sa</td>
<td>ndda</td>
<td>itda</td>
<td>itda</td>
<td>nda</td>
<td>inda</td>
<td>inda</td>
</tr>
<tr>
<td>(b.pr. are identical)</td>
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<tr>
<td>Ono</td>
<td>nin</td>
<td>gin</td>
<td>man</td>
<td>ṣepon</td>
<td>ṣipon</td>
<td>epon</td>
<td>ṣebon</td>
<td>ṣibon</td>
<td>ebon</td>
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<tr>
<td>Kb.</td>
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<td>mi</td>
<td>niri-</td>
<td>iripi</td>
<td>iripi</td>
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<tr>
<td>Kt.</td>
<td>nare</td>
<td>gare</td>
<td>râcne</td>
<td>nâcte</td>
<td>ṣacte</td>
<td>yacte</td>
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<td>gare</td>
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<td>ɾare</td>
<td>yare</td>
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<tr>
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<td>saam</td>
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<td>niim</td>
<td>saam</td>
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<td>niim</td>
<td>saam</td>
<td>yam</td>
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</tr>
<tr>
<td>Kw.</td>
<td>nami</td>
<td>gami</td>
<td>ami</td>
<td>nimi</td>
<td>dami</td>
<td>yomi</td>
<td>nimi</td>
<td>dami</td>
<td>yomi</td>
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<tr>
<td>(b.pr. are identical)</td>
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<td></td>
<td></td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>Wn.</td>
<td>namu</td>
<td>gamu</td>
<td>imu</td>
<td>nimu</td>
<td>damu</td>
<td>yemu</td>
<td>nimu</td>
<td>damu</td>
<td>yemu</td>
</tr>
<tr>
<td>ṣamu</td>
<td>gamu</td>
<td>ṣâmû</td>
<td>nimu</td>
<td>damu</td>
<td>yâmû</td>
<td>nimu</td>
<td>damu</td>
<td>yâmû</td>
<td></td>
</tr>
</tbody>
</table>
A comparison of the various bound object marker allomorphs reveals two significant features. Firstly, for many languages the bound object marker allomorphs which occur with a zero verb root show cognate forms throughout many of the object marker paradigms. Compare, for example, the object marker allomorphs occurring with the verb *to bite* in Selepet, Nabak, Kube and Uri. Secondly and equally significant is the fact that the 3s object marker in one or more languages is often cognate with the verb root morphemes in other languages. Note that the 3s form in Ono and Kube is *ki* and that this form is the same as the root morpheme in Rawa and Kâte. It is important to note that the Kâte bound object markers occurring with *ki* are suffixes but in Rawa they are prefixes. This should caution anyone in using prefixal or suffixal object markers as a heavily weighted typologically contrastive feature.\(^{49}\)

It is premature to state whether or not the proto-form of *ki* represents the root for *to bite* in the Finisterre-Huon languages. One hypothesis is that the verb *to bite* as well as many other verbs were represented in the proto-language by zero morphemes.\(^ {50}\) These zero morpheme verb roots were then distinguished by the subclasses of the bound object marker allomorphs. In the historical development of these languages the third
person singular object marker allomorph of the proto-language became the verb root in later stages of development, and to this verb root were added the bound object marker allomorphs of another sub-class. By this method the number of object marker allomorph sub-classes were reduced. In support of this hypothesis a number of observations may be given.

The 3s object marker allomorphs of the Ono language are often cognate with the root morphemes of other languages. This may indicate that the Ono language preserves more archaic forms than most other languages. The fact that the Ono 3s object marker allomorph ki occurs as a verb root in Rawa and Kâte has already been noted.

For the verb to see the 3s forms in Selepet, Ono, Kube, Uri, Kewieng and Wantoat are recognizable as apparent cognates. The Selepet form involves metathesis of vowel and consonant. In the Nabak language this form is found as aga. Another apparently unrelated series is found in Kâte, Rawa and Kovai. The root in Kâte is hone and cognate forms are found in the Rawa 3s form keno (vowel metathesis) and in the Kovai 3s form ane.

In the series given for to hit the 3s forms in Selepet, Nabak, Ono, Kube, Kâte and Uri are apparently cognate. In Rawa the object markers nu '1s', gu '2s' and u '3s' were prefixed to the form tâ to hit which is cognate with the 3s object marker in Wantoat. Note, too, that in Wantoat an irregularity occurs in which the entire singular object marker series nu-, gu-, nu-
were prefixed by another series na-, ga-, tā rather than just the 3s object marker allomorph being prefixed by another series as is usually the case (cf. the Ono 3s form ki bite it which is prefixed by the Rawa series nâ, gâ etc.). One could have expected the Wantoat forms to be something like na-ku, ga-ku and tā-ku or i-ku rather than na-nu, ga-gu, tā-nu. In the Kovai language the 3s form is cognate with the root go-.

The data in hand are most complete for the Huon Peninsula Stock of languages and a comparison of Ono and Selepet forms clearly illustrate this hypothesis.

<table>
<thead>
<tr>
<th></th>
<th>to hold</th>
<th>Ono</th>
<th>Selepet</th>
<th>to burn</th>
<th>Ono</th>
<th>Selepet</th>
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<tr>
<td>1s</td>
<td>neu-</td>
<td>me-nek</td>
<td>nae-</td>
<td>se-nek</td>
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<td>2s</td>
<td>geu-</td>
<td>me-gek</td>
<td>gae-</td>
<td>se-gek</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3s</td>
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<td>me-Ø</td>
<td>dze-</td>
<td>se-Ø</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1d</td>
<td>Ṉepu-</td>
<td>me-nelek</td>
<td>Ṉeso-</td>
<td>se-nelek</td>
<td></td>
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</tr>
<tr>
<td>2d</td>
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<td>me-ylelek</td>
<td>Ṉiso-</td>
<td>se-ylek</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3d</td>
<td>Ṉpu-</td>
<td>me-ylelek</td>
<td>eso-</td>
<td>se-ylek</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1p</td>
<td>Ṉebu-</td>
<td>me-nenek</td>
<td>Ṉezdo-</td>
<td>se-nenek</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2p</td>
<td>Ṉibu-</td>
<td>me-yek</td>
<td>Ṉizdo-</td>
<td>se-yek</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3p</td>
<td>Ṉebu-</td>
<td>me-yek</td>
<td>edzo-</td>
<td>se-yek</td>
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</table>

<table>
<thead>
<tr>
<th></th>
<th>to copulate</th>
<th>Ono</th>
<th>Selepet</th>
<th>to shoot</th>
<th>Ono</th>
<th>Selepet</th>
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<tr>
<td>1s</td>
<td>neit-</td>
<td>het-nek</td>
<td>nato-</td>
<td>yerâ-nek</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2s</td>
<td>geit-</td>
<td>het-gek</td>
<td>gato-</td>
<td>yerâ-gek</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3s</td>
<td>git-</td>
<td>het-Ø</td>
<td>yato-</td>
<td>yerâ-Ø</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1d</td>
<td>Ṉekit-</td>
<td>het-nelek</td>
<td>Ṉekotat-</td>
<td>yerâ-nelek</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2d</td>
<td>Ṉikit-</td>
<td>het-ylelek</td>
<td>Ṉikotat-</td>
<td>yerâ-ylelek</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3d</td>
<td>ekit-</td>
<td>het-ylelek</td>
<td>ekotat-</td>
<td>yerâ-ylelek</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1p</td>
<td>Ṉegit-</td>
<td>het-nenek</td>
<td>Ṉegotat-</td>
<td>yerâ-nenek</td>
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<td></td>
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<tr>
<td>2p</td>
<td>Ṉigit-</td>
<td>het-yek</td>
<td>Ṉigotat-</td>
<td>yerâ-yek</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3p</td>
<td>egit-</td>
<td>het-yek</td>
<td>egotat-</td>
<td>yerâ-yek</td>
<td></td>
<td></td>
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</tbody>
</table>
D. Davis (personal communication) reports that the word for *to copulate* in Wantoat is ye-si- and that it has the sense of *in immorality or adultery*. It is possible to divide this word into constituent morphemes ye-si (3d-p object marker-*to copulate*) *to copulate with many partners* in which the root si is apparently cognate with Ono git and Selepet het. Note that the root in the Burum language (closely related to Selepet) is set.

In each of the Ono object marker allomorph sets the 3s object marker allomorph is cognate with the Selepet verb root to which Selepet subclass I bound object marker allomorphs were suffixed. By such a process the resultant verb morphology in the Selepet language was simplified.

A few other examples which apparently support this hypothesis have been observed. The Uri forms for *to put s.o.* are nipm- '1s', gipm- '2s', kam- '3s', indipm- '1d-p', sipm- '2d-p' and ipm- '3d-p'. The 3s form kam- is apparently cognate with the Selepet root kat- to which subclass I bound object marker allomorphs were suffixed as in kat-nek *put-me*, kat-gek *put-you*, kat-Ø *put-it*, kat-nelek *put-us* (du.), etc.

The Wantoat root for *to chase s.o.* is wa to which object pronoun prefixes are added to form na-wa *me-chase*, ga-wa *you-chase*, tå-wa *him-chase*, ni-wa *us* (du.-pl.*-chase*, etc. In Nabak the root is måt to which prefixes were added as in na-måt *me-chase*, ga-måt *you-chase*, Ø-måt *him-chase*, nnda-måt *us* (du.*)-chase*, etc. In Selepet the root is wat- to which suffixes are added as in wat-nek *chase-me*, wat-gek *chase-you*, wat-Ø *chase-him*, wat-nelek *chase-us* (du.), etc. According to the
hypothesis one would expect to find a 3s form similar to wat or mät, and perhaps this form is reflected in the Ono 3s form motat- chase him.

Another significant feature of bound object marker morphology which should be noted is the similarity between the object marker allomorphs occurring with the verb to give s.o. and the benefactive markers. Because of this similarity and because the benefactive tagmeme immediately follows the verb root in all languages thus far studied, one may posit that the benefactive markers have their origin in a verbal compound which involved the verb to give s.o. as the second element of the compound. It is also significant that the phenomenon of a 3s object marker allomorph being cognate with verb roots in other languages has not been observed with the verb to give s.o. This may be due to the fact that some sort of stability resulted from the presence of the nearly identical forms of the benefactive markers. The object marker allomorphs of the verbs to hit, to see and others did not have this added factor leading to stability.

A feature of the 2s bound object markers which has been observed in Rawa (GUS.) and Selepet (WHF.) concerns the occurrence of morphophonemic variants. This phenomenon may be illustrated by the following Selepet data.

The Selepet subclass I 2s bound object marker allomorph is {-gek} which has two common morphophonemic variants: -gek which occurs following stops and -hek which occurs following vowels.\(^{53}\) These forms
occur in accordance with morphophonemic rules which apply to every morpheme which begins with a voiced stop phoneme or ends with a voiceless stop phoneme; viz., that morpheme initial voiced stop phonemes or morpheme final voiceless stop phonemes are replaced by the flat fricative phonemes at the corresponding point of articulation if the morpheme is preceded or followed by a vowel.

- alit-gek-sap (cover-you-he(ipt.)) he covered you
- kuwik-gek-sap (straighten-you-he(ipt.)) he straightened you out
- gâi-hek-sap (cut-you-he(ipt.)) he cut you
- heku-hek-sap (bind-you-he(ipt.)) he bound you

When this morpheme follows a verb root ending in the vowel e, however, the expected variant -hek does not occur. Rather the form -gek occurs as in:

- se-gek-sap [sɛŋɛk⁵saᵖ] (burn-you-he(ipt.)) he burned you
- me-gek-sap [mɛŋɛk⁵saᵖ] (hold-you-he(ipt.)) he held you
- ne-gek-sap [nɛŋɛk⁵saᵖ] (eat-you-he(ipt.)) he will eat you

This phenomenon has also been reported in Rawa by the Claassens (1968: 4) who state that the 2s bound object marker morpheme -gerâ has an allomorph -ŋgerâ which follows the vowel e.

- dobi-gerâ-te (pinch-you-he(ipt.)) he pinched you
- gana-gerâ-te (deceive-you-he(ipt.)) he deceived you
- erewe-ŋgerâ-te (seek-you-he(ipt.)) he sought you
- sure-ŋgerâ-te (send-you-he(ipt.)) he sent you
One would not expect this phenomenon to appear in Wantoat or Uri since neither of these languages have bound object-marking suffixes. Further data are needed before one can say whether or not the phenomenon is present in Kewieng or Kovai. It apparently does not occur in Ono, Nabak or Kâte.

10.10.5 Reflexive/reciprocal bound object markers

A characteristic of these languages is the occurrence of bound reflexive/reciprocal object markers which frequently exhibit subclass membership with the bound object marker subclasses. For instance, in Selepet the reflexive/reciprocal markers -ak, -agi and -aho occur in subclass I, II and III object marker subclasses respectively. The form -agi generally occurs as the benefactive reflexive/reciprocal object marker.

subclass I

gâi-nek-sap (cut-me-he(ipt.)) he cut me

gâi-ak-sap (cut-one-self-he(ipt.)) he cut himself

gâi-ak-san (cut-one-self-I(ipt.)) I cut myself

subclass II

Ø-nihi-ai (give-me-they(ipt.)) they gave it to me

Ø-agi-ai (give-one-self-they(ipt.)) they gave to one another, they exchanged

kat-nihi-ai (put-for me-they(ipt.)) they put it for me

kat-agi-ai (put-for one-self-they(ipt.)) they put it for themselves, they put it for one another

subclass III

Ø-ku-ai (hit-him-they(ipt.)) they hit him

Ø-aho-ai (hit-one-self-they(ipt.)) they hit one another, they fought
tăn-gu-ai (help-him-they(ipt.)) they helped him
tăn-aho-ai (help-oneseif-they(ipt.)) they helped one another

In most of the other languages of the WHF. this feature is less developed and it is totally absent among the languages of the EHF. Evidence for the phenomenon occurring in other languages here compared varies and a summary for each of these other languages follows.

Nabak. One form (cognate with Selepet subclass I form, -ak) functions as a bound reflexive/reciprocal object marker. In the following examples note the form {-ak} -ak ∼ -ag oneself.

Ø-gig-ap (see-you-I(pres.)) I see you
Ø-ag-ap (see-oneseif-I(pres.)) I see myself
Ø-nig-ip (see-me-they(pres.)) they see me
Ø-ag-ip (see-oneseif-they(pres.)) they see them-selves

The Selepet reflexive/reciprocal form -agi (sub-class II) has an apparent cognate element in the Nabak word æŋ kpaem exchange as in the construction æŋ kpaem mi- to exchange (lit. to hold an exchange).

The Selepet reflexive/reciprocal form -aho (sub-class III) has an apparent cognate in the Nabak verb au- to fight as in au-wərin we(du.) fought and au-wun you/they(du.) fought. The form au has not been observed in other constructions so is tentatively regarded as a verb root.

Ono. The Ono language evidences the largest number of object marker subclasses and for many of these subclasses there is a reflexive/reciprocal form (see Wacke, 1930-31: 179-180).
A form cognate with the Selepet -ak is found in the Ono forms Ø-aek-ke-we (see-yourself-hab.-I(inch.))
I will see myself, Ø-ka-nom (see-it-you(inch.)) look at it, and Ø-aek-nom (see-yourself-you(inch.)) look at yourself. For other verbs of this subclass, however, another reflexive form -nagu occurs as in kpesin-nan-
maike (help-me-he(pres.)) he helps me and kpesin-nagu-
maike (help-yourself-he(pres.)) he helps himself.
The Ono reflexive/reciprocal form -yaku belongs to the subclass of verbs of which the form to hit is
cognate with the Selepet subclass III form -aho.
Ø-neku-maike (hit-me-he(pres.)) he hits me
Ø-yaku-maike (hit-yourself-he(pres.)) he hits himself
Ø-yaku-maile (hit-yourself-I(pres.)) I hit myself
Other reciprocal forms in Ono are: au which occurs with the verb to tell as in nolat-mit (tell me-they (ipt.)) they told me and au-mit (tell one another-they(ipt.)) they told each other; ai as in nirot-mit (bite me-they(ipt.)) they bit me and airot-mit (bite one another-they(ipt.)) they bit one another; yai as in neit-mit (copulate me-they(ipt.)) they had intercourse with me and yai-mit (copulate one another-they (ipt.)) they had intercourse with one another.
Kube. Three reflexive/reciprocal bound object marker allomorphs have been observed in Kube, the first occurring with the verb to see, the second with the verb to give s.o. and the third with the verb to hit.
Ø-gen-dzua (see-you-I(ipt.)) I see you
Ø-anen-dzua (see-yourself-I(ipt.)) I see myself
Ø-æn-æn (see-yourself-you(inch.)) you look at
yourself!
Ø-non-gic (give-to-me-they(rpt.)) they gave it
to me
Ø-amu-gic (give-to-yourself-they(rpt.)) they
exchanged things
Ø-nu-tsou (hit-me-they(ipt.)) they hit me
Ø-eu-tsou (hit-yourself-they(ipt.)) they hit one
another, they fight
Ø-gu-tsac (hit-you-he(ipt.)) he hit you
Ø-eu-tsac (hit-yourself-he(ipt.)) he hit himself
Ø-eu-tsu (hit-yourself-I(ipt.)) I hit myself

Uri. Webb has described a morpheme {-an} -an ~ -n
which immediately follows the verb stem and which
expresses intensification of the subject, e.g., I
myself, you yourself, or reflexive benefaction, for
oneself. Because this morpheme is mutually exclusive
in occurrence with the bound object pronouns as
described by Webb and because it appears to occur in
the same tagmeme as these bound object pronouns, it
may be regarded as the only surviving reflexive/
reciprocal bound object marker in Uri.

Kewieng. Data are quite limited in this language and
the only forms identified are emat fight, a noun, and
waman- to fight, a verb. No relation is demonstrable
between these forms and the pronouns occurring with
the verbs to hit, to see, to give s.o. or other verbs.
Wantoat. For Wantoat Davis reports a noun amâk fight
which occurs with verbal suffixes as a verb root:
amâ-king they fought, amâ-kak he fights and amâ-gat
I fight. This morpheme is apparently cognate with the Kewieng morpheme emak fight but any relationship it bears to the posited reflexive/reciprocal object marker of Uri or to those of the Huon Peninsula languages must be indeed remote. Rawa and Kovai. No evidence of reflexive/reciprocal object markers has been found to date.

10.10.6 Verbal prefixes

Verbal prefixes are uncommon in the languages of the FHP. and many of the prefixes reported for various languages may be interpreted as preposed clitics or adverbs, or may be shown to be the result of compounding.

For Wantoat, Davis posits three prefixal tagmemes. The tagmeme closest to the root manifests the object-marking prefixes which the present writer prefers to regard as part of a transitive verb stem filling a verbal nucleus. Two of the remaining five prefixes are forms of the negative, ma- and do-, of which the former shows cognates throughout the Finisterre-Huon languages in which these cognate forms have been interpreted as adverbs.

A causative prefix has often been indicated for Kâte but the morpheme is identical to the verb root to do and therefore may be interpreted as the first element of a compound. In those languages of the Huon Peninsula which do not show causation by compounding, this idea is expressed by the dependent homopersonal form of the verb to hold or to do.
10.10.7 Verbal person-marking vowel formatives

For all of the representative languages the subject-marking person-number composites may be divided into formatives indicating person and number. One of the formatives (occasionally there are two) indicating person is a vowel and in most of the languages there is a vowel difference which indicates first person vs. non-first person. Usually this vowel difference is only evident in the dual and plural number. Frequently this vowel occurs with the tense/mode indicator in a probable portmanteau form. In the comparisons given here no analysis of these supposed portmanteau forms will be attempted; rather focus will be put upon the actual vowel differences. The fact that particular matrices occur with particular tense/mode distinctions will be simply noted in parentheses next to the person formative matrix. All matrices are given in a nine cell division with horizontal vectors from top to bottom indicating 'first', 'second' and 'third' person and vertical vectors from left to right indicating 'singular', 'dual' and 'plural' number.

The most common vowel difference is that in which a low vowel indicates first person and a higher vowel indicates second and third person. Usually the higher vowel indicating second and third person is only manifest in the dual and plural numbers. More often than not there is only one higher vowel quality represented.
Occasionally slightly different vowel qualities are involved in the difference between low and high.
In a number of languages the difference occurs in all numbers (sg., du., pl.) or in only one number (usually du. or pl.). Occasionally the same vowel occurs in the first person forms or the singular number forms without any regularity.

<table>
<thead>
<tr>
<th>Nabak (rpt. interpt.)</th>
<th>Uri (ipt./pres., ift.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>a</td>
<td>i</td>
</tr>
<tr>
<td>a</td>
<td>u</td>
</tr>
<tr>
<td>a</td>
<td>u</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Kewieng (rpt./ipt.)</th>
<th>Kewieng (ift.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>a</td>
<td>a</td>
</tr>
<tr>
<td>a</td>
<td>a</td>
</tr>
<tr>
<td>a</td>
<td>a</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Rawa (rpt., ipt.)</th>
<th>Rawa (ctf./inch.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>o</td>
<td>o</td>
</tr>
<tr>
<td>-</td>
<td>i</td>
</tr>
<tr>
<td>-</td>
<td>i</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Kovai (proh., hetero.)</th>
<th>Kovai (past)</th>
</tr>
</thead>
<tbody>
<tr>
<td>e</td>
<td>e</td>
</tr>
<tr>
<td>e</td>
<td>i</td>
</tr>
<tr>
<td>o</td>
<td>i</td>
</tr>
</tbody>
</table>

In a few cases the difference is between front and back vowels.

<table>
<thead>
<tr>
<th>Nabak54 (pres., ift., rft.)</th>
<th>Uri (rpt.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>a</td>
<td>u</td>
</tr>
<tr>
<td>a</td>
<td>u</td>
</tr>
<tr>
<td>i</td>
<td>u</td>
</tr>
<tr>
<td>i</td>
<td>u</td>
</tr>
</tbody>
</table>
Kewieng (inch./ctf.)  Wantoat (inch., hetero.)

\[
\begin{array}{ccc}
   o & o & o \\
   -/i & a & a \\
   a & a & a \\
\end{array}
\]

\[
\begin{array}{ccc}
   a & a & a \\
   -/i & a & a \\
   a & a & a \\
\end{array}
\]

The Kube language is peculiar in that in all of its matrices show a difference between high vowels indicating first person and lower vowels indicating second and third person, the opposite of the most common type.

Kube (ctf., proh./ipt., Kube (rpt.)

\[
\begin{array}{ccc}
   -/i & a & a \\
   i/a & i & i \\
   a & ao & ou \\
\end{array}
\]

\[
\begin{array}{ccc}
   a & ao & ou \\
   i/e & i & i \\
   e & o & i \\
\end{array}
\]

Wantoat exhibits a difference between high vowels indicating first person and low vowels indicating second and third person, but note that the difference is found in the singular and dual numbers rather than the dual and plural numbers. Selepet also shows a similar distinction.

Wantoat (fut.)  Selepet (all except inch., ift.)

\[
\begin{array}{ccc}
   - & i & i \\
   - & a & i \\
\end{array}
\]

\[
\begin{array}{ccc}
   - & a & i \\
   - & wo & i \\
\end{array}
\]
### 10.11 Clitics, functor words (particles) and derivational affixes

**Table L**

<table>
<thead>
<tr>
<th></th>
<th>sub.</th>
<th>inst.</th>
<th>bene.</th>
<th>poss.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sl.</td>
<td>-ŋe</td>
<td>-ŋe</td>
<td>-gât</td>
<td>-gât</td>
</tr>
<tr>
<td></td>
<td></td>
<td>kâdâk</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nb.</td>
<td>-a(ŋ)</td>
<td>-a(ŋ)</td>
<td>-gât</td>
<td>-gât(ən)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>-yât</td>
<td>-yât</td>
</tr>
<tr>
<td>Ono</td>
<td>-ŋo</td>
<td>-ŋo</td>
<td>-wane</td>
<td>-wane</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>-ŋane</td>
<td>-ŋane</td>
</tr>
<tr>
<td>Kb.</td>
<td>-ŋa</td>
<td>-ŋa</td>
<td>-ac/</td>
<td>-ac</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>-niŋ</td>
<td>-niŋ</td>
</tr>
<tr>
<td>Kt.</td>
<td>-tsi</td>
<td>-tsi</td>
<td>-re</td>
<td>-re</td>
</tr>
<tr>
<td>Uri</td>
<td>-ri</td>
<td>-ri</td>
<td>-gat</td>
<td>-niŋ</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-niŋ</td>
</tr>
<tr>
<td>Kw.</td>
<td>-nəŋ</td>
<td>-nəŋ</td>
<td>-do</td>
<td>-do</td>
</tr>
<tr>
<td></td>
<td>-da</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wn.</td>
<td>-tà</td>
<td>-tà</td>
<td>-de</td>
<td>-tàni</td>
</tr>
<tr>
<td></td>
<td>-u</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rw.</td>
<td>-mbo</td>
<td>-mbo</td>
<td>-ro</td>
<td>-ro</td>
</tr>
<tr>
<td></td>
<td>-ndo</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kv.</td>
<td>-e</td>
<td>-e</td>
<td>-non</td>
<td>-ai</td>
</tr>
<tr>
<td></td>
<td>-ai</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>locative clitics</td>
<td></td>
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<td>------</td>
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<td></td>
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<td></td>
</tr>
<tr>
<td></td>
<td>in</td>
<td>towards</td>
<td>from</td>
<td>out of</td>
</tr>
<tr>
<td><strong>Sl.</strong></td>
<td>-ân</td>
<td>-ângen</td>
<td>-ângebâ</td>
<td>-âbâ</td>
</tr>
<tr>
<td><strong>Nb.</strong></td>
<td>-e(n)</td>
<td>ene(n)</td>
<td>-gâtnâŋ</td>
<td>-e(n)set</td>
</tr>
<tr>
<td></td>
<td>-kî</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Ono</strong></td>
<td>-o</td>
<td>-oken</td>
<td>-oŋîno</td>
<td>-okenŋîno</td>
</tr>
<tr>
<td><strong>Kb.</strong></td>
<td>-u</td>
<td>-ugenŋ</td>
<td>-unec</td>
<td></td>
</tr>
<tr>
<td><strong>Kt.</strong></td>
<td>-o</td>
<td>-opec</td>
<td>-onec</td>
<td>-pecnic</td>
</tr>
<tr>
<td></td>
<td>-ne</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Uîî</strong></td>
<td>-ganaŋ</td>
<td>-gat</td>
<td>-di</td>
<td></td>
</tr>
<tr>
<td></td>
<td>-ganaŋgat</td>
<td>into</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Kw.</strong></td>
<td>-mon</td>
<td>-mongin</td>
<td>-monŋ</td>
<td></td>
</tr>
<tr>
<td></td>
<td>-kwon</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Wn.</strong></td>
<td>-kâtâŋ</td>
<td>-ne</td>
<td>-daga</td>
<td>-nanâ(?)</td>
</tr>
<tr>
<td></td>
<td>-daŋ</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Rw.</strong></td>
<td>-mâ</td>
<td>-sina</td>
<td>-mângo</td>
<td></td>
</tr>
<tr>
<td><strong>Kv.</strong></td>
<td>-o</td>
<td>-n</td>
<td>-o</td>
<td></td>
</tr>
<tr>
<td>nomzer.</td>
<td>ajzer.</td>
<td>acc.</td>
<td>origin</td>
<td></td>
</tr>
<tr>
<td>---------</td>
<td>--------</td>
<td>------</td>
<td>--------</td>
<td></td>
</tr>
<tr>
<td>Sl.</td>
<td>-ŋe</td>
<td>-ŋe/-dâ</td>
<td>orop-ŋâit/-dâ</td>
<td>-gâtŋe</td>
</tr>
<tr>
<td>Nb.</td>
<td>-ŋâŋ</td>
<td>-ŋâŋ</td>
<td>-bâk</td>
<td>-gâtnâŋ</td>
</tr>
<tr>
<td>Ono</td>
<td>-kitne</td>
<td>-rop</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kb.</td>
<td>-ŋa</td>
<td>-a</td>
<td>-guc</td>
<td>-necŋa</td>
</tr>
<tr>
<td>Kt.</td>
<td>-tsi</td>
<td>-kicne</td>
<td>-hec</td>
<td>-nectsi</td>
</tr>
<tr>
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<td>-cne/-hec</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Uri</td>
<td>-ni</td>
<td>-guk</td>
<td>-ni</td>
<td></td>
</tr>
<tr>
<td>Kw.</td>
<td>-ŋâ/-mâ</td>
<td>-gât</td>
<td>-nai</td>
<td></td>
</tr>
<tr>
<td>Wn.</td>
<td>-tâ</td>
<td>-ŋâ</td>
<td>-kât</td>
<td>-nanâ</td>
</tr>
<tr>
<td>Rw:</td>
<td>-ŋo/-mi</td>
<td>-ŋuŋya</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>-wiŋo/-do</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kv.</td>
<td>-än/-ŋon</td>
<td>-su</td>
<td>-ıtâŋ</td>
<td></td>
</tr>
</tbody>
</table>
Table 0

<table>
<thead>
<tr>
<th>like</th>
<th>one like</th>
<th>avzer.</th>
<th>poss.+loc.</th>
<th>vbzer.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sl.</td>
<td>-wu</td>
<td>-wuya</td>
<td>-âk</td>
<td>-gât-ân</td>
</tr>
<tr>
<td>Nb.</td>
<td>-nok</td>
<td>-(nom)bon</td>
<td>-âk</td>
<td>-bâk-ônen</td>
</tr>
<tr>
<td>O no</td>
<td>-(ya)le</td>
<td>-lelelo</td>
<td>-ka</td>
<td>-ônan-o</td>
</tr>
<tr>
<td>Kb.</td>
<td>-mu/-uc</td>
<td>-mûya</td>
<td>-oc</td>
<td>-ar-u</td>
</tr>
<tr>
<td>Kt.</td>
<td>-ŋuc</td>
<td>-ŋucne</td>
<td>-rao(c)</td>
<td>-rao</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>-yahac</td>
<td></td>
</tr>
<tr>
<td>Uri</td>
<td>-niŋ</td>
<td>-sat</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kw.</td>
<td>-teŋ</td>
<td>-teŋin</td>
<td>-tsi(?)</td>
<td>-do-kwon</td>
</tr>
<tr>
<td>Wn.</td>
<td>-ziŋ</td>
<td>-bîngâdâ</td>
<td>-gân</td>
<td></td>
</tr>
<tr>
<td></td>
<td>-bîngâ</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rw.</td>
<td></td>
<td>-so</td>
<td>-ro-ko</td>
<td>-we</td>
</tr>
<tr>
<td>Kv.</td>
<td></td>
<td></td>
<td></td>
<td>-i</td>
</tr>
</tbody>
</table>

The clitics, functor words (particles) and derivational affixes for the ten languages are given insofar as possible in tables L, M, N and O. In addition to the presence of cognate forms occurring throughout the representative languages, there are a number of features which are also quite regular and common to most, and in some cases all, of the languages.

10.11.1 The inst. and sub. clitics are homophonous. This feature is found in all of the languages. Note, however, that -ŋe (Selepet inst.) and -mbô (Rawa sub.) are infrequent forms.

10.11.2 The bene. and poss. clitics are homophonous. The Wantoat language is an exception and the poss. clitic was not identified in the Kovai language. Note
that the bene. clitic -niŋ has been observed only in nemac-niŋ (what-for) why in Kube, and indi-niŋ (what-for) why in Uri.
10.11.3 The various loc. clitics in each language evidence a form of building in which the shortest form usually means in and the other forms meaning towards, from, or out of are built upon this first form by the addition of subsequent syllables. For example, in Selepet, -ân in, -ângen towards, -âbâ out of, -ângebâ from.
10.11.4 In some of the languages the Acc.Ph. is the basis for an adjectival phrasal compound.

Sl. hàlâm to-ŋe orop (sugar, water-its, with)
    juicy sugar cane
Nb. tip sip-bâk (dung, blood-with) dyssentary
Ono pilanŋ net-ne-rop (knife, teeth-its-with)
    a sharp knife
Kb. pósic doku-a-guc (sugar, water-its-with)
    juicy sugar cane
Kt. ə̄kpi soc-hec (dress, blood-with) a bloody dress

10.11.5 The ajzer. is usually homophonous with one of the allomorphs (if any) of the 3s nominal possession-marking suffix.
10.11.6 The avzer. usually also occurs as an unrestricted suffix (unrestricted in the sense of occurring on most word classes and many construction types) meaning only or showing intensification. Alternatively one may assume homophoneity of two separate forms.
10.11.7 Note that the origin phrase is formed by apparently one of two methods. In Selepet and Nabak the form given above consists of a poss. clitic (-gât) followed by a nomzer. (-ŋe or -nâŋ). In many of the other languages the form is a suffix (Kube -nec-ŋa, Kâte -nec, Uri -ni, Kewieng -nâi, Wantoat -nanâ) which in some cases appears to be related to one of the loc. clitics (Kube -unec, Kâte -onec, Uri -di, Wantoat -nanâ). The Kube form -nec-ŋa represents this suffix plus the nomzer. -ŋa.

10.11.8 The forms one like are derived from the forms like by one of two or three methods. In Selepet and Kube a pronominal form ya follows the suffix meaning like. In Wantoat the suffix like is followed by a nomzer. In Ono, Kâte and perhaps Kewieng the suffix like is followed by an ajzer. (or at least a form homophonous with the ajzer.).

10.11.9 Many languages show location with animate referents by the embedding of a Poss.Ph. in the axis of a Loc.Ph. (see column poss.+loc. for the two clitics). For Nabak, however, an embedded Acc.Ph. rather than an embedded Poss.Ph. has been observed. Examples follow with regular personal pronouns in the axis of the Poss.Ph. or Acc.Ph.

Sl. nâ-gât-ân (me-for-at) (here) by me
Nb. nâm-bâk-gen (me-with-at) (here) by me
Ono na-ŋane-o (me-for-at) (here) by me
(note: e + o + o)
Kb. no-ar-u (me-for-at) (here) by me
Kt. no-re-o (me-for-at) (here) by me (note: e + o → ao)
Kw. nak-do-kwon (me-for-at) (here) by me
Wn. (not observed in Wantoat)
Rw. ende-ro-ko (village-for-at) at the village's (place)
Kv. (this could not be elicited satisfactorily)

10.12 Clause level constructions

Descriptions of some clause and sentence level constructions are found in Pilhofer, 1933 (Kåte) and chapters eight and nine of this thesis (Selepet). Other more brief descriptions are found in Pilhofer, 1926-27a (Kåte) and Wacke, 1930-31 (Ono). As one would expect, there appear to be no significant differences among these languages at the clause level. It may be safely said that the clause and sentence constructions as described for Selepet in chapters eight and nine are fairly typical for the FHP. languages.

10.13 Conclusion

The foregoing serve to demonstrate the apparent genetic relationships of the languages of the Finisterre-Huon group. The structural and morphological similarities are of such a character that one may suppose that they generally preclude borrowing. Moreover, the data yield evidence for one to hypothesize that the morphology of the proto-FHP. language was considerably simpler than that of any of the present day daughter languages. It is apparent that the nominal suffixes
represent a later development from postposed adjective stems derived from pronoun roots by the suffixation of an adj ectivizer. Furthermore, the verbal suffixes indicating benefaction, habitual mode, desiderative mode and intensive mode are probably a result of compounding of verb roots or they represent phrasal compounds. Any verbal prefixes indicating negation or causation also are the result of probable compounding. One may hypothesize therefore that the verb morphology in the proto-language consisted of simply suffixes indicating person, number and tense/mode.
Notes

1. Because time was not available for a detailed phonemic analysis of Kewieng, Kovai, Kube, and Nabak, the examples from these languages are given in a near phonemic orthography. This is particularly true of the mid and low vowels in Kube and Nabak. Examples from Kâte are given in a standardized non-phonemic orthography based upon that used in Kâte literature.

2. Note that the expected form would be Ṋerep + ine → Ṋerew-ine. The sequence -wi, however, is a correspondence for u.

3. This difference may be the result of only interpretational differences. What one person may regard as a pronoun being qualified by post-position qualifiers, another person may regard as noun phrases in apposition to these qualifiers.

4. An allomorph -dákwoŋ has also been observed.

5. The word tokŋa hot consists of a root tok plus -ŋa 'adjectivizer'.

6. In Kâte the possession markers function as clitics as the last element of a noun phrase. In both Ono and Kâte a morpheme indicating endearment occurs between the number tagmeme and the possession markers as in Ono tar-étke-mi-ne (el.br.-du.-dear-my) my two dear elder brothers and in Kâte hahac-yahec-mae-nane (el.br.-du.-dear-my) my two dear elder brothers.

7. The Selepet contrastive and comparative pronoun series evidence a modification of this matrix in which the 3s form occurs also as 3d and 3p. Thus
there is a distinction between 2d and 3d and between 2p and 3p but not any between 3s, 3d or 3p.

8. The Kovai inchoative form reflects a chance occurrence of the 1s form identical with the 2-3 plural forms but this does not warrant positing another matrix type.

9. This analysis is based on a comparison of the pronoun systems of all the languages in the FHP.

10. In the Selepet contrastive pronoun series nâku 1s, gâku 2s and yâku 3s, the k indicating 'singular' number is retained in all persons (see 5.6). There is the possibility that such archaic forms will be found in the other languages as well.

11. Whether or not this represents a phonemic change remains to be determined.

12. For a description of this phenomenon in Kube see (2.4).

13. This may be considered evidence for regarding glottal stop and velar nasal to be variants of phonemes k and q respectively. An alternative hypothesis might consider the final t and k (before neutralization) to be reflexes of a single proto-form (see McElhanon and Voorhoeve, 1970, k and t as reflexes of *C).

14. This has also been lost in some of the Selepet pronominal forms (see 4.3.9.2).

15. The addition of this suffix is the probable explanation for the historical development of the exclusive/inclusive distinction in the regular personal pronouns of Kâte and the other languages
of the Eastern Huon Family. In these languages the suffix meaning *only, alone* occurs only on the first person dual and plural forms, thus creating distinct forms. In the other languages, however, this suffix occurs on all the pronouns. In order to demonstrate that the exclusive/inclusive distinction found in Kâte is not a structural innovation, one would need examples of the forms *gahac '2s', yahac '3s', ṇahac '2d', ṇaŋac '2p' and yaŋac '3p' occurring alone, i.e., without other pronominal forms in a preposed position. In over 4,000 words of text material the writer found only one form, *gahac-zí-ha raroc (you yourself-subj.marker-only, go and hold) You yourself alone go get it!*

16. Webb considers this to be a verbal element rather than demonstrative plus clitic. An alternative form *yaarat-ganaŋ (this-at) here* also occurs.

17. Not enough data have been collected in Kovai to allow for certainty in morpheme division.

18. Longacre's (1964: 101-102) distinction between root and stem is here followed; viz., stems represent a grammatical level and have internal structure but roots do not represent a grammatical level and have neither internal structure nor contrasting types.

19. Because this tense often occurs with another future tense, the writer prefers the designation 'inchoative future tense' rather than 'imperative mode'.
20. It is difficult to give a fully adequate label to the tagmeme indicating mode/tense since both notions of tense and mode are expressed by the manifested morphemes.

21. The non-first person forms of the inchoative future paradigms generally appear to be of a different structure and are difficult to analyze. Whether or not this difficulty indicates that these forms do not belong in the same paradigm as the first person forms is not presently clear (see 6.2.1.3).

22. The phoneme represented by w usually has a fricative variant [w] and in many languages may be included in the flat fricative series of consonants. Moreover, in most languages w, b and p; r, d and t; and h, g and k represent series of morphophonemic variants.

23. The remote future tense is formed by the occurrence of the suffix -bo 'remote future tense' following the immediate future tense affixes. Further study is necessary to see whether or not this remote future tense morpheme has any bearing on the structure of the verb peripheries. It may prove to be a clitic rather than a suffix.

24. In Ono number in the third order person-number tagmeme fillers is not indicated. The contrary-to-fact mode in Uri has similar structure and differs only in having a morpheme -ya immediately following the benefactive.
25. For example, in Selepet the clitic -gât for occurs following the independent verb. In such usage the morpheme occurs with the meaning of *course* and some analysts may be inclined to posit another suffixal mode tagmeme manifesting the morpheme -gât 'affirmative mode'. In a simpler analysis, however, the construction is regarded as a truncated dependent sentence.

26. Kube has similarities between the 2-3d and 2-3p forms in the remote past and inchoative future tenses which may necessitate a third subtype of verb perifery. Within the Huon Stock, however, Kube represents a typologically mixed language and any explanation of this phenomenon must await reconstruction.

27. Kâte has a third perifery including the remote past tense, the contrary-to-fact mode and the prohibitive mode with the structure: ± benefactive + mode/tense + person + number.

28. In all the examples given in regard to the hab. mode only the verb root/stem is shown to precede the mode tagmeme. The benefactive morphemes, however, in fact intervene between the root/stem and the mode tagmeme but the benefactive morphemes may also be shown to have developed from compounding of the verb root/stem with the verbal forms for *to give*. Thus the proto-form may be posited as a three item compound: verb root/stem + verb *to give* + verb *to do/to live*.
29. The hypothesis that the constituents are -m and -bisà involves the assumption that the nasal -m reduces preceding the prenasalized stop -b and when these suffixes follow a consonant root/stem there is no evidence of prenasalization.

30. The verb ge- to live is probably cognate with Kâte e- to do and the verb ma- to do is probably cognate with Selepet {m-} m- ~ man- to live.

31. With some verbs, however, there appear to be co-occurrence restrictions and these are based partly on homophonicity of the morphemes ma- to live, -ma or ma- 'hab.' and -m 'interpt'. More data are needed for the investigation of this phenomenon. In the 3s form in the past and future tenses the verb ge- to live is also compounded as in ari-ma-ge-ke (to go- to do- to live-3s rpt.) he used to go and ari-ma-ge-ake (to go- to do- to live-3s fut.) he will always go.

32. This identification involves the hypothesis that the hab. mode morpheme occurs with the rpt. suffixation. However, the person-number composites occurring with the hab. mode are identical with those which occur with the ipt. suffixation. If one hypothesizes that the hab. mode morpheme occurs with the ipt. suffixation then the form is -ega, not -e. Moreover, the phonemic analysis of Kewieng is very tentative so that one cannot discount the possibility that \ represents an allophone of /e/. 
33. The analysis involves the hypothesis that the hab. morpheme \( A \) and the vowel \( \hat{A} \) of the root reduce to a single vowel \( \hat{A} \).

34. As a result of compounding, \( o + \hat{a} \rightarrow o \). An alternate form is (verb root/stem) \( -ro + \hat{ade} \) yields (verb root/stem) \( -râte \). The form \( \hat{ade} \) is contracted from \( \hat{adâte} \).

35. An alternate form is (verb root/stem) \( -ro + \hat{ara} \) yields (verb root/stem) \( -rara \).

36. As done by the Claassens (1968: 9) and the writer (6.2.2.2).

37. In his analysis of Wantoat verb morphology, Davis (1964: 168-9) stated that simultaneity between the dependent verb and the following verb is marked by a system of heteropersonal affix reduplication with complex co-occurrence restrictions. No similar phenomenon has been found in other Finisterre-Huon languages and for Wantoat it may be useful to posit a separate time morpheme \( -wât \) with the following morphophonemic rules: (1) \( \hat{t} \) reduces before \( w \), (2) \( a + \hat{a} \) when the vowel of the person-number composite is \( a \).

38. Another morpheme \( -gani\hat{g} \) 'antecedent action' has not been identified with a clitic and so mitigates such a solution. However, the solution should not be hastily ruled out.

39. A detailed comparative study and reconstruction of the Huon Stock of languages is beyond the scope of this present study but hopefully one day it will be undertaken.
40. There is no distinction in person in Nabak hetero-
personal subject markers indicating dual number.

41. The morpheme -guc is probably the accompaniment
clitic so that the simultaneous form is simply the
dependent heteropersonal form occurring in the
axis of the Accompaniment Axis-relator Phrase.

42. The occurrence of the prenasalization on the z
is the result of compounding and inclusion within
a single phonological word.

43. This form may be better rendered as I consider
going.

44. The second form appears to evidence the change
a + ò → ñ.

45. The vowel i is often found to be a correspondence
for y plus a back vowel in Finisterre-Huon
languages (cf. demonstrative pronouns, 10.9).
Here it is suggested that i is the correspondence
of yu.

46. In class three the pronoun allomorphs also function
as verbalizers and in these examples the root is
translated by the English noun.

47. See McElhanon and Voorhoeve, 1970, particularly
the items to burn, to eat and to tie.

48. It is a debatable point whether these zero mor-
phemes in Ono are indeed necessary. Confirmatory
evidence is only found in the case where verb root
morphemes other than the posited zero morpheme are
found manifesting the total object marker allomorph
as given here. For example, in Selepet a zero
morpheme is posited for each of the object marker
allomorph subclasses (represented in the following examples by the 1d forms): Ø-neleḵ see us(du.), Ø-nitki give it to us(du.), and Ø-notko hit us(du.). One could posit the following structure V = any vowel): + object marker prefix + verb root, with the object marker morpheme as nVT- '1d' and the root morphemes as -ki to give s.o., -ko to hit s.o. and -ek to see s.o. (the morpheme -ek resulting from metathesis of -ke with the result that the final -t of nVT- became I before a vowel. The vowel in the object marker morpheme shows vowel harmony with the vowel in the verb root. Such an analysis is shown to be false when the corpus of data is extended to include additional data such as gâi-neleḵ cut us(du.) and se-neleḵ burn us(du.). The fact that Wacke (1930-31) listed these morphemes separately as object verbs indicates that he regarded them as in some way peculiar. Whether or not this irregularity is best described by positing a zero morpheme for a root is not evident. For the Kâte language which also has been described as having object verbs (Pilhofer, 1926-27a, 1933) it is possible to support a zero morpheme in some cases (e.g., Ø-nu-kac hit-me-he(ipt.) he hit me and hone-nu-kac see-me-he(ipt.) he saw me) but not in all cases (e.g., nowa-tu-kac me-show-he(ipt.) he showed me and nowa-ru-kac me-pass by-he(ipt.) he passed by me.

49. Another reason for caution, of course, is the occurrence of both suffixal and prefixal forms in the same language.
Whether or not one should regard the verb roots of some of the present day languages as constituting a zero morpheme and thus posit that the overt form represents the bound object marker allomorph or whether one should seek to isolate an overt verb root in this supposed bound object pronoun allomorph is not presently clear. In the Ono data provided by Wacke (1930-1: 174-7), the dual and plural forms lend themselves to rather neat analyses so that one may indeed isolate supposed verb roots. The singular forms are not regular and would necessitate the positing of root allomorphs. In some cases these root allomorphs may be explained as simple losses (e.g., to burn) when compared with the dual and plural forms, but in other cases such an explanation is not possible and the third person singular forms are quite peculiar. Thus the 3s Ono form ma- to hold it cannot be explained by comparing other object marker allomorphs and must be regarded as peculiar. Moreover, ma- is obviously cognate with the Selepet verb root me- to hold which is simply one of many verb roots in subclass I Selepet transitive verb roots. It should also be noted that in cases where the postulated object marker allomorph (occurring with a zero morpheme verb root) can be divided into an overt verb root plus a diminished object marker allomorph, it is the total composite that is found in related languages. Thus Ono to hit may be posited as {-ku} -ku ~ -gu ~ -kpe but the related forms in Selepet, viz., {-ku} -ku ~ -go ~ -ko cannot be isolated.
51. Of course, more than just the 3s forms can be shown to be cognate. Note the Selepet, Uri and Kâte forms as given below.

<table>
<thead>
<tr>
<th></th>
<th>1s</th>
<th>2s</th>
<th>3s</th>
<th>1d</th>
<th>2d</th>
<th>3d</th>
</tr>
</thead>
<tbody>
<tr>
<td>Selepet</td>
<td>no-Ø-go</td>
<td>go-Ø-go</td>
<td>Ø-Ø-ku</td>
<td>no-t-ko</td>
<td>yo-t-ko</td>
<td>yo-t-ko</td>
</tr>
<tr>
<td>Uri</td>
<td>nu-Ø-uk</td>
<td>gu-Ø-uk</td>
<td>Ø-Ø-uk</td>
<td>in-di-f</td>
<td>si-di-f</td>
<td>i-di-f</td>
</tr>
<tr>
<td>Kâte</td>
<td>nu-Ø-Ø</td>
<td>gu-Ø-Ø</td>
<td>Ø-Ø-kpe</td>
<td>nâ-f-o</td>
<td>ño-f-a</td>
<td>yo-f-a</td>
</tr>
</tbody>
</table>

The singular forms are easily analyzed. A zero formative may be posited to indicate 'singular' number. The Uri form -uk represents a metathesis of the Selepet form -ku. In Selepet this form has been interpreted as an object marker subclass marker (5.2.2) and in Uri the form has been interpreted as a verb root, as also has the dual form -if (Webb, 1967: 18). Although the synchronic analyses differ, the relationship of the forms is apparent. With the application of morphophonemic rules the resultant Selepet forms are noho, goho and ku and the Uri forms are nuk, guk, uk. The Uri dual forms are interesting in that they apparently have dual marking formatives cognate with both Selepet and Kâte. The d in Uri corresponds to the t showing dual number in Selepet and the f in Uri corresponds to the f showing dual number in Kâte. The Wantoa dual forms marked by s also may be considered to be cognate with the f in Kâte and Uri.

52. The morpheme -ŋu is apparently patterned after the free 3s regular personal pronoun. The writer has observed this sort of phenomenon in only one other language, viz., Nabak as in to push s.o.
<table>
<thead>
<tr>
<th></th>
<th>Sg.</th>
<th>Du.</th>
<th>Pl.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st person</td>
<td>nâtât-ne</td>
<td>ndâtât-ndne/ âtâ-nde</td>
<td>âtâ-nde</td>
</tr>
<tr>
<td>2nd person</td>
<td>gâtât-ge</td>
<td>âtâ-itde</td>
<td>âtâ-inde</td>
</tr>
<tr>
<td>3rd person</td>
<td>âtât-pe</td>
<td>âtâ-itde</td>
<td>âtâ-itde</td>
</tr>
</tbody>
</table>

53. The variants -geh and -heh are not relevant at this point.

54. One may hypothesize that in the neutralization of the dual forms in Nabak, the 2-3 person formative was dropped in favour of the first person formative u (but see Nabak (rpt., interpt.).

55. The Kube form ya has not been observed in other Kube constructions or forms but it is apparently cognate with the Selepet demonstrative pronoun ya.
Appendix A

Verb paradigms for six Finisterre-Huon languages.

Morpheme divisions in Nabak, Kewieng and Kovai are tentative in many cases due to apparently complex morphophonemics.

1. **Nabak.** The verb root is m@t to go.

1.1 rpt. *I went a long time ago*, etc.

<table>
<thead>
<tr>
<th></th>
<th>Sg.</th>
<th>Du.</th>
<th>Pl.</th>
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</thead>
<tbody>
<tr>
<td>1st per.</td>
<td>m@-ban</td>
<td>m@-balin</td>
<td>m@-ban</td>
</tr>
<tr>
<td>2nd per.</td>
<td>m@-banan</td>
<td>m@-bun</td>
<td>m@-biën</td>
</tr>
<tr>
<td>3rd per.</td>
<td>m@-g@</td>
<td>m@-bun</td>
<td>m@-biën</td>
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</table>

1.2 interpt. *I went (yesterday)*, etc.

<table>
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<tr>
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<th>Sg.</th>
<th>Du.</th>
<th>Pl.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st per.</td>
<td>m@-man</td>
<td>m@p-malin</td>
<td>m@p-man</td>
</tr>
<tr>
<td>2nd per.</td>
<td>m@-manan</td>
<td>m@p-mun</td>
<td>m@p-miën</td>
</tr>
<tr>
<td>3rd per.</td>
<td>m@-dzan</td>
<td>m@p-mun</td>
<td>m@p-miën</td>
</tr>
</tbody>
</table>

1.3 ipt. *I went (this morning)*, etc.

<table>
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<tr>
<th></th>
<th>Sg.</th>
<th>Du.</th>
<th>Pl.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st per.</td>
<td>m@t-l-a</td>
<td>m@t-lut</td>
<td>m@t-nn</td>
</tr>
<tr>
<td>2nd per.</td>
<td>m@-d@k</td>
<td>m@t-lut</td>
<td>m@t-o</td>
</tr>
<tr>
<td>3rd per.</td>
<td>m@-t@p</td>
<td>m@t-lut</td>
<td>m@t-o</td>
</tr>
</tbody>
</table>

1.4 pres. *I am going*, etc.

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<tr>
<th></th>
<th>Sg.</th>
<th>Du.</th>
<th>Pl.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st per.</td>
<td>m@t-ap</td>
<td>m@t-lup</td>
<td>m@t-nup</td>
</tr>
<tr>
<td>2nd per.</td>
<td>m@-d@k</td>
<td>m@t-lup</td>
<td>m@t-ip</td>
</tr>
<tr>
<td>3rd per.</td>
<td>m@-t@p</td>
<td>m@t-lup</td>
<td>m@t-ip</td>
</tr>
</tbody>
</table>

1.5 ift. *I will go (this afternoon, right now)*, etc.

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<tr>
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<th>Sg.</th>
<th>Du.</th>
<th>Pl.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st per.</td>
<td>m@-sap</td>
<td>m@-selup</td>
<td>m@-senup</td>
</tr>
<tr>
<td>2nd per.</td>
<td>m@-senik</td>
<td>m@-selup</td>
<td>m@-s@ip</td>
</tr>
<tr>
<td>3rd per.</td>
<td>m@-sem</td>
<td>m@-selup</td>
<td>m@-s@ip</td>
</tr>
</tbody>
</table>

1.6 rft. *I will go (tomorrow, thereafter)*, etc.

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<tr>
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<th>Pl.</th>
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<tbody>
<tr>
<td>1st per.</td>
<td>m@-bap</td>
<td>m@-balup</td>
<td>m@-banup</td>
</tr>
<tr>
<td>2nd per.</td>
<td>m@-banik</td>
<td>m@-balup</td>
<td>m@-bep</td>
</tr>
<tr>
<td>3rd per.</td>
<td>m@-be</td>
<td>m@-balup</td>
<td>m@-bep</td>
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</table>

1.7 inch. *I must go, you go*, etc.

<table>
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<th></th>
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<th>Du.</th>
<th>Pl.</th>
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<tbody>
<tr>
<td>1st per.</td>
<td>m@t-Ø</td>
<td>m@t-it</td>
<td>m@t-it</td>
</tr>
<tr>
<td>2nd per.</td>
<td>m@t-Ø</td>
<td>m@t-it</td>
<td>m@t-it</td>
</tr>
<tr>
<td>3rd per.</td>
<td>m@t-ak</td>
<td>m@t-it</td>
<td>m@t-it</td>
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</tbody>
</table>
1.8  ctf. I should have gone, I might go, etc.

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<tr>
<th></th>
<th>Sg.</th>
<th>Du.</th>
<th>Pl.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st per.</td>
<td>m^bak</td>
<td>m^ba lék</td>
<td>m^ba nék</td>
</tr>
<tr>
<td>2nd per.</td>
<td>m^bek</td>
<td>m^buk</td>
<td>m^bi ék</td>
</tr>
<tr>
<td>3rd per.</td>
<td>m^dak</td>
<td>m^buk</td>
<td>m^bi ék</td>
</tr>
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1.9  past, hab. I used to go, etc.

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<tr>
<th></th>
<th>Sg.</th>
<th>Du.</th>
<th>Pl.</th>
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</thead>
<tbody>
<tr>
<td>1st per.</td>
<td>mam^taman</td>
<td>mam^tamaln</td>
<td>mam^tamân</td>
</tr>
<tr>
<td>2nd per.</td>
<td>mam^tamanan</td>
<td>mam^temun</td>
<td>mam^temiën</td>
</tr>
<tr>
<td>3rd per.</td>
<td>mam^tan</td>
<td>mam^temun</td>
<td>mam^temiën</td>
</tr>
</tbody>
</table>

1.10  pres., hab. I am always going, etc.

<table>
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<tr>
<th></th>
<th>Sg.</th>
<th>Du.</th>
<th>Pl.</th>
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</thead>
<tbody>
<tr>
<td>1st per.</td>
<td>mam^l-ap</td>
<td>mam^l-up</td>
<td>mam^l-nup</td>
</tr>
<tr>
<td>2nd per.</td>
<td>mam^t-ik</td>
<td>mam^l-up</td>
<td>mam^l-ip</td>
</tr>
<tr>
<td>3rd per.</td>
<td>mam^dzin</td>
<td>mam^l-up</td>
<td>mam^l-ip</td>
</tr>
</tbody>
</table>

1.11  desid. I want to go, etc.

<table>
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<tr>
<th></th>
<th>Sg.</th>
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<th>Pl.</th>
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</thead>
<tbody>
<tr>
<td>1st per.</td>
<td>m^sâ-bap</td>
<td>m^sâ-bilup</td>
<td>m^sâ-mnup</td>
</tr>
<tr>
<td>2nd per.</td>
<td>m^sâp-mnik</td>
<td>m^sâ-bilup</td>
<td>m^sâp-min</td>
</tr>
<tr>
<td>3rd per.</td>
<td>m^sâp-m</td>
<td>m^sâ-bilup</td>
<td>m^sâp-min</td>
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</tbody>
</table>

1.12  intent. I intend to go, etc.

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<tr>
<th></th>
<th>Sg.</th>
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<th>Pl.</th>
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<tbody>
<tr>
<td>1st per.</td>
<td>m^sâtpâmi-ap</td>
<td>m^sâtpâmi-lup</td>
<td>m^sâtpâm-nup</td>
</tr>
<tr>
<td>2nd per.</td>
<td>m^sâtpâmâni-ik</td>
<td>m^sâtpâmi-lup</td>
<td>m^sâtpâm-ip</td>
</tr>
<tr>
<td>3rd per.</td>
<td>m^sâtpâmi-m</td>
<td>m^sâtpâmi-lup</td>
<td>m^sâtpâm-ip</td>
</tr>
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</table>

1.13  fut., hab. (verb root is mup to ascend) I will always ascend, etc.

<table>
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<tr>
<th></th>
<th>Sg.</th>
<th>Du.</th>
<th>Pl.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st per.</td>
<td>mamupmam-bap</td>
<td>mamupmam-barup</td>
<td>mamupmam-banup</td>
</tr>
<tr>
<td>2nd per.</td>
<td>mamupmam-banik</td>
<td>mamupmam-barup</td>
<td>mamupmam-bep</td>
</tr>
<tr>
<td>3rd per.</td>
<td>mamupmam-be</td>
<td>mamupmam-barup</td>
<td>mamupmam-bep</td>
</tr>
</tbody>
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1.14  hetero. I went and someone else..., etc.

<table>
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<tr>
<th></th>
<th>Sg.</th>
<th>Du.</th>
<th>Pl.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st per.</td>
<td>m^m</td>
<td>m^malu</td>
<td>m^man</td>
</tr>
<tr>
<td>2nd per.</td>
<td>m^man</td>
<td>m^malu</td>
<td>m^me</td>
</tr>
<tr>
<td>3rd per.</td>
<td>m^me</td>
<td>m^malu</td>
<td>m^me</td>
</tr>
</tbody>
</table>

1.15  homo. I went and..., etc.

m^at-n^wemban  I went and slept
m^at-nâti wemban  I used to go and sleep
2. **Kube.** The verb root is *me* to hold.

2.1 rpt. *I held it a long time ago,* etc.

<table>
<thead>
<tr>
<th></th>
<th>Sg.</th>
<th>Pl.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st per.</td>
<td>me-ī</td>
<td>me-īnē</td>
</tr>
<tr>
<td>2nd per.</td>
<td>me-nēc</td>
<td>me-gic</td>
</tr>
<tr>
<td>3rd per.</td>
<td>me-yeć</td>
<td>me-gic</td>
</tr>
</tbody>
</table>

2.2 ipt. *I held it (this morning),* etc.

<table>
<thead>
<tr>
<th></th>
<th>Sg.</th>
<th>Pl.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st per.</td>
<td>me-tsuā</td>
<td>me-tsiņ</td>
</tr>
<tr>
<td>2nd per.</td>
<td>me-tsān</td>
<td>me-tsou</td>
</tr>
<tr>
<td>3rd per.</td>
<td>me-tsač</td>
<td>me-tsou</td>
</tr>
</tbody>
</table>

2.3 ift. *I will hold it,* etc.

<table>
<thead>
<tr>
<th></th>
<th>Sg.</th>
<th>Pl.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st per.</td>
<td>me-mąń</td>
<td>me-biņ</td>
</tr>
<tr>
<td>2nd per.</td>
<td>me-gišenā</td>
<td>me-mou</td>
</tr>
<tr>
<td>3rd per.</td>
<td>me-mač</td>
<td>me-mou</td>
</tr>
</tbody>
</table>

2.4 inch. *I must hold it, you hold it,* etc.

<table>
<thead>
<tr>
<th></th>
<th>Sg.</th>
<th>Pl.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st per.</td>
<td>me-ba</td>
<td>me-ni</td>
</tr>
<tr>
<td>2nd per.</td>
<td>me-na</td>
<td>me-gic</td>
</tr>
<tr>
<td>3rd per.</td>
<td>me-yu</td>
<td>me-gic</td>
</tr>
</tbody>
</table>

2.5 ctf. *I should have held it,* etc.

<table>
<thead>
<tr>
<th></th>
<th>Sg.</th>
<th>Pl.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st per.</td>
<td>me-beinec</td>
<td>me-binnc</td>
</tr>
<tr>
<td>2nd per.</td>
<td>me-bannec</td>
<td>me-baoncc</td>
</tr>
<tr>
<td>3rd per.</td>
<td>me-bac</td>
<td>me-baoncc</td>
</tr>
</tbody>
</table>

2.6 proh. *I must not go,* etc.

<table>
<thead>
<tr>
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<th>Pl.</th>
</tr>
</thead>
<tbody>
<tr>
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<td>me-beic</td>
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<tr>
<td>2nd per.</td>
<td>me-bań</td>
<td>me-baoc</td>
</tr>
<tr>
<td>3rd per.</td>
<td>me-bac</td>
<td>me-baoc</td>
</tr>
</tbody>
</table>

2.7 past, hab. *I used to hold it,* etc.

<table>
<thead>
<tr>
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<th>Pl.</th>
</tr>
</thead>
<tbody>
<tr>
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<td>me-keri</td>
<td>me-keriņ</td>
</tr>
<tr>
<td>2nd per.</td>
<td>me-kercneč</td>
<td>me-kercgic</td>
</tr>
<tr>
<td>3rd per.</td>
<td>me-kerc</td>
<td>me-kercgic</td>
</tr>
</tbody>
</table>

2.8 pres., hab. *I am always holding it,* etc.

<table>
<thead>
<tr>
<th></th>
<th>Sg.</th>
<th>Pl.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st per.</td>
<td>me-andzua</td>
<td>me-andzic</td>
</tr>
<tr>
<td>2nd per.</td>
<td>me-andzań</td>
<td>me-andzaoc</td>
</tr>
<tr>
<td>3rd per.</td>
<td>me-andzac</td>
<td>me-andzaoc</td>
</tr>
</tbody>
</table>
2.9 hetero. I hold it and someone else..., etc.

<table>
<thead>
<tr>
<th></th>
<th>Sg.</th>
<th>Du.</th>
<th>Pl.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st per.</td>
<td>me-ba</td>
<td>me-tsi</td>
<td>me-ni</td>
</tr>
<tr>
<td>2nd per.</td>
<td>me-na</td>
<td>me-ic</td>
<td>me-gic</td>
</tr>
<tr>
<td>3rd per.</td>
<td>me-yu/-u</td>
<td>me-ic</td>
<td></td>
</tr>
</tbody>
</table>

Add -guc 'simultaneous and punctilier'
Add -ganin 'antecedent and prolonged'
Add -kec 'prolonged' as in me-kec-ba I was holding it and..., etc.

2.10 homo. I hold it and..., etc.

- ma  'antecedent and punctilier'
-
manec 'simultaneous and punctilier'
-kecma 'antecedent and prolonged'

3. Uri. The verb root is ka to go.

3.1 rpt. I went a long time ago, etc.

<table>
<thead>
<tr>
<th></th>
<th>Sg.</th>
<th>Du.</th>
<th>Pl.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st per.</td>
<td>ka-aguk</td>
<td>ka-agumuk</td>
<td>ka-agum</td>
</tr>
<tr>
<td>2nd per.</td>
<td>ka-aguŋ</td>
<td>ka-agumuc</td>
<td>ka-agin</td>
</tr>
<tr>
<td>3rd per.</td>
<td>ka-aguc</td>
<td>ka-agumuc</td>
<td>ka-agin</td>
</tr>
</tbody>
</table>

3.2 ipt. I went (this morning), etc.

<table>
<thead>
<tr>
<th></th>
<th>Sg.</th>
<th>Du.</th>
<th>Pl.</th>
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</thead>
<tbody>
<tr>
<td>1st per.</td>
<td>ka-ŋak</td>
<td>ka-ŋaamuk</td>
<td>ka-ŋam</td>
</tr>
<tr>
<td>2nd per.</td>
<td>ka-ŋaŋ</td>
<td>ka-ŋaamuc</td>
<td>ka-ŋiŋ</td>
</tr>
<tr>
<td>3rd per.</td>
<td>ka-ŋac</td>
<td>ka-ŋaamuc</td>
<td>ka-ŋiŋ</td>
</tr>
</tbody>
</table>

3.3 pres. I am going, etc.

<table>
<thead>
<tr>
<th></th>
<th>Sg.</th>
<th>Du.</th>
<th>Pl.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st per.</td>
<td>ka-rik</td>
<td>ka-yaamuk</td>
<td>ka-yam</td>
</tr>
<tr>
<td>2nd per.</td>
<td>ka-raŋ</td>
<td>ka-riiamuc</td>
<td>ka-riŋ</td>
</tr>
<tr>
<td>3rd per.</td>
<td>ka-rac</td>
<td>ka-riiamuc</td>
<td>ka-riŋ</td>
</tr>
</tbody>
</table>

3.4 ift. I will go soon, etc.

<table>
<thead>
<tr>
<th></th>
<th>Sg.</th>
<th>Du.</th>
<th>Pl.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st per.</td>
<td>ka-otik</td>
<td>ka-ntaamuk</td>
<td>ka-ntam</td>
</tr>
<tr>
<td>2nd per.</td>
<td>ka-wotaŋ</td>
<td>ka-ntaamuc</td>
<td>ka-ntiŋ</td>
</tr>
<tr>
<td>3rd per.</td>
<td>ka-wotac</td>
<td>ka-ntaamuc</td>
<td>ka-ntiŋ</td>
</tr>
</tbody>
</table>

3.5 rft. I will go (tomorrow or later), etc.

<table>
<thead>
<tr>
<th></th>
<th>Sg.</th>
<th>Du.</th>
<th>Pl.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st per.</td>
<td>ka-wakga</td>
<td>ka-damga</td>
<td>ka-namga</td>
</tr>
<tr>
<td>2nd per.</td>
<td>ka-yacga</td>
<td>ka-demucga</td>
<td>ka-nicga</td>
</tr>
<tr>
<td>3rd per.</td>
<td>ka-wacga</td>
<td>ka-demucga</td>
<td>ka-nicga</td>
</tr>
</tbody>
</table>
3.6 inch. *I must go, you go, etc.*

<table>
<thead>
<tr>
<th></th>
<th>Sg.</th>
<th>Du.</th>
<th>Pl.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st per.</td>
<td>ka-wak</td>
<td>ka-dam</td>
<td>ka-nam</td>
</tr>
<tr>
<td>2nd per.</td>
<td>ka-yac</td>
<td>ka-demuc</td>
<td>ka-nic</td>
</tr>
<tr>
<td>3rd per.</td>
<td>ka-wac</td>
<td>ka-demuc</td>
<td>ka-nic</td>
</tr>
</tbody>
</table>

3.7 ctf. *I should have gone, etc.*

<table>
<thead>
<tr>
<th></th>
<th>Sg.</th>
<th>Du.</th>
<th>Pl.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st per.</td>
<td>ka-rok</td>
<td>ka-yadam</td>
<td>ka-yanam</td>
</tr>
<tr>
<td>2nd per.</td>
<td>ka-roŋ</td>
<td>ka-dir̂</td>
<td>ka-nir̂</td>
</tr>
<tr>
<td>3rd per.</td>
<td>ka-roc</td>
<td>ka-dir̂</td>
<td>ka-nir̂</td>
</tr>
</tbody>
</table>

3.8 past, hab. *I used to go, etc.*

<table>
<thead>
<tr>
<th></th>
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<th>Du.</th>
<th>Pl.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st per.</td>
<td>ka-raguk</td>
<td>ka-yaagumuk</td>
<td>ka-yaagum</td>
</tr>
<tr>
<td>2nd per.</td>
<td>ka-raguŋ</td>
<td>ka-ragumuc</td>
<td>ka-raginŋ</td>
</tr>
<tr>
<td>3rd per.</td>
<td>ka-raguc</td>
<td>ka-ragumuc</td>
<td>ka-raginŋ</td>
</tr>
</tbody>
</table>

3.9 pres., hab. *I am always going, etc.*

<table>
<thead>
<tr>
<th></th>
<th>Sg.</th>
<th>Du.</th>
<th>Pl.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st per.</td>
<td>ka-atiŋ</td>
<td>ka-ataamuk</td>
<td>ka-atinŋ</td>
</tr>
<tr>
<td>2nd per.</td>
<td>ka-ataŋ</td>
<td>ka-ataamuc</td>
<td>ka-atinŋ</td>
</tr>
<tr>
<td>3rd per.</td>
<td>ka-atac</td>
<td>ka-ataamuc</td>
<td>ka-atinŋ</td>
</tr>
</tbody>
</table>

3.10 fut., hab. *I will always go, etc.*

<table>
<thead>
<tr>
<th></th>
<th>Sg.</th>
<th>Du.</th>
<th>Pl.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st per.</td>
<td>ka-rotik</td>
<td>ka-yaantaamuk</td>
<td>ka-yaantam</td>
</tr>
<tr>
<td>2nd per.</td>
<td>ka-rotąŋ</td>
<td>ka-rotaamuc</td>
<td>ka-rotinŋ</td>
</tr>
<tr>
<td>3rd per.</td>
<td>ka-rotac</td>
<td>ka-rotaamuc</td>
<td>ka-rotinŋ</td>
</tr>
</tbody>
</table>

4. *Ke̱i̱æng.* The verb root is *kΛ to go.*

4.1 rpt. *I went a long time ago, etc.*

<table>
<thead>
<tr>
<th></th>
<th>Sg.</th>
<th>Du.</th>
<th>Pl.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st per.</td>
<td>kΛ-ŋam</td>
<td>kΛ-ŋamak</td>
<td>kΛ-ŋamaŋ</td>
</tr>
<tr>
<td>2nd per.</td>
<td>kΛ-ŋal</td>
<td>kΛ-ŋamal</td>
<td>kΛ-wit</td>
</tr>
<tr>
<td>3rd per.</td>
<td>kΛ-ŋat</td>
<td>kΛ-ŋamal</td>
<td>kΛ-wit</td>
</tr>
</tbody>
</table>

4.2 ipt. *I went (this morning), etc.*

<table>
<thead>
<tr>
<th></th>
<th>Sg.</th>
<th>Du.</th>
<th>Pl.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st per.</td>
<td>kΛ-t</td>
<td>kΛ-mak</td>
<td>kΛ-maŋ</td>
</tr>
<tr>
<td>2nd per.</td>
<td>kΛ-ŋl</td>
<td>kΛ-ŋmal</td>
<td>ke-ŋ</td>
</tr>
<tr>
<td>3rd per.</td>
<td>kΛ-ŋk</td>
<td>kΛ-ŋmal</td>
<td>ke-ŋ</td>
</tr>
</tbody>
</table>

4.3 iff. *I will soon go, etc.*

<table>
<thead>
<tr>
<th></th>
<th>Sg.</th>
<th>Du.</th>
<th>Pl.</th>
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</thead>
<tbody>
<tr>
<td>1st per.</td>
<td>kΛ-kwenŋ</td>
<td>kΛ-ndenŋ</td>
<td>kΛ-neŋ</td>
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<tr>
<td>2nd per.</td>
<td>kΛ-kwi</td>
<td>kΛ-ndziŋ</td>
<td>kΛ-ni</td>
</tr>
<tr>
<td>3rd per.</td>
<td>kΛ-tseak</td>
<td>kΛ-ndziŋ</td>
<td>kΛ-ni</td>
</tr>
</tbody>
</table>
### 4.4 \texttt{rft.} I will go (tomorrow or later), etc.

<table>
<thead>
<tr>
<th></th>
<th>Sg.</th>
<th>Du.</th>
<th>Pl.</th>
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</thead>
<tbody>
<tr>
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<td>ka-kwenbo</td>
<td>ka-ndešbo</td>
<td>ka-nešbo</td>
</tr>
<tr>
<td>2nd per.</td>
<td>ka-kwimbo</td>
<td>ka-ndzilbo</td>
<td>ka-nimbo</td>
</tr>
<tr>
<td>3rd per.</td>
<td>ka-tsekbo</td>
<td>ka-ndzilbo</td>
<td>ka-nimbo</td>
</tr>
</tbody>
</table>

### 4.5 \texttt{inch.} I must go, you go, etc.

<table>
<thead>
<tr>
<th></th>
<th>Sg.</th>
<th>Du.</th>
<th>Pl.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st per.</td>
<td>ka-kwo</td>
<td>ka-ndo</td>
<td>ka-no</td>
</tr>
<tr>
<td>2nd per.</td>
<td>ka-Ø</td>
<td>ka-1</td>
<td>ku-t</td>
</tr>
<tr>
<td>3rd per.</td>
<td>k-wan</td>
<td>ka-1</td>
<td>ku-t</td>
</tr>
</tbody>
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### 4.6 \texttt{ctf.} I should have gone, etc.

<table>
<thead>
<tr>
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<th>Du.</th>
<th>Pl.</th>
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</thead>
<tbody>
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<td>1st per.</td>
<td>ka-pom</td>
<td>ka-ndom</td>
<td>ka-nom</td>
</tr>
<tr>
<td>2nd per.</td>
<td>k-wim</td>
<td>ka-ŋbal</td>
<td>k-wam</td>
</tr>
<tr>
<td>3rd per.</td>
<td>ka-ŋban</td>
<td>ka-ŋbal</td>
<td>k-wam</td>
</tr>
</tbody>
</table>

### 4.7 \texttt{past, hab.} I used to go, etc.

<table>
<thead>
<tr>
<th></th>
<th>Sg.</th>
<th>Du.</th>
<th>Pl.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st per.</td>
<td>ka-ŋat</td>
<td>ka-ŋapmamak</td>
<td>ka-ŋapmamag</td>
</tr>
<tr>
<td>2nd per.</td>
<td>ka-ŋal</td>
<td>ka-ŋapmamal</td>
<td>ka-ŋeŋ</td>
</tr>
<tr>
<td>3rd per.</td>
<td>ka-ŋak</td>
<td>ka-ŋapmamal</td>
<td>ka-ŋeŋ</td>
</tr>
</tbody>
</table>

### 4.8 \texttt{pres. hab.} I am always going, etc.

<table>
<thead>
<tr>
<th></th>
<th>Sg.</th>
<th>Du.</th>
<th>Pl.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st per.</td>
<td>ka-tsat</td>
<td>kpa-mak</td>
<td>kpa-maq</td>
</tr>
<tr>
<td>2nd per.</td>
<td>ka-tsal</td>
<td>kpa-mal</td>
<td>k-waŋ</td>
</tr>
<tr>
<td>3rd per.</td>
<td>ka-tsal</td>
<td>kpa-mal</td>
<td>k-waŋ</td>
</tr>
</tbody>
</table>

### 4.9 \texttt{hetero.} I go and someone else..., etc.

<table>
<thead>
<tr>
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<th>Pl.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st per.</td>
<td>ka-kwo</td>
<td>ka-ndo</td>
<td>ka-no</td>
</tr>
<tr>
<td>2nd per.</td>
<td>ka-wi</td>
<td>k-wal</td>
<td>ka-ŋba</td>
</tr>
<tr>
<td>3rd per.</td>
<td>k-wan</td>
<td>k-wal</td>
<td>ka-ŋba</td>
</tr>
</tbody>
</table>

### 4.10 \texttt{hetero., simultaneous. when I went someone else...}, etc.

<table>
<thead>
<tr>
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<th>Sg.</th>
<th>Du.</th>
<th>Pl.</th>
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</thead>
<tbody>
<tr>
<td>1st per.</td>
<td>ka-ŋapbo</td>
<td>ka-ŋapdo</td>
<td>ka-ŋapno</td>
</tr>
<tr>
<td>2nd per.</td>
<td>ka-ŋapkiw</td>
<td>ka-ŋapkwal</td>
<td>ka-ŋapkwa</td>
</tr>
<tr>
<td>3rd per.</td>
<td>ka-ŋakwa</td>
<td>ka-ŋapkwal</td>
<td>ka-ŋapkwa</td>
</tr>
</tbody>
</table>

### 5. \texttt{Rawa.} The verb root is âre to go.

### 5.1 \texttt{rpt.} I went a long time ago, etc.

<table>
<thead>
<tr>
<th></th>
<th>Sg.</th>
<th>Du.</th>
<th>Pl.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st per.</td>
<td>âre-wonowo</td>
<td>âre-worowo</td>
<td>âre-wotowo</td>
</tr>
<tr>
<td>2nd per.</td>
<td>âre-worowo</td>
<td>âre-woriyowo</td>
<td>âre-wongoriyowo</td>
</tr>
<tr>
<td>3rd per.</td>
<td>âre-worowo</td>
<td>âre-woriyowo</td>
<td>âre-wongoriyowo</td>
</tr>
</tbody>
</table>
5.2 ipt. *I went (this morning)*, etc.

<table>
<thead>
<tr>
<th></th>
<th>Sg.</th>
<th>Du.</th>
<th>Pl.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st per.</td>
<td>ãre-wono</td>
<td>ãre-woro</td>
<td>ãre-woto</td>
</tr>
<tr>
<td>2nd per.</td>
<td>ãre-wo</td>
<td>ãre-wori</td>
<td>ãre-wongo</td>
</tr>
<tr>
<td>3rd per.</td>
<td>ãre-wo</td>
<td>ãre-wori</td>
<td>ãre-wongo</td>
</tr>
</tbody>
</table>

5.3 pres. *I am going*, etc.

<table>
<thead>
<tr>
<th></th>
<th>Sg.</th>
<th>Du.</th>
<th>Pl.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st per.</td>
<td>ãre-teno</td>
<td>ãre-tero</td>
<td>ãre-teto</td>
</tr>
<tr>
<td>2nd per.</td>
<td>ãre-te</td>
<td>ãre-teri</td>
<td>ãre-tengo</td>
</tr>
<tr>
<td>3rd per.</td>
<td>ãre-te</td>
<td>ãre-teri</td>
<td>ãre-tengo</td>
</tr>
</tbody>
</table>

5.4 fut. *I will go*, etc.

<table>
<thead>
<tr>
<th></th>
<th>Sg.</th>
<th>Du.</th>
<th>Pl.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st per.</td>
<td>ãre-wano</td>
<td>ãre-waro</td>
<td>ãre-wato</td>
</tr>
<tr>
<td>2nd per.</td>
<td>ãre-wa</td>
<td>ãre-warí</td>
<td>ãre-wango</td>
</tr>
<tr>
<td>3rd per.</td>
<td>ãre-wa</td>
<td>ãre-warí</td>
<td>ãre-wango</td>
</tr>
</tbody>
</table>

5.5 inch. *I must go*, *you go*, etc.

<table>
<thead>
<tr>
<th></th>
<th>Sg.</th>
<th>Du.</th>
<th>Pl.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st per.</td>
<td>ãre-we</td>
<td>ãre-woro</td>
<td>ãre-woto</td>
</tr>
<tr>
<td>2nd per.</td>
<td>ãre-Ø</td>
<td>ãre-ri</td>
<td>ãre-yí</td>
</tr>
<tr>
<td>3rd per.</td>
<td>ãre-ni</td>
<td>ãre-ri</td>
<td>ãre-yí</td>
</tr>
</tbody>
</table>

5.6 ctf. *I should have gone*, etc.

<table>
<thead>
<tr>
<th></th>
<th>Sg.</th>
<th>Du.</th>
<th>Pl.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st per.</td>
<td>ãre-we</td>
<td>ãre-re</td>
<td>ãre-ye/-we</td>
</tr>
<tr>
<td>2nd per.</td>
<td>ãre-Ø</td>
<td>ãre-ri</td>
<td>ãre-yí</td>
</tr>
<tr>
<td>3rd per.</td>
<td>ãre-ni</td>
<td>ãre-ri</td>
<td>ãre-yí</td>
</tr>
</tbody>
</table>

5.7 past, hab. *I used to go*, etc.

<table>
<thead>
<tr>
<th></th>
<th>Sg.</th>
<th>Du.</th>
<th>Pl.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st per.</td>
<td>ãre-roruwonó</td>
<td>ãre-roruworó</td>
<td>ãre-roruwo</td>
</tr>
<tr>
<td>2nd per.</td>
<td>ãre-roruwo</td>
<td>ãre-roruwarí</td>
<td>ãre-roruwango</td>
</tr>
<tr>
<td>3rd per.</td>
<td>ãre-roruwo</td>
<td>ãre-roruwarí</td>
<td>ãre-roruwango</td>
</tr>
</tbody>
</table>

5.8 pres., hab. *I always go*, etc.

<table>
<thead>
<tr>
<th></th>
<th>Sg.</th>
<th>Du.</th>
<th>Pl.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st per.</td>
<td>ãre-rorâteno</td>
<td>ãre-rorâtero</td>
<td>ãre-rorâteto</td>
</tr>
<tr>
<td>2nd per.</td>
<td>ãre-rorâte</td>
<td>ãre-rorâterí</td>
<td>ãre-rorâtengo</td>
</tr>
<tr>
<td>3rd per.</td>
<td>ãre-rorâte</td>
<td>ãre-rorâterí</td>
<td>ãre-rorâtengo</td>
</tr>
</tbody>
</table>

5.9 fut., hab. *I will always go*, etc.

<table>
<thead>
<tr>
<th></th>
<th>Sg.</th>
<th>Du.</th>
<th>Pl.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st per.</td>
<td>ãre-roruwonó</td>
<td>ãre-roruwaro</td>
<td>ãre-roruwo</td>
</tr>
<tr>
<td>2nd per.</td>
<td>ãre-roruwa</td>
<td>ãre-roruwarí</td>
<td>ãre-roruwango</td>
</tr>
<tr>
<td>3rd per.</td>
<td>ãre-roruwa</td>
<td>ãre-roruwarí</td>
<td>ãre-roruwango</td>
</tr>
</tbody>
</table>

5.10 hetero. *I went and someone else...*, etc.

<table>
<thead>
<tr>
<th></th>
<th>Sg.</th>
<th>Du.</th>
<th>Pl.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st per.</td>
<td>ãre-ní</td>
<td>ãre-ri</td>
<td>ãre-yí</td>
</tr>
<tr>
<td>2nd per.</td>
<td>ãre-ní</td>
<td>ãre-ri</td>
<td>ãre-yí</td>
</tr>
<tr>
<td>3rd per.</td>
<td>ãre-ní</td>
<td>ãre-ri</td>
<td>ãre-yí</td>
</tr>
</tbody>
</table>
6. Kovai. The verb root is ga to go.

6.1 past. I went, etc.

<table>
<thead>
<tr>
<th></th>
<th>Sg.</th>
<th>Du.</th>
<th>Pl.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st per.</td>
<td>ga-pai</td>
<td>ga-pot</td>
<td>ga-pon</td>
</tr>
<tr>
<td>2nd per.</td>
<td>ga-pin</td>
<td>ga-pit</td>
<td>ga-pe</td>
</tr>
<tr>
<td>3rd per.</td>
<td>ga-i</td>
<td>ga-pit</td>
<td>ga-pe</td>
</tr>
</tbody>
</table>

6.2 fut. I will go, etc.

<table>
<thead>
<tr>
<th></th>
<th>Sg.</th>
<th>Du.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st per.</td>
<td>ga-p</td>
<td>g-et</td>
</tr>
<tr>
<td>2nd per.</td>
<td>ge-m</td>
<td>g-it</td>
</tr>
<tr>
<td>3rd per.</td>
<td>ga-go</td>
<td>g-it</td>
</tr>
</tbody>
</table>

6.3 ctf. I should have gone, etc. The forms given here are often preceded by the morpheme ara.

<table>
<thead>
<tr>
<th></th>
<th>Sg.</th>
<th>Du.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st per.</td>
<td>ga-nap</td>
<td>ga-naβat</td>
</tr>
<tr>
<td>2nd per.</td>
<td>ga-nam</td>
<td>ga-naβit</td>
</tr>
<tr>
<td>3rd per.</td>
<td>ga-nam (?)</td>
<td>ga-naβit</td>
</tr>
</tbody>
</table>

6.4 hetero. The verb root is u ~ we to come.

<table>
<thead>
<tr>
<th></th>
<th>Sg.</th>
<th>Du.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st per.</td>
<td>we-p</td>
<td>u-wet</td>
</tr>
<tr>
<td>2nd per.</td>
<td>we-m</td>
<td>u-wit</td>
</tr>
<tr>
<td>3rd per.</td>
<td>w-o (?)</td>
<td>u-wit</td>
</tr>
</tbody>
</table>

6.5 inch. The verb root is me to talk.

<table>
<thead>
<tr>
<th></th>
<th>Sg.</th>
<th>Du.</th>
<th>Pl.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st per.</td>
<td>me-p</td>
<td>me-βet</td>
<td>me-βen</td>
</tr>
<tr>
<td>2nd per.</td>
<td>me-m</td>
<td>mi-βit</td>
<td>me-p</td>
</tr>
<tr>
<td>3rd per.</td>
<td>m-o (?)</td>
<td>mi-βit</td>
<td>me-p</td>
</tr>
</tbody>
</table>
The following abbreviations are used:

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Full Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>AA</td>
<td>American Anthropologist</td>
</tr>
<tr>
<td>AEH</td>
<td>Acta Ethnographica Hungaricae</td>
</tr>
<tr>
<td>AL</td>
<td>Anthropological Linguistics</td>
</tr>
<tr>
<td>AT</td>
<td>Australian Territories</td>
</tr>
<tr>
<td>DIES</td>
<td>Department of Information and Extension Services</td>
</tr>
<tr>
<td>DKb</td>
<td>Deutsches Kolonialblatt</td>
</tr>
<tr>
<td>IJAL</td>
<td>International Journal of American Linguistics</td>
</tr>
<tr>
<td>J of L</td>
<td>Journal of Linguistics</td>
</tr>
<tr>
<td>JRAI</td>
<td>Journal of the Royal Anthropological Institute</td>
</tr>
<tr>
<td>LCCP</td>
<td>Linguistic Circle of Canberra Publications</td>
</tr>
<tr>
<td>NKWL</td>
<td>Nachrichten aus dem Kaiser Wilhelmsland</td>
</tr>
<tr>
<td>PGM</td>
<td>Petermanns Geographische Mitteilungen</td>
</tr>
<tr>
<td>PL</td>
<td>Pacific Linguistics (formerly LCCP)</td>
</tr>
<tr>
<td>ZaoS</td>
<td>Zeitschrift für afrikanische und oceanische Sprachen</td>
</tr>
<tr>
<td>ZEthn</td>
<td>Zeitschrift für Ethnologie</td>
</tr>
<tr>
<td>ZfES</td>
<td>Zeitschrift für Eingeborenen-Sprachen</td>
</tr>
</tbody>
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ZAHN, H.


Z'GRAGGEN, J.A.

ZÖLLER, H.
