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NOR-PONDO LEXICOSTATISTICAL SURVEY

Stan Abbott

1. INTRODUCTION

1.1. Reasons for conducting survey

The reasons for conducting this survey were to confirm tentative conclusions for the classifications of dialects, languages, language families, and stocks by determining the relationships according to lexicostatistical procedures and to find a suitable allocation in which to do linguistic, literacy, and translation work.

1.2. Groups surveyed

The target of the survey was a group of Nor-Pondo languages (names after the words for 'man' in the two groups) in the East Sepik Region of Papua New Guinea. The Nor-Pondo Families are considered to be a part of the Sepik-Ramu Phylum posited as follows by Laycock (1973):

Sepik-Ramu Phylum: 192,362

Sepik Sub-Phylum: 133,412

Lower Sepik Sub-Phylum (Nor-Pondo): 11,658

Nor Family: 2,594

Murik Language: 1,476

Villages: Aramut, Darapap, Jangimut, Karau, Mendam, Wagamut

Kopar Language: 229

Villages: Kopar, Singarin, Wongun

Pondo Family: 9,064

Angoram Language: 6,514

Papers in New Guinea Linguistics No.22, 313-338.
Pacific Linguistics, A-63, 1985.

Villages:	Angoram	Moim	Maramba
	Kambrindo	Tambali	Sapalu
	Kambrok	Yueriman	Chuimondo
	Kanduanam	Angrumara	Bien
	Krinjambi	Andua	Imbuando
	Magendo	Arangunam	Marbuk
	Mundomundo	Kausimbi	
	Pinang	Kundima	

Karawari Language: 1,300

Villages:	Ambonwari	Kungriabun
	Imanmeri	Manjamai
	Kaiwaria	Marinyam
	Kommei	Masandenai
	Kundiman	Meiderobi

Chambri Language: 1,050

Villages:	Aibom	Kilimbit	Milae
	Arinjone	Luk-Luk	Timbunmeri
	Changriman	Mari	Wombun
	Indingai	Mensuat	Yambi Yambi

Yimas Language: 200

Villages: Yimas

The primary focus within the Nor-Pondo Families was the Murik and Kopar Languages of the Nor Family and the Angoram Language of the Pondo Family.

1.3. Previous linguistic work

Previous linguistic work in the area includes a grammar statement for Murik by Joseph Schmidt 1924-26, 1933, and 1953; preliminary establishment or perception of relationships of the Nor-Pondo Stock by Karl Lauman 1951, 1952, and 1954; confirmation and extension of the establishment of Nor-Pondo relationships by Eike Haberland in 1966; and three survey fieldtrips for the proposition of the entire Sepik-Ramu Phylum by D.C. Laycock 1965a, 1965b, and 1973.

1.4. Geographic description

The Murik language group is located on the Murik Lakes, from the mouth of the Sepik River west along the coast approximately 23 miles to the village of Kaup, and inland approximately ten miles to the flood plain region, an area of approximately 232 square miles. The area is almost totally mangrove swamps and the Murik Lakes are primarily salt water, controlled by the Bismarck Sea. The Bismarck Sea is very slowly removing the beach area along the coast of the Murik Lakes area and forcing the villagers inland. Jangimut, Wagamut, and Aramut (collectively called Murik by the people of the area) and Mendam, in which only a few old people reside, are the villages left on the actual beach area. Most of the people of Mendam have relocated at the village site of Bramick inside the lagoons. The remaining few people of Bramick merely incorporated into the village of Mendam and therefore Bramick is no longer considered a separate village. Karau was forced to relocate inland approximately ¼ or ½ mile from

the beach in the mangrove swamp. Darapap is the only village without the problem of a loss of beach area. Approximately 20 years ago a steamship sunk directly off the coast adjacent to the village of Darapap. Since that time the sand has actually been building up on the sunken hull of the ship. Therefore Darapap has about ¼ mile of high ground between the village and the sea. The lagoons are shallow in many places and there are many water trails cut through the mangrove trees. A guide is a necessity.

The Kopar language group is located on the Sepik River from the mouth of the Sepik, upriver approximately 25 miles. The area is primarily flood plain forest, mangrove swamps, and nipa. This language group is part of the Lower Sepik 11 Census Division along with the villages of Bien, Marbuk, and Imbuando of the Angoram language in the Pondo family. The total land for all six villages is approximately 176 square miles.

The Angoram language group begins on the Sepik River where the Kopar group ends (for map orientation see Marienberg Mission and Angoram vicinity). The last village on the Sepik of the Kopar group is Singarin and the first village of the Angoram group is Marbuk. This Angoram language group extends up the Sepik River approximately 50 miles. The majority of the villages in this language group are built on the river bands usually only one house deep and parallel to the river. The approximate land mass size of this area is 716 square miles.

For a division of all villages into sub-districts and census divisions along with population figures see Appendix A. For a general orientation to the geographic location of the East Sepik Region see Map 1.

2. PROCEDURES

2.1. Survey methodology

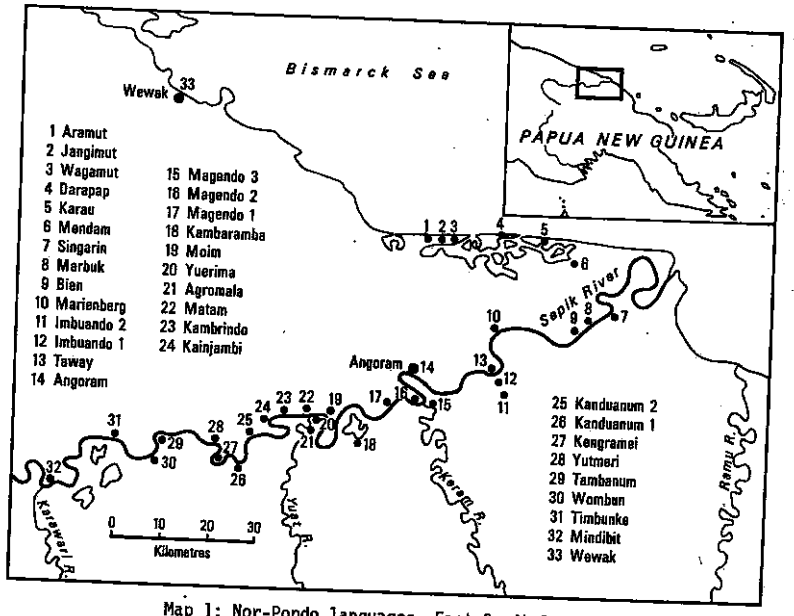
Lexicostatistical methodology was chosen because of the ease and expedience for survey work being done in short periods of time with limited funds. The first concern prior to departing on the survey was selection of the proper wordlist. The lexicostatistical method postulates that a 'diagnostic list of 'N' items can be or has been established; when this list is applied to any particular language, a single word can be found for each item...' (Chretien 1962:11). With this thought in mind, a revised version of the Papua New Guinea Summer Institute of Linguistics' 190 word survey wordlist with a 36 word lowlands supplement was used. Beginning with 226 words each word was reviewed on the basis of two criteria:

(1) Ability to be clearly conceptualised and terminology distinct in the area to be surveyed

(2) Vocabulary observed to be stable throughout areas which are otherwise linguistically homogenous at some level, but contrastive between such areas at some level (Bromley 1967:287-288).

This list was reduced to 173 words. Items were removed from the wordlist or carefully scrutinised after elicitation on the basis of the following:

(1) Unavailable items, i.e. 'hour' non-indigenous



Map 1: Nor-Pondo languages, East Sepik Province

(2) Multiple items with the same root, i.e.
bark/skin
egg/eye
feather/hair
person/people
man/woman

(3) Items difficult to match, i.e. colours
full
many
this/that

(4) Items requiring narrower definitions, i.e.
ashes - fine white or coarse black
belly - inside or outside
rain - a.m. or p.m.
neck - throat or back

(5) Items requiring broader definitions, i.e.
foot - unit of foot and leg
arm - unit of hand and arm
(Bromley 1967:289)

After elicition from Tok Pisin to vernacular, 75%-80% of the vernacular data was read back to the informant to elicit the corresponding Tok Pisin response. All of the wordlists were checked in this manner. The use of Tok Pisin in the area was extensive because of contact with missions, government officials, and tourists; therefore the method of elicitation was lingua franca (Tok Pisin).

The second concern for procedures was how to determine the probable cognates. 'True cognates are developed from the same word in a common parent language and only true cognates are conclusive evidence of relationships. The most accurate estimate of whether or not the pairs of words in a given comparison are cognate is arrived at by the careful use of the comparative method in reconstructing the proto-language' (Gudschinsky 1956:175-210). Since this type of proto-language study was not available because of limited time and funds, the 'probable cognates' were determined impressionistically, cf.

Tok Pisin	gras bilong het	sikau
Kambrindo	'wabɪr̃$_1$	—
Marbuk	'wobɪr̃$_1$	'monago$_5$
Mabendo 2	'wabɪr̃$_1$	'manak^{h}o$_5$

In the case of questionable cognation between two forms, a conservative approach was taken and the two forms were listed as non-cognates. Illustration of this approach is as follows:

Tok Pisin	mama	yes
Kilimbit	—	'al$_1$
Kambrindo	'nɪŋe$_1$	—
Kambaramba	'niam$_2$	—
Singarin	—	'ao$_4$
Karau	'ŋain$_4$	'ao$_4$
Wagamut	'ŋien$_4$	'ao$_4$
Marbuk	'nanas$_5$	—

2.2. Sociolinguistic testing

At different locations in each language group a series of sociolinguistic questions were asked. The locations considered were those on the extreme outside boundaries of the language groups and those thought to be in the geographic center of the areas. The questions asked were as follows:

Linguistic:
1. What is the name of your language?
2. Who speaks this language?
3. Who speaks a little differently but almost the same?
4. Who in your area speaks differently from you (no understanding)?

Contact:
1. Where are the markets in this area?
2. When you have a singsing, who comes?
3. Do you go to singsings in other places?
4. Do all of the men in your village understand Tok Pisin?
5. Do all of the women in your village understand Tok Pisin?
6. Do all of the children in your village understand Tok Pisin?

School:
1. Do your children go to school?
2. If so, where?
3. How many from this village go?
4. How many years do they go to school?

Marriage:
1. Where do the men here get their wives?
2. If they get their wives from other villages, what determines the priority?

The villages of the Murik and Kopar language groups questioned were Murik (Jangimut, Wagamut, and Aramut combined), Darapap, Karau, Mendam, and Singarin.

3. RESULTS

3.1. Explanation and display of diagnostic lists

Upon completion of the survey there were a total of ten diagnostic lists. These lists were elicited in the following order:

Date elicited	Language	Elicited at
1. 24 January 1977	Chambri	Council center at Maprik
2. 26 January 1977	Angoram	Kambrindo
3. 26 January 1977	Kambot	Kambaramba
4. 27 January 1977	Kopar	Singarin
5. 27 January 1977	Murik	Karau
6. 27 January 1977	Murik	Wagamut
7. 28 January 1977	Angoram	Marbuk
8. 28 January 1977	Angoram	Magendo 2
9. 29 January 1977	Angoram	Kanduanam
10. 30 January 1977	Angoram	Moim

The last diagnostic list taken on the 30th of January at Moim was not the standard Tok Pisin to vernacular elicitation. In this village the vernacular diagnostic list that had been elicited from Kambrindo was given to the informant and a Tok Pisin response was elicited. This was to serve as a check on the transcription accuracy and to see if the vernacular would be easily understood between the two villages. 97 Kambrindo vernacular words were read to the Moim informant eliciting a Tok Pisin response. The Tok Pisin word with which the Moim informant responded was the same as had been used to elicit the vernacular responses from the Kambrindo informant except two, the words for 'stone' and 'fish'. The Moim informant showed no evidence of understanding the Kambrindo vernacular words for 'stone' and 'fish'.

A compilation was made of the remaining nine wordlists so that all of the words elicited from each village could be compared at the same time. This compilation can be seen in Appendix B. The test words formed the columns and the different villages where the lists had been elicited formed the rows. Out of the original possible 173 words on the lists, there were 128 used (but not 128 common to all nine diagnostic lists). The remaining possible 45 words were either too hard to elicit or unable to be elicited for various reasons.

At this point another screening process took place to make sure of the quality of the diagnostic list. Out of 128 words, 44 were eliminated. The criteria for elimination were as follows:

(1) No vernacular response for six or more villages out of the nine possible.
(2) Possible non-indigenous items to the specific area.
(3) Possible phrases.
(4) Suspicious looking words because unusually long.
(5) Totally different vernacular forms given by majority of the the villages for any one word elicited.

Examples of these words eliminated can be seen in Appendix B. The words not used are marked out and no numbers were assigned showing their probable cognate sets. The total number of words compared between the nine villages can be seen in the following matrix:

Kilimbit

63	Kambrindo							
61	71	Kambaramba						
64	76	72	Singarin					
64	76	72	79	Karau				
72	69	67	73	75	Wagamut			
53	59	59	61	63	66	Marbuk		
51	54	53	55	57	60	62	Magendo 2	
52	59	59	60	62	65	68	62	Kanduanam

Using the inspection method described in the section on procedures, all of the words were grouped into probable cognate sets (synchronically similar sets: hereafter referred to an either cognates or probable cognates for expedience). Where a word was not given for comparison, the block of the matrix was assigned a zero. The first word in each row was assigned number 1 and the next word in that same row, if 50% the same, was assigned the same number 1. If the next word in that same row was not 50% the same to the previous words in the row, then that word was assigned number 2. This same procedure was repeated until all of the words in each row had been assigned numbers and all of the words in the matrix had been assigned numbers. Upon completion of grouping probable cognate sets for all 84 words and all nine villages, this data was fed into a computer to find the cognate percentages between the villages. The computer presented the data in matrix form as follows:

Kilimbit

15	Kambrindo							
0	9	Kambaramba						
11	19	1	Singarin					
6	13	1	39	Karau				
6	15	1	41	90	Wagamut			
15	64	12	30	22	22	Marbuk		
18	90	10	25	20	22	67	Magendo 2	
13	66	8	26	21	19	61	65	Kanduanam

3.2. Matrix analysis

Out of the nine villages listed, two, Kilimbit and Kambaramba, were removed from the matrix on the basis of the following criteria:

(1) Extremely low cognate percentage relationship with the other village and/or

(2) Mutual agreement by surveys of the area to be separate language groups.

The remaining seven villages of Karau, Wagamut, Singarin, Marbuk, Kanduanam, Magendo 2, and Kambrindo were then grouped according to similarity of cognate percentages by permutation of the matrix as follows:

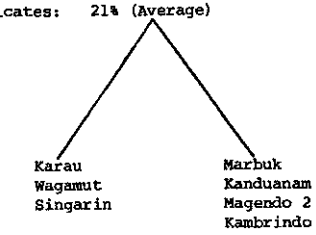
Karau

90	Wagamut					
39	41	Singarin				
22	22	30	Marbuk			
21	19	26	61	Kanduanam		
20	22	25	67	65	Magendo 2	
13	15	19	64	66	90	Kambrindo

The cognate percentages presented within this matrix form a pattern indicating language divergence, recognised by the block of adjacent low and relatively equal figures as follows (Simons 1976):

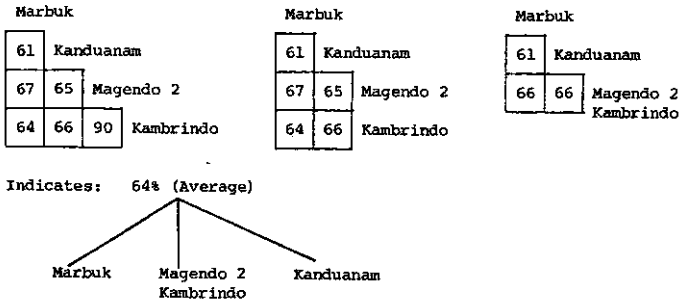
Karau	Wagamut	Singarin	
22	22	30	Marbuk
21	19	26	Kanduanam
20	22	25	Magendo 2
13	15	19	Kambrindo

Indicates: 21% (Average)

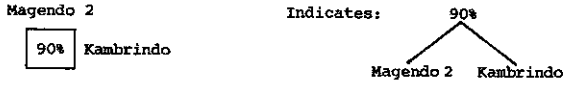


$$76 + 78 + 100 = \frac{254}{12} = 21\% \text{ average}$$

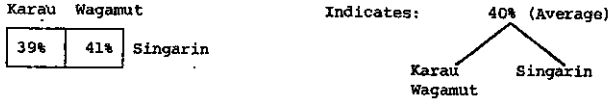
Using this block of adjacent low and relatively equal figures as the indicator that there is a language divergence, the present cognation between the two groups would be represented by an average of all of these percentage figures at approximately 21% as diagrammed above.



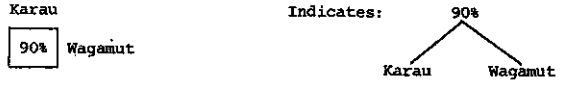
The first matrix immediately above shows Marbuk, Kanduanam, Magendo 2, and Kambrindo grouped by like percentage figures. Because of the similarity between Magendo 2 and Kambrindo reflected by the 90% cognation figure (an average of almost 26% higher cognation than the 61%-67% range within the matrix) Magendo 2 and Kambrindo can be collapsed into one column as diagrammed in the second matrix immediately above. The range of difference between the 64, 65, 66, and 67 percentage figures the surveyor interpreted as not significantly different and therefore collapsed into one row represented by an average of the figures. This averaging is illustrated by the third matrix immediately above. The three percentage figures (61, 66, and 66) represented in this third matrix, because of their similarity, indicate a three-way split between Marbuk, Magendo 2 and Kambrindo, and Kanduanam who presently share an average cognation of 64% as seen in the tree diagram immediately above.



Magendo 2 and Kambrindo are presently 90% cognate. (Illustrated in the diagrams above.)



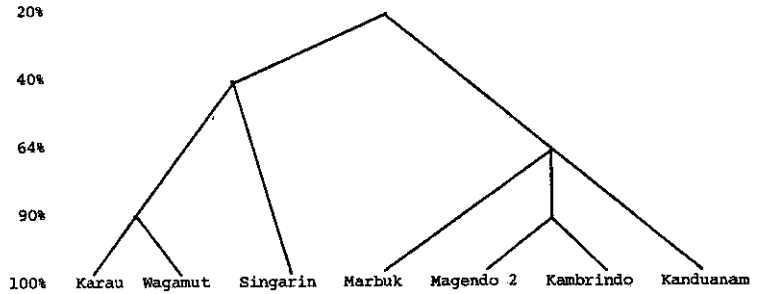
Karau and Wagamut are presently 39% and 41% cognate respectively to Singarin.



Karau and Wagamut are presently 90% cognate.

With all of the cognation percentages analysed within each section of the matrix and all of the divergent indications represented in simple tree diagrams, the next step is to mkae a compilation of all of the individual tree diagrams

in order to represent the overall relationship between Karau, Wagamut, Singarin, Marbuk, Kanduanam, Magendo 2, and Kambrindo. Such a compilation would be as follows:



This tree diagram shows that Karau, Wagamut, and Singarin were probably one language group that split from Marbuk, Magendo 2, and Kambrindo, and Kanduanam. Singarin has an average of 25% cognation with Marbuk, Kanduanam, Magendo 2, and Kambrindo and an average of 40% cognation with Karau and Wagamut. Singarin was grouped with Karau and Wagamut on the basis of the 40% average cognation rather than the 25% average cognation with Marbuk, Kanduanam, Magendo 2, and Kambrindo. However, the closeness between these two percentage figures indicates some type of convergence between the two groups. There is surely some specific reason for this closeness of cognation percentages but because of the brevity of this survey, the surveyor was unable to determine the exact reasons for this feature of the matrix.

3.3. Sociolinguistic data

Karau and Wagamut rate each other as the same and rate Singarin as similar but Magendo 2, Kambrindo, and Marbuk as different. Likewise Magendo 2, Kambrindo, and Marbuk rate each other as the same and Karau, Wagamut, and Singarin as different. Convergence between the two groups can be seen through Singarin, just as the matrix and three diagram analyses indicated. Singarin rate themselves as the same only with two other villages, the two villages of Kopar and Wongun. These three villages comprise the language group of the Kopar language. Singarin rate themselves as similar to Marbuk and to Karau, two villages which rated themselves as different. This identification by Singarin to these two different groups has far greater implications than the scope of this survey paper. However, it does point to the possibility of language convergence between the two groups.

Contact (1) *Trade* - During the dry season from June to October, Wewak is the major source of trade for the people. They travel to Wewak by canoe on the Bismarck Sea. However, during the rainy season from November to May the storms on the Bismarck Sea make canoe travel very hazardous so the people travel up the Sepik River to Angoram. (2) *Singsings* - All of the Murik language group (Jangimut, Wagamut, Aramut, Darapap, Karau, and Mendam) share equally in the preparation and staging of singsings. A co-operative rotation system is used

for these singsing productions. When a singsing is to be staged at one particular village, it is that village's responsibility to build any necessary facilities for the production, and help with some of the food supply. The remainder of the villages co-operate by bringing the majority of food stuffs to be consumed at the time of the singsing. This procedure is repeated among all of the villages until they have all had their turn staging a singsing and then the process begins again. (3) *Pidgin usage* - The majority of the men and women of Murik and Kopar language groups understand and speak Pidgin. The sources of trade at both Wewak and Angoram dictates the need for use of Pidgin. The largest and most extensive use of Pidgin is among the young people. Their education through contact with teachers and students from other language groups accentuates their need to know and speak Pidgin. (4) *School* - A government school is located at the village of Wongun in the Kopar language group. All of the villages of Murik and Kopar language groups send their children to this school. The children stay at the school during the week and return to their respective villages on the weekends. The school is primary grades only. The school was not actually visited by the surveyor but rather all of the data were gathered from the villages of the two groups. The general consensus of all of these villages was that school was good for their children and they were eager to co-operate. Several of the villages (Darapap, Mendam, and Singarin) had students who had attended at least some high school and Darapap had one university student. (5) *Marriage* - Murik language group only - The men get their wives from all of the villages within this Murik language group. They try to get a wife from their own village first but if there are none available or none desirable, they go to any of the other villages in their language group and select one. There is no special order of villages but merely random selection.

3.4. Relative phylum groupings

Thus far the relationships within and between language groups has been on a village name basis only. In an article on Papuan Language Classifications, S.A. Wurm and K. McElhanon represented the degrees of interrelationships between speech groups using the classification terminology of dialect, language, family, stock, and phylum. This type of terminology is useful in relating language groups to the overall Papua New Guinea linguistic scene. This table of interrelationships is as follows (Wurm and McElhanon 1975:152-5):

Cognation Percentages	Group	Constituent Members	Internal Relationship of members within group	External Relationship of group to other groups
Above 81%	Dialect	Sub-Dialects	Dialect-Level	Language-Level
70 - 81%	Language	Dialects	Language-Level	Family-Level
45 - 70%	Sub-Family			
20 - 28%	Family	Languages	Family-Level	Stock-Level
12 - 20%	Stock	Families	Stock-Level	Phylum-Level
5 - 10%	Phylum	Stocks	Phylum-Level	Unrelated

Using these figures to show degrees of interrelationship for the data within this survey paper, the classifications would be as follows:

Phylum 5-10%

Kilimbit	- 6% - Karau	Kambaramba	- 8% - Kanduanam
	- 6% - Wagamut		- 10% - Magendo 2
	- 11% - Singarin		- 9% - Kambrindo

Stock 12-20%

Kilimbit	- 13% - Kanduanam	Wagamut	- 19% - Kanduanam
	- 18% - Magendo 2		- 15% - Kambrindo
	- 15% - Kambrindo	Karau	- 20% - Magendo 2
	- 15% - Marbuk		- 13% - Kambrindo
Singarin	- 19% - Kambrindo	Kambaramba	- 12% - Marbuk

Family 20-28%

Marbuk	- 22% - Karau	Singarin	- 26% - Kanduanam
	- 23% - Wagamut		- 25% - Magendo 2
	- 30% - Singarin	Karau	- 21% - Kanduanam

Sub-Family 45-70%

Marbuk	- 67% - Magendo 2	Kambrindo	- 66% - Kanduanam
	- 61% - Kanduanam	Kanduanam	- 65% - Magendo 2
	- 64% - Kambrindo		
Karau	- 39% - Singarin	Singarin	- 41% - Wagamut

Language 71-78%

No percentages derived from this analysis for this category.

Dialect Above 81%

Magendo 2 - 90% - Kambrindo	Karau - 90% - Wagamut

The degrees of interrelationship seen in the Sub-Family and Family groups help support the convergence possibility of the two groups, Karau, Wagamut, and Singarin to Marbuk, Magendo 2, Kambrindo, and Kanduanam through Singarin and Marbuk.

3.5. Tentative conclusions for classifications confirmed and expanded

The classifications posited by Laycock in his 1973 survey of the Sepik-Ramu Phylum for the Nor Family are supported by the data of this survey. There has been a new census since 1970 and the figures have changed. (See Appendix A).

Using Wurm and McElhanon's chart showing degrees of interrelationships, Magendo 2 and Kambrindo are related on the Dialect level as 90% cognate. Marbuk and Kanduanam are rated in the 45-70% Sub-Family. Because of the high cognate percentage figure of 64% average between Marbuk and Kanduanam, and because there were no villages rated on the Language level according to Wurm and McElhanon's chart, the surveyor would classify Marbuk and Kanduanam as related on the Language level. Therefore the Angoram language could be classified into dialects as follows:

(1) Downriver Dialect:	Marbuk	
	Bien	
	Imbuando	
(2) Central Dialect:	Angoram	Mundomundo
	Magendo	Tambali
	Chuimondo	Moim
	Pinang	Yueriman
	Kambrok	Kambrindo
(3) Upriver Dialect:	Angrumara	Sapalu
	Arangunam	Krinjambi
	Kundima	Kanduanam
	Andua	Maramba
	Kausimbi	

4. ACKNOWLEDGEMENTS

I wish to express my thanks to Gary Simons of the Summer Institute of Linguistics for his suggestions and consultation on the analysis of the data of this survey project. Appreciation is also extended for the use of the ETP 8L micro-computer on loan to Simons from the Cornell University as part of his equipment for a projected dialect survey in the Solomon Islands. Many hours of doing statistical calculations by hand were eliminated by use of this computer.

I also wish to thank Wayne Dye, Irwin Firchow, and Robert Conrad, all of the Summer Institute of Linguistics, for their help in the survey — Wayne Dye for accompanying me on the survey, and Irwin Firchow and Robert Conrad for their reviews and critiques of the survey paper.

APPENDIX A: 1976 Census

Lower Sepik (Nor-Pondo) sub-phylum sub-district divisions:

I. Nor Family

A. Sub-district: Angoram
Census division: Murik Lakes 13
L.G. council: Angoram
Open electorate: Angoram
App. area (sq. miles): 232
Population: 1,396

Aramut	Karau
Darapap	Mendam
Jangimut	Wagamut

B. Sub-district: Angoram
Census division: Lower Sepik 11
L.G. council: Angoram
Open electorate: Angoram
App. area (sq. miles): 176
Population: 1,024

Bien	Marbuk
Imbuando	Singarin
Kopar	Wongun

II. Pondo Family

A. Sub-district: Angoram
Census division: Middle Sepik 6
L.G. council: Angoram
Open electorate: Angoram
App. area (sq. miles): 716
Population: 6,869

Angoram	Mindimbit (non-council)
Angrimara (non-council)	Moim
Kambringo	Mundomundo
Kambrok	Pinang
Kaminimbit (non-council)	Tambali
Kanduanam	Tambanum
Kararau (non-council)	Timbunke (non-council)
Krinjambi	Wombun
Magendo	Yueriman

B. Sub-district: Angoram
Census division: Karawari 1
L.G. council: non-council
Open electorate: Angoram
App. area (sq. miles): 320
Population: 1,909

Ambonwari	Kungriabun
Imanmeri	Manjamai
Kaiwaria	Marinyam
Konmei	Masandenai
Kundiman	Meikerobi

C. Sub-district: Angoram
Census division: Arafundi 4
L.G. council: non-council
Open electorate: Angoram
App. area (sq. miles): 320
Population: 616

Arambro	Meakambut
Auwin	Pundugum
Aviemi	Warlamas
Amboin	Yamandim
Isangan	Yimas

D. Sub-district: Ambunti
Census division: Chambri Lakes
L.G. council: Gaui
Open electorate: Wosera-Gaui
App. area (sq. miles): 568
Population: 2,743

Aibom	Mari
Arinjone	Mensuat
Changriman	Milae
Indingai	Timbunmeri
Kilimbit	Wombun
Luk-luk	Yambi Yambi

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Pidgin	Kilimbit	Kambrindo	Kambaramba	Singarin	Karau	Wagamut	Marbuk	Magendo 2	Kanduanum
1. gras bilong het	wɔ'břɨ 1	'wabɨř 1	'wal 2	'dwar 3	'dwar 3	'mošuř 4	'wobɨř 1	'wabɨř 1	'bugamaře 5
2. het	k^{h}a'řɨ 1	'k^{h}ařauaŋ 1	t^{h}ongam 2	'k^{h}ǎřan 1	'k^{h}ambet^h at^h 3	'k^{h}ambot^{h}at^h 3	'k^{h}ařauaŋ 1	'k^{h}ařauaŋ 1	'k^{h}ařauaŋ 1
3. lip	an'tan·o 1	'susum 2	'p^{h}onamp^h 3	'asup^h 4	'tsak^{h}in 5	'tsak^{h}in 5	'susum 2	'susum 2	'šušumbare 2
4. nus	'wambošu 1	'maisit^h 2	'p^{h}am 3	'ɨmpot^h 4	'daul(ř) 5	'daul(ř) 5	'musuk^h 6	'maisit^h 2	'naŋin 7
5. ai	'blaŋk^h 'tsɨtsɨŋk^h 1	't^{h}ambil 2	'lamben 3	'nambrɨn 2	'nabin 2	'nabin 2	't^{h}ambřl 2	t^{h}ambřɨ 2	t^{h}ambil 2
6. skin	maŋ'gak^h 1	'nangunl 2	'unt^h 3	'nangun 2	'nagun 2	'nagun 2	'ŋaŋl 2	'nangunl 2	naŋga'bař 2
7. skru bilong lek	'přamp^h	'uruk^{h}e	'ambwanpwan-dama	'pentɨkip^h	'nambig	'pat^{h}uř	'řok^{h}al	'uřok^{h}e	'lugue
8. man	nanma'sian 1	'p^{h}ondo 2	'yol 3	'noř 4	'noř 4	'noř 4	'p^{h}ondo 2	'p^{h}ondo 2	'p^{h}ondo 2
9. meri	no'manen 1	'anmandak^{h}en 2	'naiŋ 3	'namantak^h 1	'numařo 4	'numařo 4	'ŋan 3	'anmandak^{h}en 2	'aŋuno 5
10. pisin	lam'bwi 1	andom'bwalino 2	'auan 3				'tšenaŋ 4	'anembaře 5	
11. dok	yu'ri	'ndanda	'wor nt^h m t^h	'or n	'dw n	'dw n	'k^{h}auk^h	'ndanda	'n ndanda
12. dok i kalkaim man		'ndanda 'p^{h}ondo 'nandik^{h}e	'vřendama 'wa 'valenyat	'oren 'nor 'mbok^{h}aim 'mat^{h}a 'k^{h}ola					
13. em i sindaun		'nandak^{h}a 1		'mant^{h}asa 1	't^{h}osasa 2				
14. em i sanap		'nanɨmk^{h}e 1		'mařik^{h}et^{h}e 2	't^{h}oyařase 3				
15. em i slip		nan'k^{h}ont-šik^{h}a		'mak^{h}ant^{h}a-k^{h}ambaiyo	't^{h}oaře				
16. rot	'hau 1	'yoge 2	'da 3	'p^{h}ořek^{h}ain 4	'lagabol 5	'lagaboř 5	'k^{h}auk^{h}in-anaŋ 6	'lo 7	'lo 7
17. ston	'ořo 1	'k^{h}ambwak^h 2		'p^{h}at^h 4	'dug 5	'dug 5	'lal 6	'le 7	'k^{h}ambwak^h 2
18. bikpela	'ubo	'k^{h}apan		'k^{h}ap^{h}am	'ap^{h}o	'ap^{h}o	'k^{h}apan	'k^{h}apan	'k^{h}apan
19. liklik	ba'pok^{h}o	't^{h}amat^{h}k^{h}a-ndigre	'k^{h}ařenas	'mendek^h	'ŋgaŋgan	'ŋgaŋgan	't^{h}amarat^{h}a-k^{h}an	'samat^{h}ak^{h}an-t^{h}ak^{h}an	'k^{h}ɨndžambagam

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Pidgin	Kilimbit	Kambrindo	Kambaramba	Singarin	Karau	Wagamut	Narbuk	Nagendo 2	Kanduanum
20. pala	har'll 1	'uoɾ 2	'pʰandama 2	'auɾ 2	'auɾ 2	'aul 2	'ŋaɾ 4	'uoɾ 2	'aɾonkʰ 5
21. smok bilong pala	ela'pan	'gindingɾi	'pos	'athikʰ	'sakhen	'sakharakʰa-tikh	'sokhai	'nkʰintʰen	'khintʰiŋ
22. sit bilong pala	esa'lo 1		'waukhayan-tʰama 2				'aɾoŋ 3	'utʰakhaɾe 4	'aɾewo 5
23. yau	kʰe'll 1	'bɛn 2	'kʰombe 3	'kʰotakʰeɾ 4	'kharakʰeph 4	'kʰalakʰeph 4	'kʰondum 5	'kʰondum 5	'kʰondum 6
24. tang	tobala'nuŋkʰ 1	'meneŋ 2	'menyo 3	'mbeneŋ 2	'mbeneŋ 2	'mbineŋ 2	'waneŋ 2	'saɾuŋ 2	'siɾiŋgɾi 2
25. tit	'selankʰ 1	'siɾingli 2	'vaiwe 3	'lasiɾaph 6	'lasaɾaph 6	'lasaɾaph 6	'saɾuŋ 2	'nangɾi 2	'phonom 6
26. han	'nunkʰalo 1	'lagɾi 2	'yabau 3	'napaŋ 4	'deɾin 5	'daŋkʰ 3	'waneŋ 2	'phonom 6	'yangɾi 2
27. lek (foot)	'nanaŋkʰ 1	'naŋuŋ 1	'speŋ 2	'naŋoŋ 1	'daŋkʰ 3	'akʰon 4	'nambi-o 3	'naŋoŋ 1	'naŋuŋkʰ 1
28. san	siɾma'll 1	'mbwino 2	'alin 3	'akʰun 4	'akʰon 4	'kʰaleman 4	'kʰaɾaph 4	'mbwino 2	'mbwino 2
29. nun	'mall 1	'anbuɾ 2	'mambo 3	'kʰaɾaph 4	'noaln 4	'noaln 4	'aɾum 5	'lnantšo 2	'ɾeandžo 6
30. sta	'tuŋ'gwi 1	'inantšo 2	'yangandama 3	'noaln 4	'phasakʰ 5	'bun 6	'nambisana 7	'mangenen 8	'mangenen 8
31. klaut	kan'plantše 1	'bosuɾu 2	'baneban 3	'panchan 4	'tʰokʰakʰen	'aɾum	'alom/aɾum	'nunom	'butšine
32. ren	'mâlnu	'butšine	'yandama	'tʰokʰakʰen	'aɾum 1	'alom/aɾum 1	'aɾom 1	'aɾom 1	'aɾum 1
33. wara	'alun/arun 1	'aɾom 1	ya'mandama 2	'aɾom 1	'laɾaɾ 2	'lalal 2	'loɾoɾ 2	'loɾoɾ 2	'loɾoɾ 2
34. diwal	'luan 1	'loɾoɾ 2	'wintyetʰ 3	'eɾaɾ 3	'lalal 2	'lalal 2	'loɾoɾ 2	'bɛɾum 3	'mbɾi 3
35. lip (leaf)	nimbe'lamph 1	'beɾom 1	'balabin 2	'bɾindan 3	'nabiɾakʰ 4	'nabiɾukʰ 4	'nambaɾom 1	'bɛɾum 1	'mbɾi 3
36. abus	an'dal 1	'amagɾe 2	'nakʰare 2	'nanuɾan 3	'nagon 4	'tʰagkʰ 5	'amagɾe 2	'amagɾe 2	'amagɾe 2
37. grls	'landlal 1	'nambaɾ 2	'ambaiyo 3	'nonon 4	'tabwan 5		'nambaɾ 2	'nambaɾ 2	'nambaɾ 2
38. klau	'awaŋkʰ 1	'tuŋ 1	'mbwi 2	'aol 3	'ngaug 4	'ngaug 4	'ŋaŋ 1	'uoŋ 1	'aunkʰ 1
39. em i kal-kal saksak		'mbwawanga	'usindama 'vandama	bon'mambu-kola	'mandeɾimaro				

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Pidgin	Kilimbit	Kambrindo	Kambaramba	Singarin	Karau	Wagamut	Narbuk	Nagendo 2	Kanduanum
40. em i lukim		'waseɾikʰa 1	'yamentʰe 2	'manasatakola 3	'mentʰesobɾe 4				
41. em i kam		'nanlakʰa 1	'mise 2	'maiᵐkʰe 1	'manwolaɾe 3				
42. laus		'wakʰarakʰa 1	'nabaweya 2	'makʰencʰe 3	'nambuɾ 4				
43. wan	'blankʰ 1	'beŋ 2	'bwa 3	'bacheph 4	'abeba 5	'abeba 5			
44. tu	'usun 1	'kʰɾupɾaɾ 2	'nungoa 3	'kʰompaɾi 4	'kʰobo 3	'kʰobo 5			
45. sol		'tʰab kʰenen 1	'nambon 2	'Fahon 3	'phinagenb 4	'phinagenb 4	'kʰabukʰimun 1	'kʰabukʰenen 1	kʰabu'kʰenem 1
46. wasket	kʰase'pi-amph 1	'kʰasinuanim 2	'makag 3	'husinan 4	'kʰušunakʰ 5	'kʰušunakʰ 5	'kʰasenuanen 2	'kʰasinuaneŋ 2	'uangenden 6
47. skru bilong pinga	'tuluk/ 'tuɾuk 1	'tiŋ	'landan	'nampaphaten	'phedakʰ	'phedakʰ	'sungedun	'tʰen	'kwonbinan
48. nambawan pinga	'bwiamph 1	'nonanakʰen	'lokʰotonam	'kʰapan	'daɾiphinan		'pinim	'nben	'nunonunoa
49. lek (leg)							'nunbunaŋ	'an	'naŋuŋ
50. bun	'anamph 1	'saɾin 2	'wano 3	'tšaɾinkʰiph 2	'saɾiglb 2	'soɾiglb 2	'saɾin 2	'tšaɾiŋ 2	'tšaɾiŋ 2
51. blut	'laɾi 1	'laɾuɾaɾe 1	'sinduma 2	'Faɾen 3	'waɾan 3	'weɾan 3	'leɾuɾe 1	'laɾuɾaɾe 1	'lalunle 1
52. gras bilong pisin	lambe'lunkʰ 1	'wambwongɾi 2	'angoph 3	'tsatselŋ 4	'uason 5	'uasen 5	'pakhenen 6	'wanbwungɾi 2	'wanblun 2
53. wing bilong pisin	'nimpu 1	'tʰumbɾa-kʰeno 2	'phe 3	'lakʰon 4	'kʰokʰotʰaph 5	'kʰokʰotʰaph 5	'wantʰemboi 6	'tʰenosbɾegwe 2	šuša'k nue 7
54. pikinini man	'noɾanankʰo-ɾakʰan 1	'plse	'bembogo	'tsenentʰiŋkʰ	'gwanggangan		'pʰoɾimantʰekh	'mantʰekʰen	'pʰlse
55. yangpela meri	'nan'paɾe-kwenen 1	'tʰomanse	'lenkʰan	'plaletenan-tʰakʰ	nasegangan		'ganantʰekh	'tʰomandže	'manse
56. liklik pikinini	'limenenkʰo-ɾakʰonan 1	'tʰomatʰekʰen	'bebuan	'tsenentʰiŋkʰ	'gwan	'gwan	'mantekʰen 'tʰomatʰekʰen	'mantʰekʰen	'manse 'pʰlse

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Pidgin	Kilimbit	Kambrindo	Kambaramba	Singarin	Karau	Wagamut	Marbuk	Magendo 2	Kanbuanum
57. lapun man	'nořenen	'apap^h	'uau	'k^{h}apenořo	'norap^{h}o	'ap^{h}anoř	'p^{h}ondok^{h}o-p^{h}an	'p^{h}ondok^{h}o-p^{h}an	'abap^h
58. lapun meri		'apap^h/'ate	'mom	'k^{h}apaman-t^{h}ak^h	'lap^{h}umařo	'lap^{h}amařo	'ŋaŋk^{h}op^{h}an	'p^{h}ondok^{h}o-p^{h}an	'ařembwo
59. papa		'ano 1	'ape 2	'atše 3	'ian 4	'ian 4	'mam 5	'mam 5	'ano 1
60. mama		'nιŋe 1	'niam 2	'aia 3	'ŋain 4	'ŋian 4	'nana 5	'neŋe 1	'mařι 6
61. bikpela brata bilong man		'at^{h}uk^h 1		'k^{h}ak^{h}an 2	't^{h}at^{h}an 3	't^{h}at^{h}an 3	'at^{h}uk^h 1	'at^{h}uk^h 1	'at^{h}uk^h 1
62. bikpela susa bilong man		'waεřme·		'mamak^{h}apan	't^{h}at^{h}an	't^{h}at^{h}an	'manan'k^{h}o-p^{h}an	'uεřeme	'man
63. nem		'υli/'üři	'ιnduma		'yaut^h				
64. rat	man'toi 1	'yak^{h}rauwi 2	'yak^{h}a 2	'nanank^{h}ař 3	'k^{h}imbeř 4	k^{h}imbeui 4	'nonangař 3	'iakřani 2	'k^{h}asek^{h}amař 4
65. krokrok		'k^h eřem 1	'uk^{h}eřemphe 2	'gřongřok^h 3	'k^{h}ok^{h}řaik^h 4	'p^{h}op^{h}řak^h 5	'k^{h}eřem 1	'k^{h}ařem 1	k^{h}eřem 1
66. snek	'uan 1	'pwat^{h}enuŋ 2	'k^{h}andιndama 3	'ik^{h}un 4	'wauk^{h}ün 4	'wauk^{h}on 4	'k^{h}oŋgonda-k^{h}ai 5	'pwat^{h}unuŋ 2	'p^{h}eřum 6
67. pis	k^{h}on'tsai 1	'amangře 2	'megeře 2	't^{h}amuunt^{h}o 3	't^{h}ant^h 4	't^{h}ant^h 4	'amut^{h}aře 2	'amangře 2	'amangře 2
68. taro		'k^{h}angaraem 1		'mandořan 2	'wařep^{h}on 3	'tšořap^h 4		'k^{h}angařaem 1	
69. banana	'panaŋk^h 1	'ařambaŋ 2	'naŋge 3	'p^{h}ehřiman 4	'p^{h}řeman 4	'p^{h}ιniman 4	'ařambeŋ 2	'aiambaŋ 2	'alambaŋ 2
70. kaukau		-		angomařepa-pakii 1	'ambandek^{h}in 2	'nambant^{h}ek^{h}i 2	'gawepapak^{h}ii 1		
71. tamiok	'yiamp^{h}ařo 1	sa'k^{h}ařama 2	'nk^{h}ai 2	'p^{h}ant^{h}εn 4	'bořin 5	'iamborin-eŋge 3	'sak^{h}ařema 2	'uak^{h}ampiše 6	tša'k^{h}ařema 2
72. naip	'inanp^h 1	t^{h}angεře 2	't^{h}angeře 2	'nank^{h}en 3	'bořin 4	'segit^h 5	't^{h}angεře 2	't^{h}angεře 2	'sangεře 2

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Pidgin	Kilimbit	Kambrindo	Kambaramba	Singarin	Karau	Wagamut	Marbuk	Magendo 2	Kanbuanum
73. spia	'want^{h}amp^h	'andžimangen	'pořl/'puli	'mbεmp^h	'aiamp^{h}ep^h	'nigek^h	'inon	'ŋgaři	'ŋgaři
74. haus	'k^{h}ořii/ 'k^{h}uiii 1	'nam 2	'pandama 3	'yin 4	'iřan 5	'iřan 5	'nam 2	'nam 2	'nam 2
75. graun	'nank^{h}ařump^h 1	'andi 2	'bιn 3	'din 4	'agin 5	'agin 5	'andi 2	'andi 2	'andi 2
76. waisan	ořanti'k^{h}as 1	'soŋwaia 2	'moiŋ 3	'k^{h}ak^{h}eřan 4	'gugudžeřak^h 5	'džeŋai 1	's ŋai 2	'tsingaie 2	'k^{h}eřařan 4
77. maunten	'bawi 1	'uiŋ 2	'iambwan 3	'p^{h}ant^{h}am 4	'p^{h}ařam. 4	'p^{h}ařam 4	'imbwaŋ 3	'uiŋ 2	'wιngři 2
78. win	'pari .						'p^{h}up^{h}uan		
79. skin diwai			'moaŋ 1	'εřoř'řok^h - omp^h 2	'ιmbeřan 3	'ιmbařan 3			
80. nait	t^{h}a'p^{h}amp^h 1	'i k^{h}amun 2	'bandan 3	'řak^{h}amant^{h}e 4	'aganan 5	'agenun 5	'iuk^{h}amun 2	'iuk^{h}amun 2	'igomun 2
81. asde	'namanšinιn 1	'nak^{h}amun 2	'naiendan 3	'nařen 4	'ařen 4	'nařun 4	'nak^{h}am 2	'nak^{h}amun 2	'nagamun 2
82. tumora	'k^{h}asιp^h 1	't^{h}umbon 2	'bon 2	'nařen 3	'ařen 3	'nařun 3	't^{h}umbon 2	t^{h}umbon 2	t^{h}umbon 2
83. gutpela	yab'k^{h}ařen 1	'mandžikun 2	'yoiaimen 3	'ařat^{h}et^h 4	'ařet^{h}ogo 4	'ařat^{h}o 4	'nandak^h n 5		'ařandak^{h}en 5
84. nogut	'madřeŋ 1	'magře 2	'džue 2	'mak^h 2	'mwao 4	'mwao 4	'mwak^{h}en 5		'mwak^{h}en 5
85. longpela	k^{h}oind'řeŋ 1	'k^{h}aisek^{h}ak^{h}an 2	'iolk^{h}onet^h 3	'ŋk^{h}oŋk^{h}op^{h}ařι 4	'gogoŋgo 4	'gogoŋ 4	'k^{h}oŋk^{h}ořono-k^{h}en 4		k^{h}ongřant^{h}e-k^{h}en 4
86. sotpela	'apřeamp^h 1	'k^{h}aisek^{h}an 2	't^{h}e 3	'k^{h}atarük^{h}ük^h 4	'p^{h}ok^{h}op^{h}o 5	'p^{h}ok^{h}op^{h}o 5	'k^{h}asak^{h}en 2		k^{h}ařagem'p^{h}e-nagem 6
87. hevi	wopi'tareŋ 1	'iebιnk^{h}en-d k^{h}ře 2	'denat^h 3	'patent^{h}ük^h 4	'dip^{h}at^{h}o 5	'dip^{h}at^{h}o 5	'ibinet^{h}ak^{h}en 6		'ivik^{h}arak^{h}en 6
88. i no hevi		'přιndemosιk^{h}re 1	'pansembaři 2	'tsanenpřau 3	'sanabao 4	'sonebao 4	'snank^{h}an-t^{h}ak^{h}en 5		sam'biakala-k^{h}en 5
89. kol	sa'iuk^h	'wak^{h}ark^{h}a	'k^{h}obo	'tsεřep^{h}at^{h}in	'nagunmwago-wangasiarn				'p^{h}ubont^{h}uk^h

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Pidgin	Kilimbit	Kambrindo	Kambaramba	Singarin	Karau	Wagamut	Marbuk	Magendo 2	Kanbuanum
90. hat	aleya'k^{h}ɨn	'alek^{h}ark^{h}e	'ulsanařak^{h}op		'undun	'akuŋgap^{h}a-rep^{h}o			'alak^{h}arek^{h}an
91. olpela	mař['ial			'pat^{h}ɛnt^{h}ɛk	'pat^{h}ɛřo				'p^{h}ombosIk^{h}řa
92. nupela				'nank^{h}ümük^{h}	'neŋgamoŋgo				't^{h}ok^{h}asIpařane
93. olgeta	mama'lɨŋ 1	'mdak^{h}abo 2	'ařop 3		'abet^{h}abet^{h}a 4				
94. dispela	mak^{h}a'le								
95. yes	'al 1	't^{h}ak^{h}ep^{h}e 2	'na 3	'ao 4	'ao 4	'ao 4			
96. nogat	'tsɪk^{h}ampoŋ 1	'ant^{h}ak^{h}le 2	'ap^{7} 3	'ak'aiye 4	'ŋgwende 5	'ŋgwende 5			
97. em i tok		'soaře							
98. em i harim				'manant^{h}a-k^{h}oye	'manenuřawɪn				
99. em i save				'manant^{h}unda-t^{h}ak^{h}oye	'met^{h}ořat^{h}				
100. em i dring wara		'ařemwamk^{h}a		'ařamumbü-k^{h}oye					
101. em i slip		'nank^{h}ondžik^{h}a		'mak^{h}entak^{h}ü-mboye	'manweřagařa				
102. em i kilim i dai		'nank^{h}eřaře-nant^{h}ik^{h}a		't^{h}ambüpaŋ-k^{h}amant^{h}e	't^{h}odiře				
103. em i dai pinis		'patipřak^{h}ena			't^{h}opeřɪn				
104. pala i lait		'wanalařiki-tak^{h}a							

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Pidgin	Kilimbit	Kambrindo	Kambaramba	Singarin	Karau	Wagamut	Marbuk	Magendo 2	Kanbuanum
105. em i pundaun		nam'k^{h}olat^{h}-řɪk^{h}a							
106. em i paitim dok		'ndanda 'nant^{h}ik^{h}a	'ufontai 'maip						
107. em i kus		'nanikowk^{h}a	'ut^{h}at^{h}ap						
108. em i lap		'nanpit^{h}ak^{h}a	'alait^{h}a						
109. mi	'ami 1	'mit^{h}ɛp^{h} e 2	'ape 2	'ma 1	'ma 1	'ma 1			
110. yu	'nɨmi 1	'ɛmet^{h}ak^{h}epe 2	'yolaŋga 3	'moni 1	'mi 1	'mi 1			
111. em	sak^{h}a'ne 1	'nambe 2		'mo 3	'men 4	'men 4			
112. mipela	yi'p^{h}i	'paŋgeyam-bramnda		'paŋgü					
113. yupela	yi'bi	't^{h}ak^{h} nte							
114. ol	yi'bi	'pupwe							
115. kokonas	yi'bam 1	'wankɛřom 2	'tsombřa 3	'řuaŋ 4	'dap^{h}ag 5	't^{h}epak^{h} 5	'uaŋ 4	'uaŋ 4	'uaŋ 4
116. buai		'pwařeŋ 1	'au 2	'pořoŋ 1	'p^{h}eřog 1	'p^{h}ořoge 1	'pwařeŋ 1	'pwařeŋ 1	'pwařeŋ 1
117. kambang		'auɪř 1	'ai 1	'aiř 1	'aiř 1	'aiř 1	'auiř 1	'auiř 1	'auiř 1
118. saksak	t^{h}i'nam 1	'mbwe 2	'yapaŋ 3	'mařinün 4	'dořɪn 5	'dořɪn 5	'řino 5	'uři 1	't^{h}oli
119. kanu	'k^{h}e 1	'k^{h}e 1	'mandoma 2	'k^{h}ain 3	'gain 3	'gain 3	'k^{h}aiř 3	'k^{h}e 5	'k^{h}e
120. pul	'naŋk^{h} 1	'inap^{h} 1	'napuŋ 2	'naŋ 1	'inaŋ 1	'inaŋ 1	'inap^{h} 1	'inap^{h} 1	'inap^{h} 1
121. basket bilong pis		'k^{h}aise	'want^{h}ana	'aweř					

APPENDIX B

Pidgin	Kilimbit		Kambrindo		Kambaramba		Singarin		Karau		Naganat		Marbuk		Nagendo 2		Kanbanamum	
122. basket	'tʃi	1	'isi	2	'sa	3							'isi	2	'isi	2	'isi	2
123. pukpuk	'ayi	1					'oramon	2	'dwamin	2	'dwamin	2	'uafami	2	'uafami	2	'uajami	2
124. natnat	nan'kw n	1					'naogich	2	'naukh	3	'naukh	3	'ofafa	4	'uafafafan	4	'ualuale	4
125. solwara									'gogon	1	'gogon	1	'masak	2	'masak	2	'bhoggun	1
126. nambis									'dʒ natn		'dʒwajain		'sapai					
127. em i wokabaut																		
128. em i givim mi																		

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A TENTATIVE MULTILEVEL MULTIUNIT PHONOLOGICAL ANALYSIS OF THE MURIK LANGUAGE

Stan Abbott

0. INTRODUCTION

This paper presents a descriptive phonological analysis of the sound system of the Murik language.[1] The theoretical basis underlying the paper is multilevel multiunit as introduced by Marvin K. Mayers. The basic premise of the theoretical framework is that phonemic criteria should be applied to more than just segments (individual phones) or syllables of any given language. It should in fact produce a system of notation for the consistent, accurate pronunciation of the entire language, not just the segments.

Details of phonetic pronunciation such as voicing, stress, pitch, duration, etc., can be spread throughout the phonological hierarchy in such a way as to tie phonetic features into specific contrastive units on the various levels of the hierarchy and thus reduce the amount of complexity on the segment level. Such features are divided into three classes: (1) *contact* - involving point and manner of articulation, (2) *relational* - such as the relative positioning of the tongue in the pronunciation of certain sounds, (3) *dynamic* - involving such features as level of pitch, contour of pitch, terminal point of contour of pitch. (Mayers 1975).

Phonetic features are assigned to specific levels of the phonological hierarchy according to the following criteria: (a) recurring patterns of features, (b) frequency with which the features occur in the speech span, and (c) by analogy to the assignment of features to a level and the sucessive bundling of features assigned to a given level. Generally the more frequently a feature occurs, the lower will be its assignment as to level; the less frequently, the higher the level assignment. (Mayers 1975).

Thus Murik phonology is conceived of as a number of phonological levels ordered specifically within the hierarchy. Each level is seen in descriptive terms of contrastive and variant types of units and distribution of these units within the hierarchy. The unit and level-defining features comprising the individual levels are specific to that particular level but not necessarily unique to that level. The individual levels are specifically different from the other levels but should not be regarded as sutonomous. 'The higher layer may condition the lower or the lower mark or identify the higher'. (Pike 1962:14).

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