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TABLE OF CONTENTS

	Page
PROTO-SOUTH-EAST MINDANAO AND ITS INTERNAL RELATIONSHIPS, by Andrew F. Gallman.	
1. INTRODUCTION	1
1.1. Purpose	1
1.2. Previous Classifications	1
1.3. Geography	4
1.4. Source of Data	5
1.5. Abbreviations	5
2. THE PHONEMIC SYSTEMS IN PSEM	6
2.1. The Phonemic Systems of the SEM Languages	6
2.1.1. The Consonants	6
2.1.2. The Vowels	8
2.2. The Phonemic System of Proto-South-Eastern-Mindanao	8
2.2.1. Proto-Consonants	9
2.2.1.1. *p	9
2.2.1.2. *t	9
2.2.1.3. *k	9
2.2.1.4. *b	9
2.2.1.5. *d	10
2.2.1.6. *g	10
2.2.1.7. *m	11
2.2.1.8. *n	11
2.2.1.9. *ŋ	11
2.2.1.10. *s	11
2.2.1.11. *l	12
2.2.1.12. *ʔ	13
2.2.1.13. *w	14
2.2.1.14. *y	15

2.2.2. Proto-Vowels 15
2.2.2.1. *a 15
2.2.2.2. *ɨ 15
2.2.2.3. *i 17
2.2.2.4. *u 17

3. THE RELATIONSHIP OF KAMAYO AND DAVAWENYO TO THE SEM LANGUAGES 17

4. RELATIONSHIPS WITHIN THE PSEM GROUP 19
4.1. Lexicostatistical Analysis 19
4.2. Phonological Features 21
4.3. Analysis in Terms of Probabilities 22
4.4. Summary and Conclusions 24

5. RECONSTRUCTION AND COGNATE SETS 25

6. CONCLUSION 26

NOTES 46

BIBLIOGRAPHY 49

PROTO-DANAW: A COMPARATIVE STUDY OF MARANAW, MAGINDANAW, AND IRANUN, by E. Joe Allison 53

1. INTRODUCTION 53
1.1. Purpose 53
1.2. Abbreviations 53
1.3. Previous Classifications 54
1.4. Historical Background 55

2. THE PHONEMIC SYSTEMS 56
2.1. Essential Aspects of MAR, MGD, and IRN Phonologies 56
2.1.1. Consonants 56
2.1.2. Semi-vowels 57
2.1.3. Vowels 58
2.2. The Phonemic System of Proto-Danaw 59
2.2.1. Proto-Consonants 59
2.2.1.1. *p 59
2.2.1.2. *t 59
2.2.1.3. *k 59
2.2.1.4. *b 60
2.2.1.5. *d 60
2.2.1.6. *g 61
2.2.1.7. *m 61
2.2.1.8. *n 61
2.2.1.9. *ŋ 61

2.2.1.10. *s 62
2.2.1.11. *l 62
2.2.1.12. *r 62
2.2.1.13. *? 63
2.2.1.14. *w 63
2.2.1.15. *y 63
2.2.2. Proto-Vowels 64
2.2.2.1. *a 64
2.2.2.2. *ɨ 64
2.2.2.3. *i 65
2.2.2.4. *u 65

3. RELATIONSHIPS WITHIN THE DANAW GROUP 65
3.1. The Subgrouping Hypothesis 65
3.2. Lexicostatistical Analysis 66
3.3. Functor Analysis 66
3.4. Phonological Innovations 69
3.4.1. Phonemic Change in Proto-Danaw 69
3.4.1.1. PDAN *b-*w Merger 69
3.4.1.2. PDAN Loss of Stem-Initial Consonant 70
3.4.2. Phonemic Changes in MAR, MGD, and IRN 71
3.4.2.1. MAR-IRN Vowel Assimilation 71
3.4.2.2. MGD-IRN Glottal Stop Loss 71
3.4.2.3. MGD r-l Merger 72
3.4.2.4. MAR Consonant Cluster Reduction 72
3.5. Morphological Features 72
3.5.1. Deictics 72
3.5.2. Verbal Affixes 73
3.6. Shared Lexicon 74
3.7. Summary and Conclusions 77

4. RECONSTRUCTIONS AND COGNATE SETS 78
4.1. Proto-Danaw Reconstructions 79
4.2. English Index of Proto-Danaw Reconstructions 91

APPENDIX 1. Modified Swadesh 100-meaning List 96
APPENDIX 2. Danaw Functor and Qualitative Wordlist 98
NOTES 102
BIBLIOGRAPHY 108

PROTO-MANOBO PRONOUNS AND CASE MARKING PARTICLES,
by Carol W. Harmon 113

1. INTRODUCTION 113

2. PRONOUNS 114
2.1. Independent Nominative 114
2.2. Oblique 116
2.3. Nominative Enclitic 117
2.4. Genitive 118

3. CASE MARKING PARTICLES 122
3.1. Personal Noun Markers 122
3.2. Common Noun Markers 123

4. CONCLUSIONS REGARDING MANOBO INNOVATIONS 125
4.1. Changes From Proto-Austronesian Pronominal Innovations 125
4.2. Intra-Manobo Developments From Proto-Manobo 126

NOTES 129

BIBLIOGRAPHY 131

Table 1 - Manobo Independent Nominative Pronouns 119
Table 2 - Manobo Oblique Pronouns 120
Table 3 - Manobo Nominative Enclitic Pronouns 120
Table 4 - Manobo Genitive Pronouns 121
Table 5 - Reconstructions of Manobo Pronouns 121
Table 6 - Manobo Case Marking Particles 124
Table 7 - Reconstructions of Manobo Case Marking Particles 125

CHAMORRO PREFIXES: I, by Jeannette Witucki 135

1. INTRODUCTION 135

2. KNOWN PREFIXES WITH INITIAL /a/ 135
2.1. /á-/ 136
2.2. /án-/ 136
2.3. /atsá-/ 137

3. FURTHER /a/ INITIAL PREFIXES 137
3.1. /a-/ 137
3.2. /a-/ ∿ /ha-/ 138
3.3. /á?-/ 139
3.4. /aka-/ 140

NOTES 141

BIBLIOGRAPHY 142

Gallman, A., Allison, E., Harmon, C. and Witucki, J. editors. *Papers in Philippine Linguistics No. 10.*
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PROTO-SOUTH-EAST MINDANAO AND ITS INTERNAL RELATIONSHIPS

ANDREW F. GALLMAN

1. INTRODUCTION

1.1. *PURPOSE*

The purpose of this study is to test the assumption of the relatedness of the South-East Mindanao (SEM) languages by reconstructing the phonology of their parent, Proto-South-East Mindanao (PSEM) and also to show their internal relationships. The languages include: Kalagan-Tagakaolo (KLT), Kalagan-Kaagan (KLK), Mandayan-Islam (ISM), Mansaka (MSK), Mandayan-Maragusan (MDM), Mandayan-Kabasagan (MDK), Mandayan-Caraga (MDC), and Mandayan-Boso (MDB). It has been assumed by most scholars that Kalagan and Mansaka are more closely related to each other than to other major languages (see section 1.2. below); the other SEM languages and dialects have been little known.

1.2. *PREVIOUS CLASSIFICATIONS*

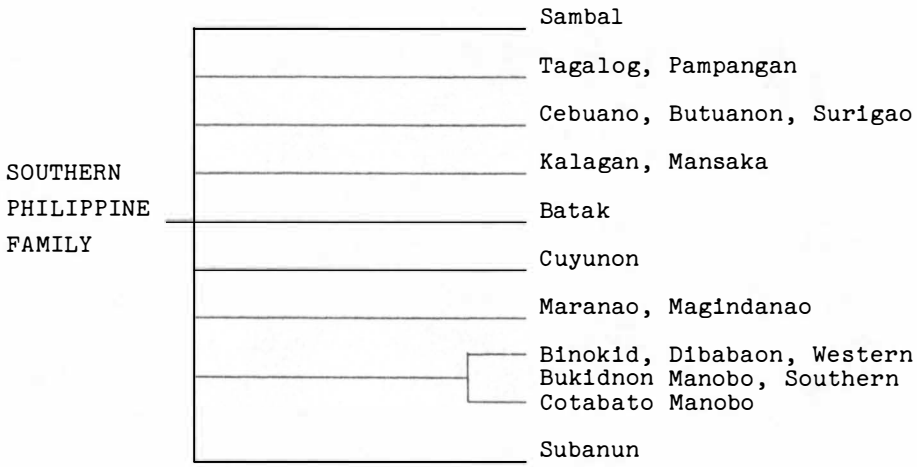
Various lexicostatistical studies have been done of the Philippine languages, but these studies by themselves are no substitute for the thorough investigation of sound shifts and grammatical structures. Adequate studies in comparative phonology and grammar, and the synthesis of these with the result of lexicostatistics are necessary to establish a solid scientific grouping of these languages.

Thomas and Healey (1962) in their lexicostatistical study showed that around 700 B.C. (±300) the Philippine stock split into a Northern Philippine Family, a Southern Philippine Family, and Pangasinan. Around 100 B.C. (±300) the Southern Philippine Family split into at least nine branches as shown in figure 1.1. Mansaka and Kalagan, which are two members of the SEM group, are shown to be a subgroup of this Southern Philippine Family.

Gallman, A.F. "Proto-South-East Mindanao and Its Internal Relationships". In Gallman, A., Allison, E., Harmon, C. and Wrucki, J. editors, *Papers in Philippine Linguistics No. 10.* **A-55:1-52**. Pacific Linguistics, The Australian National University, 1979. DOI:*10.15144/PL-A55.1*

FIGURE 1.1.

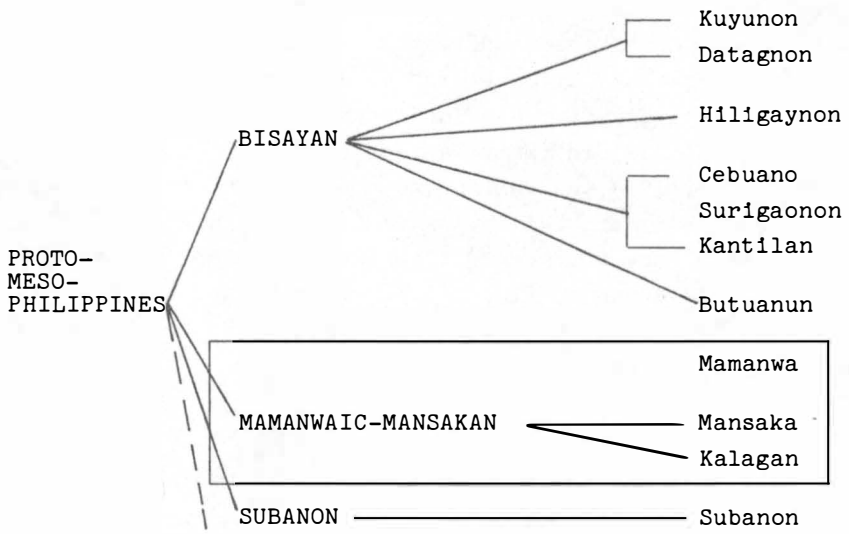
Southern Philippine Family (Thomas and Healey)



Dyen (1965) proposed the genetic relationships displayed in Figure 1.2. The node enclosed in the box indicates Dyen's later modification, as noted by Zorc (1975). Here, Dyen places Mansaka and Kalagan together in a subgroup as Thomas and Healey. However, the placing of Mansakan (my SEM) within the Mamanwaic is unique.

FIGURE 1.2.

An Interpretation of Dyen's 1965 Classification



Zorc (1975) recognised the close relationships between Bisayan, Mansakan and Mamanwa and grouped them as coordinate subgroups of a Central Philippine language group, as displayed in Figure 1.3. His grouping is well argued, and based on a number of mutually supportive techniques (lexicostatistics; functor comparisons; phonological, lexical and syntactic innovations and retentions). His grouping included Kamayo (KMY) and Davawenyo (DVW) in the Mansakan Group (nearly equivalent to my SEM). My arguments for excluding KMY and DVW can be found in section 3.

Pallesen, in his dissertation, displays the tree diagram in Figure 1.4. based on a paper in preparation by Gallman and Pallesen. Here Pallesen separates KMY and DVW from SEM into a subgroup known as Central-East Mindanao (CEM). His North-East Mindanao (NEM) is roughly equivalent to Zorc's South Bisayan languages.

FIGURE 1.3.

Some Genetic Relationships of Central Philippine Languages
(after Zorc, 1975)

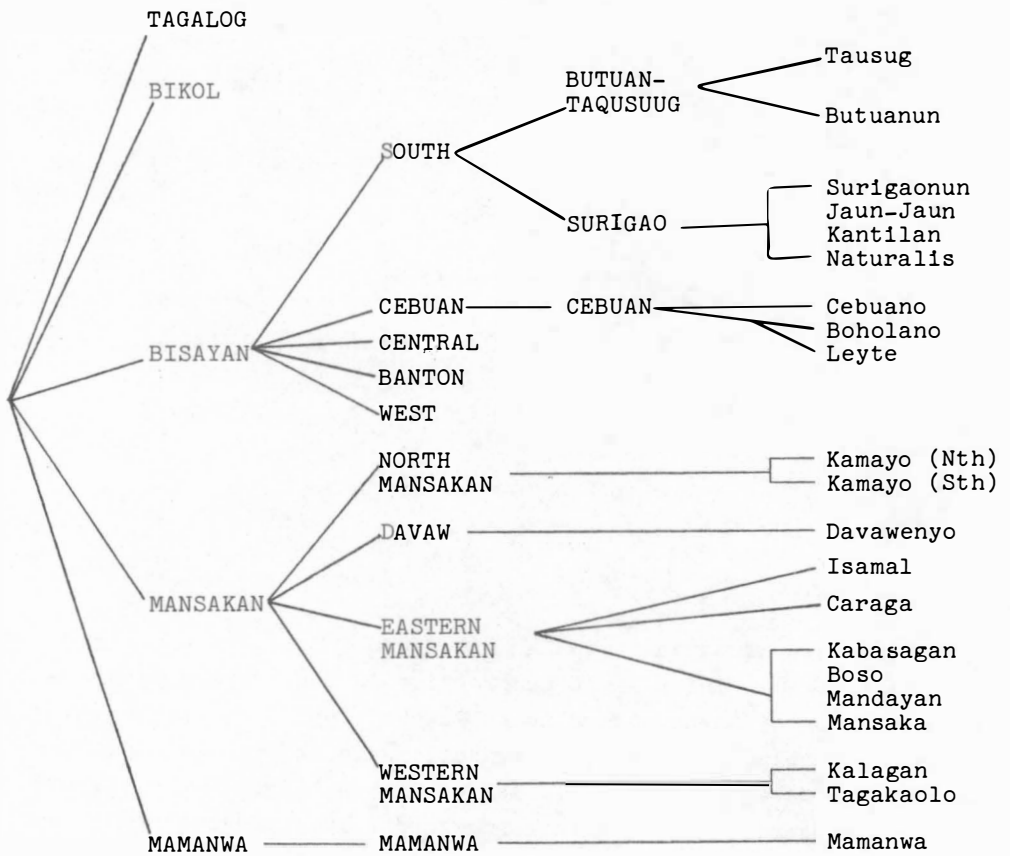
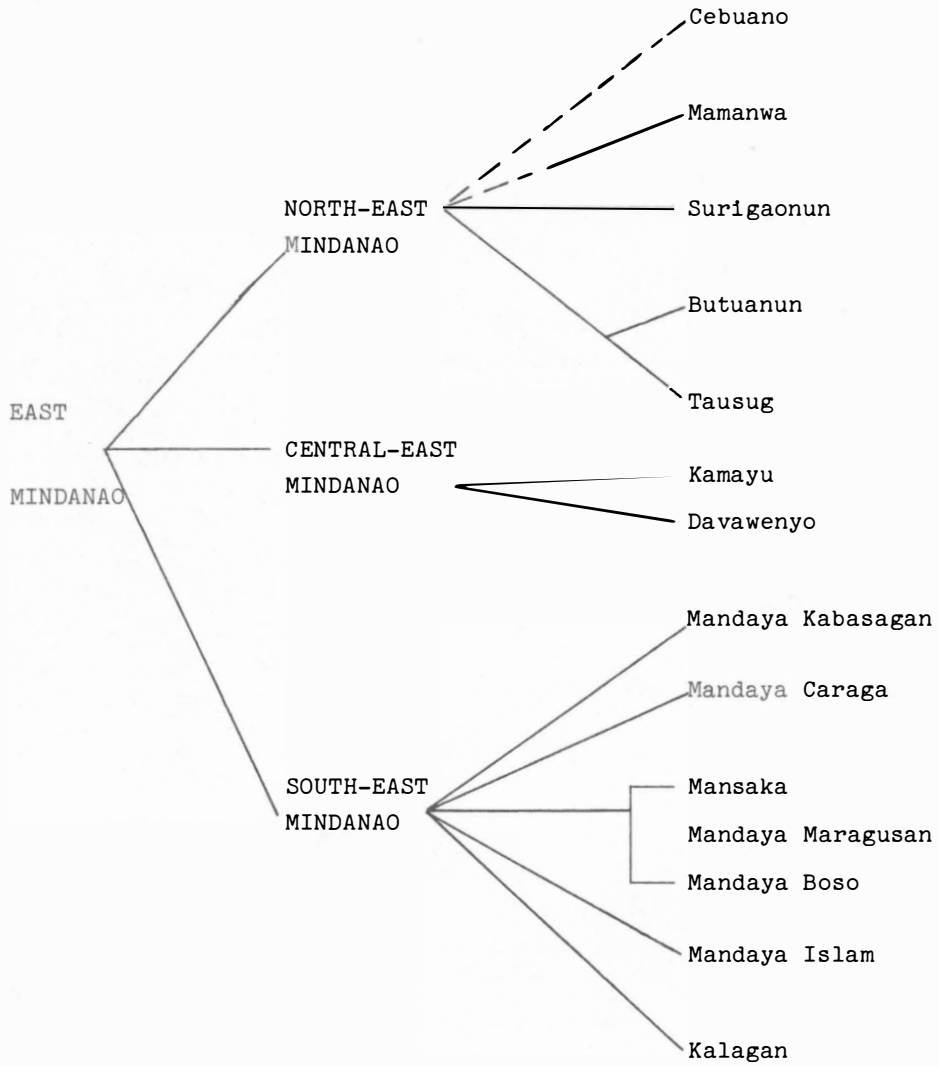


FIGURE 1.4.

Relationships Between East Mindanao Languages (Pallesen)



1.3. *GEOGRAPHY*

The South-East Mindanao languages are found in the Provinces of Cotabato and Davao. The Kalagan people live in the western part of this area. Most of them, according to Dawson (1958:47), live on the Sarangani Peninsula. The Kalagan-Tagakaolo data is from Mainit, South Cotabato. The Kalagan-Kaagan data is from Dawis, Digos, which is by the sea. The Mandayan-Islam data represents a language spoken on the east coast of the Davao Gulf at Piso, Banaybanay, in Davao Oriental.

Mansaka covers an extensive area in the middle of the SEM languages. Svelmoe and Svelmoe (1974:13) place the Mansakas

> "along the mountain streams emptying into the northeastern portion of the Davao Gulf, along the Masara and upper Hijo Rivers, and the relatively large mountain valley of Maragusan at the headwaters of the Agusan River. Some also live on the upper Sumlug, which is separated by a relatively high mountain pass of the Maragusan Valley."

The four Mandayan dialects are spoken to the north, east, and south of the Mansakas. The Mandayan-Maragusan data represents a dialect spoken in the Maragusan Valley, Davao Oriental, south of the Mansakas. The Mandayan-Kabasagan data represents a dialect spoken in Kabasaga, Boston area, northeast of the Mansakas. The Mandayan-Caraga data is from Sangab, Caraga, Davao Oriental, east of the Mansakas. And finally, the Mandayan-Boso data is from Boso, Mati, Davao Oriental, which is south of the Mansakas.

1.4. *SOURCE OF DATA*

The word lists, on which this paper is based, consist of 372 vocabulary items and are found in Reid (1971). Two of the word lists, Kalagan-Tagakaolo and Mansaka, are taken from this volume by Reid. The Kalagan-Tagakaolo list was prepared by Don Murray, and the Mansaka list was prepared by Gordon Svelmoe. The other six word lists, Kalagan-Kaagan, Mandayan-Islam, Mandayan-Maragusan, Mandayan-Kabasagan, Mandayan-Caraga, and Mandayan-Boso are from a preliminary dialect survey carried out by the Summer Institute of Linguistics in the Philippines.

1.5. *ABBREVIATIONS*

BUT	Butuanun	MSK	Mansaka
CEB	Cebuano	MWA	Mamanwa
DVD	Davawenyo-Digos	NEM	North-East Mindanao
DVM	Davawenyo-Monay	PBS	Proto-Bisayan
EM	East Mindanao	PCP	Proto-Central Philippines
ISM	Mandayan-Islam (Piso)	PEM	Proto-East Mindanao
KLK	Kalagan-Kaagan	PNEM	Proto-North East Mindanao
KLT	Kalagan-Tagakaolo	PPH	Proto-Philippines
KMY	Kamayu	PSEM	Proto-South-East Mindanao
MDB	Mandayan-Boso	SEM	South-East Mindanao
MDC	Mandayan-Caraga	SUR	Surigaonun
MDK	Mandayan-Kabasagan	TSG	Tausug
MDM	Mandayan-Maragusan		

2. THE PHONEMIC SYSTEMS IN PSEM

2.1. *THE PHONEMIC SYSTEMS OF THE SEM LANGUAGES*

There is no complete phonemic statement available for any of SEM languages except KLT and MSK. The wordlists for KLT and MSK were done by linguists who spoke the language of the people with whom they worked. They did a phonological analysis, and the wordlists are phonemic. The other six languages for which I have wordlists represent preliminary dialect survey lists in which no phonological analysis is available. I have done tentative phonological analysis of these languages where there was confusion (cf. sections 2.1.1. and 2.1.2.).

2.1.1. The Consonants

The consonants for each language are listed on figure 1. All eight languages have voiceless stops at the bilabial, alveolar, and velar points of articulation /p,t,k/. The phonetic realisation of the phoneme /p/ in KLT is a bilabial fricative [ɸ].

All eight languages have voiced stops at the bilabial, alveolar, and velar points of articulation /b,d,g/. The phoneme /d/ in KLT has an allophone [r] which occurs in free variation with [d] intervocalically.

All eight languages have voiced nasals at the bilabial, alveolar, and velar points of articulation /m n ŋ/.

All eight languages have a voiceless grooved fricative at the alveolar point of articulation /s/. The voiced alveopalatal grooved affricate [j] of MDK is a portmanteau of a /dy/ cluster.

FIGURE 2.1.

The Consonant Correspondence Sets of the SEM Languages

PSEM	KLT	KLK	ISM	MSK	MDM	MDK	MDC	MDB
*p	p	p	p	p	p	p	p	p
*t	t	t	t	t	t	t	t	t
*k	k	k	k	k	k	k	k	k
*b	b	b	b	b	b	b	b	b
*d	d,l	d,l	d,l	d,l	d,l	d,l	d,l	d,l
*g	g	g	g	g	g	g	g	g
*m	m	m	m	m	m	m	m	m
*n	n	n	n	n	n	n	n	n
*ŋ	ŋ	ŋ	ŋ	ŋ	ŋ	ŋ	ŋ	ŋ
*s	s	s	s	s	s	s	s	s
*l	l	l,ø	l,ø	l	l	l,ø	l,ø	l

PSEM	KLT	KLK	ISM	MSK	MDM	MDK	MDC	MDB
*w	w	w	w	w	w	w	w	w
*y	y	y	y	y	y	y	y	y
*?	?,ø	?,ø	?,ø	?	?,ø	?	?	?,ø

The voiced lateral phoneme /l/ is a very unstable segment in most of the SEM languages. The following is a description of the allophones of the phoneme /l/.

(a) In KLY, KLK, and MDK

$$/l/ \rightarrow [l]$$

(b) In MSK and MDM

$$/l/ \rightarrow \left\{ \begin{array}{l} [r] / V_1 \_\_ V_2 \\ [l] \text{ / elsewhere} \end{array} \right\}$$

where $V_1 \neq$ i and V_2 = any vowel

(c) In ISM

$$/l/ \rightarrow \left\{ \begin{array}{ll} [r] & [l] / V_1 \_\_ i \\ & [l] \text{ / elsewhere} \end{array} \right\}$$

where $V_1 \neq$ i

(d) In MDC

$$/l/ \rightarrow \left\{ \begin{array}{l} [lv] / V_1 \_\_ V_1 \\ \qquad\quad \_\_ \# \\ [l] \text{ / elsewhere} \end{array} \right\}$$

where $V_1 \neq$ i

(e) In MDB

$$/l/ \rightarrow \left\{ \begin{array}{l} [r] / V_1 \_\_ i \\ [lv] / V_1 \_\_ V_1 \\ \qquad\quad \_\_ \# \\ [l] \text{ / elsewhere} \end{array} \right\}$$

where $V_1 \neq$ i

In MSK the allophone [r] was later established as a phoneme due to the introduction of certain loan words. But for this paper we have treated it as an allophone.

All eight languages have a palatal semivowel /y/. In KLT this phoneme has as allophone a voiceless alveopalatal grooved fricative [š] when it occurs after /t/. It also has a voiced alveopalatal grooved

fricative [ž] when it occurs after /d/. In all other positions it is realised as a high front unrounded nonsyllabic vocoid [i]. All eight languages also have a labial semivowel /w/.

All eight languages have a glottal stop /ʔ/. Only KLT and MDK have a glottal fricative /h/. In KLT this glottal fricative occurs only in loan words or in mimic words (e.g. a bird is named after the call it makes).

2.1.2. The Vowels

The vowels of each language are listed on Figure 2.2.

FIGURE 2.2.

The Vowel Correspondence Sets of the SEM Languages

PSEM	KLT	KLK	ISM	MSK	MDM	MDK	MDC	MDB
*i	i	i	i	i	i	i	i	i
*a	a	a	a	a	a	a	a	a
*u	u	u	u	u	u	u	u	u
*ɨ	ɨ,i	ɨ,i	ɨ,u	ɨ	ɨ	ɨ,u	u	ɨ
*aʔi	e	e	ai	aʔi	aʔi	aʔi	aʔi	aʔi
*aʔu	o	au	au	aʔu	aʔu	aʔu	aʔu	aʔu

All eight languages have four vowels /i, a, u, ɨ/. The exact allophonic variations of all of these phonemes are uncertain, but their approximate positions are: high front /i/, low central /a/, mid-central /ɨ/, and high back /u/. In KLT there are two more vowels /e,o/ whose positions are: mid front /e/ and mid back /o/. In KLK this mid front /e/ is also found. I have tentatively analysed the vocoids [u] and [o] to be in free variation in ISM, MDM, MDK, MDC, and MDB. I have also analysed [i] and [ɪ] to be in free variation before the phoneme /t/ in MDK and MDB.

2.2. THE PHONEMIC SYSTEM OF PROTO-SOUTH-EASTERN-MINDANAO

The reflexes of PSEM phonemic system reveal different sound changes in the daughter languages. In the examples provided for each proto-phoneme, we have attempted to give an example of this proto-phoneme in each environment of change in the order of the environments listed. The numbers refer to the reconstruction list (section 5). If there has been no sound change then the examples of the proto-phoneme are arranged in an order that shows first, stem-initial position of the proto-phoneme; second, intervocalic position; third, stem-final position; and fourth, consonant cluster position. A statement is also given of any discrepancies that occur.

2.2.1. Proto-Consonants

2.2.1.1. *p

In MDK, MDC, MDB, MDM, MSK, ISM, KLK, and KLT

*p → p

240. *pisŋi *'cheek'*. MDK pisiŋi; MDC, MDB, MDM, MSK, ISM, KLK, KLT pisŋi.

193. *lupa? *'earth (ground)'*. MDK, MDC, MDB, MDM, MSK, ISM, KLK, KLT lupa?.

392. *tagaynɨp *'dream'*. MDK, MDB, MDM, MSK, ISM, KLK, KLT tagaynɨp; MDC mag-tagaynup.

112. *kagpa? *'short (person)'*. MDK, MDC, MDB, MDM, MSK, KLK ma-kagpa?; ISM kagpa?.

2.2.1.2. *t

In MDK, MDC, MDB, MDM, MSK, ISM, KLK, and KLT

*t → t

412. *tawag *'call'*. MDK, MDC, MDB, MDM, MSK, ISM, KLK, KLT ?utuk.

348. *?utuk *'brain'*. MDK, MDC, MDB, MDM, MSK, ISM, KLK, KLT ?utuk.

342. *?upat *'four'*. MDK, MDC, MDB, MDM, MSK, ISM, KLK, KLT ?upat.

321. *?itlug *'egg'*. MDK, MDC, MDB, MDM, MSK, ISM, KLK ?itlug.

Discrepancies: see footnote 1.

2.2.1.3. *k

In MDK, MDC, MDB, MDM, MSK, ISM, KLK, and KLT

*k → k

131. *kɨkɨ? *'chin'*. MDK kɨkɨ; MDC, MDM, MSK, ISM, KLK, KLT kɨkɨ?.

253. *?abaka *'abaca'*. MDK, MDB, MDM, MSK, ISM, KLK ?abaka.

348. *?utuk *'brain'*. MDK, MDC, MDB, MDM, MSK, ISM, KLK, KLT ?utuk.

65. *dakmɨl *'thick'*. MDK ma-dɨkmɨl; MDC, MDB, MDM, MSK, ISM, KLT ma-dakmɨl; KLK ma-dakmɨ.

2.2.1.4. *b

In MDK, MDC, MDB, MDM, MSK, ISM, KLK, and KLT

*b → b

191. *mama? *'betel chew'*. MDK yaga-mama?; MDC mama?-un; MDB mama?-in; MDM mama-in; MSK, KLT mama?; ISM ka-mama?; KLK mama.

375. *subu *'to boil'*. MDK, MDC, MSK, ISM, KLK, KLT subu; MDB, MDM yu-subu.

396. *tagub *'sheath for bolo'*. MDK, MDC, MDB, ISM, KLK tagub.

272. *?ambuŋ *'afternoon'*. MDK, MDC, MDB, MDM, MSK, ISM, KLK, KLT ?ambuŋ.

2.2.1.5. *d

(a) In MDC, MDB, MDM, MSK, ISM, KLK, and KLT

$$*d \rightarrow \begin{cases} l \;/\; \_\_\_i \\ d \;/\; \text{elsewhere} \end{cases}$$

259. *?adlaw *'day'*. MDK ?adlaw; MDC, MDB, MDM, MSK, ISM, KLK, KLT ?allaw.

260. *?adlik *'to fear'*. MDK yam-adlik; MDC m-aluk; MDB, ISM yam-allik; MDM, MSK ?allik; KLK k-allik; KLT m-allik.

(b) In MDK

*d → d

89. *dugu? *'blood'*. MDK, MDC, MDB, MDM, MSK, ISM, KLK, KLT dugu?.

301. *?idu? *'dog'*. MDK, MDC, MDB, MDM, MSK, ISM, KLK, KLT ?idu?.

24. *bayad *'to buy, pay'*. MDK, MDC, MDB, MSK, KLT bayad; MDM ga-bayad; KLK bayad-i.

311. *?indig *'to stand'*. MDK ?indug; MDC mag-indug; MDB ga-indig; MDM ga-?indig; MSK, ISM, KLK, KLT ?indig.

2.2.1.6. *g

In MDK, MDC, MDB, MDM, MSK, ISM, KLK, and KLT

*g → g

108. *gusuk *'rib'*. MDK, MDC, MDB, MDM, MSK, ISM, KLK, KLT gusuk.

354. *sagiŋ *'banana'*. MDK, MDC, MDB, MDM, MSK, ISM, KLK, KLT sagiŋ.

412. *tawag *'call'*. MDK, MDC, MDB, MDM, MSK, ISM, KLK, KLT tawag.

30. *bigsay *'canoe paddle'*. MDK, MSK, KLK bigsay; MDC, ISM, KLT bugsay; MDB, MDM ga-bigsay.

Discrepancy:248. *tukgaw > tukaw in KLT.

2.2.1.7. *m

In MDK, MDC, MDB, MDM, MSK, ISM, KLK, and KLT

*m → m

200. *manuk *'chicken'*. MDK, MDC, MDB, MDM, MSK, ISM, KLK, KLT manuk.

180. *lima *'five'*. MDK, MDC, MDB, MDM, MSK, ISM, KLK, KLT lima.

374. *siyam *'nine'*. MDK, MDC, MDB, MDM, MSK, ISM, KLK, KLT siyam.

272. *?ambuŋ *'afternoon'*. MDK, MDC, MDB, MDM, MSK. ISM, KLK, KLT ?ambuŋ.

2.2.1.8. *n

In MDK, MDC, MDB, MDM, MSK, ISM, KLK, and KLT

*n → n

212. *niwaŋ *'skinny'*. MDK, MDC, MDB, MDM, MSK, ISM, KLK, KLT ma-niwaŋ.

182. *linug *'earthquake'*. MDK, MDC, MDB, MDM, MSK, ISM, KLK, KLT linug.

369. *silat

395. *tagnik *'mosquito'*. MDK, MDB, MDM, MSK, ISM, KLT tagnik; KLK tagnak.

Discrepancies:362. *sanduk > saduk KLK and KLT.

2.2.1.9. *ŋ

In MDK, MDC, MDB, MDM, MSK, ISM, KLK, and KLT

*ŋ → ŋ

214. *ŋaŋil *'dull (as a knife)'*. MDK ma-ŋanul; MDB, MDM, MSK, ISM ma-ŋaŋil; MDC ma-ŋaŋul.

160. *laŋaw *'fly'*. MDK, MDC, MDB, MDM, MSK, ISM, KLK, KLT laŋaw.

329. *?uliŋ *'charcoal'*. MDK, MDC, MDB, MDM, MSK, ISM, KLK, KLT ?uliŋ.

240. *pisŋi *'cheek'*. MDK pisiŋi; MDC, MDB, MDM, MSK, ISM, KLK, KLT pisŋi.

2.2.1.10. *s

In MDK, MDC, MDB, MDM, MSK, ISM, KLK, and KLT

*s → s

354. *sagiŋ *'banana'*. MDK, MDC, MDB, MDM, MSK, ISM, KLK, KLT sagiŋ.

384. *susu *'breast'*. MDK, MDC, MDB, MDM, MSK, ISM, KLK, KLT susu.

217. *palis *'bark, skin'*. MDK, MDC, MDB, MDM, MSK, ISM, KLK, KLT palis.

30. *bɨgsay *'canoe paddle'*. MDK, MSK, KLK bɨgsay; MDC, ISM, KLT bugsay; MDB, MDM ga-bɨgsay.

2.2.1.11. *l

(a) In MDK[2] and ISM

$$*l \rightarrow \begin{cases} \phi & / \quad V_1 \_\_\_\_ V_1^3 \\ l & / \quad \text{elsewhere} \end{cases}$$

where $V_1 \neq i$.

331. *?ulu *'head'*. MDK, ISM, KLK ?uu; MDC, MDB, MDM, MSK, KLT ?ulu.

Discrepancies: 16. *balutu > balutu in MDK.
216. *palapala > palapala in MDK.

(b) In MDC

$$*l \rightarrow \begin{cases} \phi & / \quad al \_\_\_\_ u \\ l & / \quad \text{elsewhere} \end{cases}$$

359. *salɨpan *'west'*. MDC salupan; MDB, MDM, MSK, ISM, KLK salɨpan.

Discrepancy: 47. bulak > buwak

(c) In KLK

$$*l \rightarrow \begin{cases} \phi & / \quad V_1 \_\_\_ V_1, al \_\_\_\_ u, ɨ \_\_\_\_ \# \\ l & / \quad \text{elsewhere} \end{cases}$$

315. *?intalun *'defecate'*. MDK ga-intaun; MDC mag-intalun; MDB ga-intalun; MDM, MSK ?intalun; ISM mag-intaun; KLK m-intaun; KLT m-intalun.

14. *ballu *'fragrant'*. MDK, MDB, MDM, MSK, ISM ma-ballu; MDC, KLK ma-balu.

293. *?ɨbɨl *'smoke'*. MDK, MDC, MDB, MDM, MSK, ISM, KLT ?ɨbɨl; KLK ?ɨbɨ.

Discrepancies: 47. *bulak > bulak
355. *sakil > saki
302. *?ikɨl > ?ikɨl
327. *?ulan > ?ulan

(d) In MDB, MDM, MSK, and KLT

$$*l \rightarrow l^{4}$$

169. *silatan *'east'*. MDK, MDC, MDB, MDM, MSK, ISM, KLK, KLT silatan.

35. *bɨŋɨl *'deaf'*. MDK, MDB, MDM, ISM, KLT bɨŋɨl; MDC buŋɨl; MSK baŋɨl; KLK bɨŋɨ.

259. *?adlaw *'day'*. MDK ?adlaw; MDC, MCB, MDM, MSK, ISM, KLK, KLT ?allaw.

2.2.1.12. *?

(a) In MDB

$$*? \rightarrow \begin{cases} \phi & / \quad a\_\_\_\_u, a\_\_\_\_a \\ ? & / \quad \text{elsewhere} \end{cases}$$

401. *ba?u *'turtle'*. MDC ba?u?u; MDB, MDM, ISM, KLK, KLT bau; MSK ba?u.

124. *ka?an *'eat'*. MDK ya-ka?an; MDC, MSK ka?an; MDB, MDM ya-kaan; ISM ma-kan; KLK k-um-an; KLT kan.

Discrepancies: 78. *da?un > da?un
20. *ba?u? > ga-ba?u?
118. *kaluwa?an > kaluwa?an

(b) In MDM

$$*? \rightarrow \begin{cases} \phi & / \quad u\_\_\_\_u, a\_\_\_\_i \\ ? & / \quad \text{elsewhere} \end{cases}$$

247. *pu?ud *'buttocks, thigh'*. MDK, MDC, MDB, MSK pu?ud; MDM, ISM, KLK, KLT puud.

410. *ta?i *'excrement'*. MDK, MDC, MDB, MSK ta?i; MDM, ISM, KLK, KLT tay.

(c) In ISM

$$*? \rightarrow \begin{cases} \phi & / \quad V\_\_\_\_V \\ ? & / \quad \text{elsewhere} \end{cases}$$

62. *dada?an *'old'*. MDC, MDM, MSK dada?an; MDB, ISM dadaan; KLK, KLT dadan.

(d) In KLK[5]

$$*? \rightarrow \begin{cases} \phi & / \quad N_1 a\_\_\_\_\#,\ V\_\_\_\_V, w(C)a\_\_\_\_\# \\ ? & / \quad \text{elsewhere} \end{cases}$$

where N_1 = m or n

269. *?ama? *'father'*. MDK, MDC, MDB, MDM, MSK, ISM ?ama?; KLK, KLT ?ama.

247. *pu?ud *'buttocks, thigh'*. MDK, MDC, MDB, MSK pu?ud; MDM, ISM, KLK, KLT puud.

66. *dakula? *'big'*. MDC, MDB, MSK, KLT dakula?; ISM dakua?; KLK dakuwa.

231. *pawda? *'sweet potato'*. MSK, ISM pawda?; KAK pawda.

(e) In KLT[6]

$$*? \rightarrow \begin{cases} \phi & / \quad \#?VNa\_\_\_\_\#,\ V\_\_\_\_V \\ ? & / \quad \text{elsewhere} \end{cases}$$

310. *?ina? *'mother'*. MDK, MDC, MDB, MSK, ISM ?ina?; KLK, KLT ?ina.

225. *pa?it *'bitter'*. MDK, MDM, ISM, KLK, KLT ma-pait; MDC, MDB, MSK ma-pa?it.

(f) In MDK[7], MSK, and MDC

$$*? \rightarrow ?$$

272. *?ambuŋ *'afternoon'*. MDK, MDC, MDB, MSM, MSK, ISM, KLK, KLT ?ambuŋ.

42. *bitu?un *'star'*. MDK, MDC, MDB, MSK bitu?un; MDM, ISM bituun; KLK, KLT bitun.

89. *dugu? *'blood'*. MDK, MDC, MDB, MDM, MSK, ISM, KLK, KLT dugu?.

2.2.1.13. *w

In MDK, MDC, MDB, MDM, MSK, ISM, KLK and KLT

$$*w \rightarrow w$$

436. *walu *'eight'*. MDK, ISM, KLK wau; MDC, MDB, MDM, MSK, KLT walu.

58. *buyaya *'crocodile'*. MDK, MDC, MDB, MDM, MSK, ISM, KLK, KLT buwaya.

353. *sabaw *'soup'*. MDK, MDC, MDB, MDM, MSK, ISM, KLK, KLT sabaw.

231. *pawda? *'sweet potato'*. MSK, ISM pawda?; KLK pawda.

2.2.1.14. *y

In MDK, MDC, MDB, MDM, MSK, ISM, KLK and KLT

*y → y

197. *luya *'ginger'*. MDK, MDC, MDB, MDM, MSK, ISM, KLK, KLT luya.

137. *kilay *'eyebrow'*. MDK, MDC, MDB, MDM, MSK, ISM, KLK, KLT kilay.

392. *tagaynɨp *'dream'*. MDK, MDB, MDM, MSK, ISM, KLK, KLT tagaynɨp; MDC mag-tagaynup.

2.2.2. Proto-Vowels

2.2.2.1. *a[8]

In MDK, MDC, MDB, MDM, ISM, KLK, KLT and MSK

*a → a

272. *?ambuŋ *'afternoon'*. MDK, MDC, MDB, MDM, MSK, ISM, KLK, KLT ?ambuŋ.

193. *lupa? *'earth (ground)'*. MDK, MDC, MDB, MDM, MSK, ISM, KLK, KLT lupa?.

252. *?abaga *'shoulder'*. MDK, MDC, MDB, MDM, MSK, ISM, KLK, KLT ?abaga.

Discrepancies: 33. *bɨlad > buɨd in ISM
113. *ka(l,y)amdag > kɨmdɨg in KLK
65. *dakmɨl > ma-dɨkmɨl in MDK
155. *lakbaŋ > lakbɨŋ in KLK

2.2.2.2. *ɨ

(a) In MDK

$$*ɨ \rightarrow \begin{cases} u & / \quad \_\_\_\_ *IV_1,V_1 \; *l\_\_\_\_, \quad \_\_\_\_ \; *l\_\_\_\_ \\ ɨ & / \quad \text{elsewhere} \end{cases}$$

where $V_1 \neq$ l

33. *bɨlad *'to dry'*. MDK ga-buwad; MDC bulad-a; MDB bɨlad-ɨn; MDM, MSK, KLT bɨlad; ISM buɨd; KLK bɨwad.

70. *dalɨm *'space under house'*. MDK daum; MDC dalum; MDB, MSK, KLT dalɨm; MDM ?ag-dalum: ISM, KLK daɨm.

414. *tɨlɨn *'swallow'*. MDK ya-tu?un; MDC ya-tɨlun; MDB, MDM yɨ-tɨlɨn; MSK, KLT tɨlɨn; ISM ga-tɨɨn.

Discrepancies: 319. *ʔisɨp > ʔisuʔ
214. *ŋaŋɨl > ma-ŋanul
311. *ʔindɨg > ʔindug
134. *kɨsɨg > ma-kusug
295. *ʔikɨt > ʔukut

(b) In ISM

$$*ɨ \rightarrow \begin{cases} ɨ \ / & \text{ultimate syllables}^{9}\text{, penultimate syllables when present in ultimate syllable} \\ u \ / & \text{elsewhere} \end{cases}$$

320. *ʔɪtɨm *'black'*. MDK, MDB, MDM, ISM, KLK, KLT ma-ɨtɨm; MSK ma-ʔɪtɨm.

80. *dɨbdɨb *'belly'*. MDK, MDB, MDM, MSK, ISM dɨbdɨb.

For discrepancies see footnote 9.

(c) In KLK and KLT

$$*ɨ \rightarrow \begin{cases} i \ / & \_\_\_y \\ ɨ \ / & \text{elsewhere} \end{cases}$$

300. *ʔɨyaʔ *'live (dwell)'*, MDK yaga-ʔɨyaʔ; MDC ʔuyag; MDB yaga-ɨyaʔ; MDM yaga-uyaʔ; MSK ʔɨyaʔ; ISM mag-ɨyaʔ; KLK, KLT m-iyaʔ.

Discrepancies: 30. *bɨgsay > bugsay in KLT
277. *ʔanɨg > m-anug in KLK
152. *lagɨs > lagus in KLK
106. *gɨya > *gɨya in KLK
395. *tagnɨk > *tagnak in KLK
366. *sɨpsɨp > *supsup in KLK

(d) in MDC

$$*ɨ \rightarrow u$$ [10]

(e) in MDB, MDM, and MSK

$$*ɨ \rightarrow ɨ$$

234. *pɨsaʔ *'bone'*. MDK, MDB, MSM, MSK, KLK pɨsaʔ; MDC, ISM pusaʔ; KLT pɪsaʔ.

312. *ʔɪnɨm *'to drink'*. MDK, MDM, MSK, ISM, KLK, KLT ʔinɨm; MDC m-ɪnum; MDB ʔim-inɨm.

131. *kɨkiʔ *'chin'*. MDK kɨkɨ; MDC kukuʔ; MDB, MDM, MSK, ISM, KLK, KLT kɨkɨʔ.

Discrepancies: 35. *bɨŋɨl > baŋɨl in MSK
300. *ʔɨyaʔ > ʔuyaʔ in MDM
242. *plyɨt > plyat in MDC
399. *talɨm > talum in MSK
134. *kɨsɨg > kasɨg-an in MDM

2.2.2.3. *i

In MDK, MDC, MDB, MDM, MSK, ISM, KLK, and KLT

*ɪ → ɨ

182. *ɪɪnug *'earthquake'*. MDK, MDC, MDB, MDM, MSK, ISM, KLK, KLT ɪɪnug.

126. *kasɪɪl *'eel'*. MDK, MDC, MDB, MDM, MSK, ISM, KLK, KLT kasɪɪl.

418. *tɪnaʔɪ *'intestines'*. MDK, MSK tɪnaʔɪ; MDB, MDM, ISM, KLK, KLT tɪnay.

The following sets show an added ɪ.

162. *laŋgam > laŋgaɪm in MDK
240. *pɪsŋɪ > pɪsɪŋɪ in MDK
208. *nana > nɪana in MDC and MDB (?)

2.2.2.4. *u

In MDK, MDC, MDB, MDM, MSK, ISM, KLK, and KLT

*u → u

422. *tubag *'answer'*. MDK, MDB, MDM, MSK, IMS, KLK, KLT tubag; MDC ma-tubag.

272. *ʔambuŋ *'afternoon'*. MDK, MDC, MDB, MDM, MSK, ISM, KLK, KLT ʔambuŋ.

46. *bukubuku *'ankle'*. MDK, MDC, MDB, MDM, MSK, KLK, KLT bukubuku.

Discrepancies: 352. *ʔuyup > ʔɨyɨp in KLT
243. *pugsa > pɨgsa in MDM
381. *suksuk > sɨksɨk in ISM

3. THE RELATIONSHIP OF KAMAYO AND DAVAWENYO TO THE SEM LANGUAGES

Pallesen and I have tentatively assigned KMY and the Davawenyo Languages (DVM and DVD) to Central-East Mindanao (CEM), a subdivision of PEM which is coordinate with NEM and SEM. This assignment implies a rejection of Zorc's grouping and of the relationship indicated by the functor analysis.

Zorc assigns KMY to the SEM (his Mansakan) subgroup of languages. This is clearly indicated, if one is convinced about the greater validity of genetic relationsips indicated by functor analysis, as shown in Figure 3.1.

FIGURE 3.1.

Lexical and Functor Comparisons - Some KMY Scores

		SUR	BUT	MSK	MDK	DVM	MWA	TSG
KMY	Lexical(372-mng.)	68	63	59	69	71	59	52
	Lexical(100-mng.)	80	78	76	81	78	66	62
	Functor (Zorc)	56	66	77				

However, the lexical scores in Figure 3.1. do not indicate any clear grouping. Both the 100-meaning and 372-meaning lists indicate a equidistant from SUR (its nearest neighbour to the north), MDK (its nearest neighbour to the south, in close interaction), and DVM, spoken a hundred miles to the south. KMY also scores high with BUT, with which it is not currently in contact.

The phonological distinctions that KMY shares with the NEM languages is also good evidence for separating it from the SEM languages. These are displayed in Figure 3.2.

FIGURE 3.2.

Distinctive Phonological Developments of KMY (Pallesen)

Phonological Development	Lg. with which KMY shares development	SEM Development
PEM *h>h	all NEM and DVD	PEM *h>?
PEM *r>r	MWA and DVM	PEM *r>l
PEM *?C>?C	all NEM	PEM *?C>C
PEM *Ch>Ch		PEM *Ch>C
PEM *Cl>Cl		PEM *Cl>ll∿l

Further evidence in support of the distinction between the CEM and SEM subdivisions of PEM is provided by the lexical data. Both NEM and SEM have a number of innovations or retentions not shared by the other,

and CEM tends to share the patterns of NEM rather than those of SEM. Pallesen has shown in Chapter 6 of his dissertation that body part terminology is a moderately stable set, though it is not immune to borrowing. The data for the body terms elicited by the 372-meaning list are displayed in Figure 2.3.

FIGRUE 2.3.

Number of Terms Shared by KMY and DVD[11] for 45 Body Parts (Pallesen)

	Of 16 NEM terms	Of 15 SEM Terms	Of 37 PEM Terms
KMY	12	4	28
DVD	5	2	29

One further line of evidence for assuming the distinctiveness of the CEM subdivision is the pattern of clustering indicated by the probability analysis displayed in Figure 4.5. (section 4.3.). This shows a distinctive clustering of KMY and DVM, with secondary relationship to the languages of SEM.

4. RELATIONSHIPS WITHIN THE PSEM GROUP

In this papter we have posited that MDK, MDC, MDB, MDM, MSK, ISM, KLK, and KLT form a separate linguistic group of the Philippine languages termed PSEM. I will now show the relationships of these languages to each other. I have used three lines of evidence: (1) lexicostatistical analysis; (2) shared phonological features; (3) analysis in terms of probabilities.

4.1. *LEXICOSTATISTICAL ANALYSIS*

For the lexicostatistical comparisons I have used the Reid 372-meaning list (Reid 1971). Figure 4.1. shows the cognate percentages of the daughter languages of PSEM. The arrangement of these languages in Figure 4.1. follows a method of subgrouping described by Kenneth Smith (1974).

FIGURE 4.1.

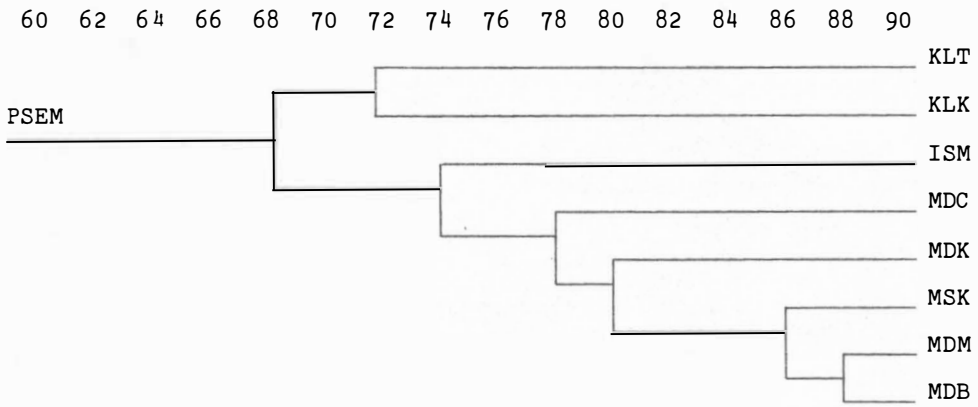
Structure of Language Relationships in SEM Using Smith (1974)

MDC						
81	MDB					
74	87	MDM				
73	82	86	MSK			
74	76	79	79	MDC		
71	76	76	76	74	ISM	
59	63	65	65	61	69	KLK
56	61	63	62	60	63	72 KLT

This triangular display in Figure 4.1. can be translated into a tree diagram by following this method also described by Smith (1974). This method was used to prepare the language tree of Figure 4.2.

FIGURE 4.2.

Language Tree Derived From Figure 4.1.



This tree diagram shows that the SEM group has at least one major division. KLT and KLK on the western side of the Davao Gulf versus ISM, MSK, MDM, MDB, MDC, and MDK on the eastern side. However, the ISM/KLT score of 69 between languages spoken on opposite sides of the Gulf of Davao, which is a considerable communication barrier, needs

further investigation. It seems likely that the genetic relationship between ISM and KLT is closer than the tree diagram indicates.

On the eastern side several divisions can be seen. MDB, MDM, and MSK form a subgroup versus MDK versus MDC versus ISM.

4.2. *PHONOLOGICAL FEATURES*

A comparative study of the scope of PSEM has revealed a number of shared innovations. It is through a study of these shared innovations that we plan to show another line of evidence of the historical genealogy of the languages under study.

We are not concerned with whether these shared innovations are innovations which have occurred in any other languages outside of our group such as exclusively shared innovations (ESI's). But we are concerned that they are innovations relative to a particular subgroup and that they were not borrowed from a nearby speech community. An example of this is the complete loss if intervocalic glottal stop which is an innovation shared by all western SEM languages. This is an innovation which has not occurred in any other EM languages or a feature of any surrounding speech communities. However it is a feature among some Philippine languages.

Figure 4.3. gives a list of the innovations in PSEM. From the chart we can also find evidence for the subgrouping posited in section 4.4.

FIGURE 4.3.

Innovations in PSEM

	KLT	KLK	ISM	MSK	MDM	MDB	MDC	MDK
1. *ʔ>ø/V__V	X	X	X					
2. *ɨ>i/__y	X	X						
3. *aʔi>e	X	X						
4. *aʔu>o	X							
5. *ɨ>u/ultimate			X					
6. *ɨ>u/_lV, Vl,_l_								X
7. *ɨ>u							X	
8. *ʔ>ø/a_u,a_a						X		
9. *ʔ>ø/u_u,a_i					X			
10.*ʔ>ø/Na_#		X						

	KLT	KLK	ISM	MSK	MDM	MDB	MDC	MDK
11. *?>ø/w(C)a_#		X						
12. *?>ø/#?VNa_#	X							
13. *ı>ø/i_		X						
14. *ı>ø/a_ıu		X					X	
15. *ı>ø/V_V		X	X					X
16. *d>ı/ _ı	X	X	X	X	X	X	X	

Rule 1 shows a split of the SEM languages into two main groups: KLT, KLK, and ISM in the west versus MSK, MDM, MDB, MDC, and MDK in the east. The lexicostatistical counts indicates that ISM is more closely related to the eastern rather than the western group.

Rules 2 and 3 divides the ancestors of the west into two groups: KLT and KLK versus ISM. This division accords well with the geographical facts of the western SEM languages and further verifies the subgrouping of section 4.4.

In accordance with our theory of subgrouping we would like to show the division of the eastern SEM languages into three parts: MSK, MDM, and MDB versus MDC versus MDK. However, we have no innovations which verify this. Rules 6, 7, 8, and 9 do show a distinctiveness in each of these languages.

4.3. *ANALYSIS IN TERMS OF PROBABILITIES*

Chreitien (1962) classified twenty-one Philippine languages on the basis of shared vocabulary, using a simple statistical technique by which the probable score was calculated for each pair of languages. The difference between this and the actual score was obtained and converted to a percentage of increase over probable scores. This figure was designated as K, a coefficient of similarity.

Originally used with 1,904 morphemes from a wide sampling of Philippine languages, the method is here applied to the closely related SEM languages, along with KMY and DVM, using the 372-meaning list. Since the probable number of identities for any pair not directly comparable with those of Chretien's study.

Figure 4.4. opposite presents the values of K.

FIGURE 4.4.

Values of K

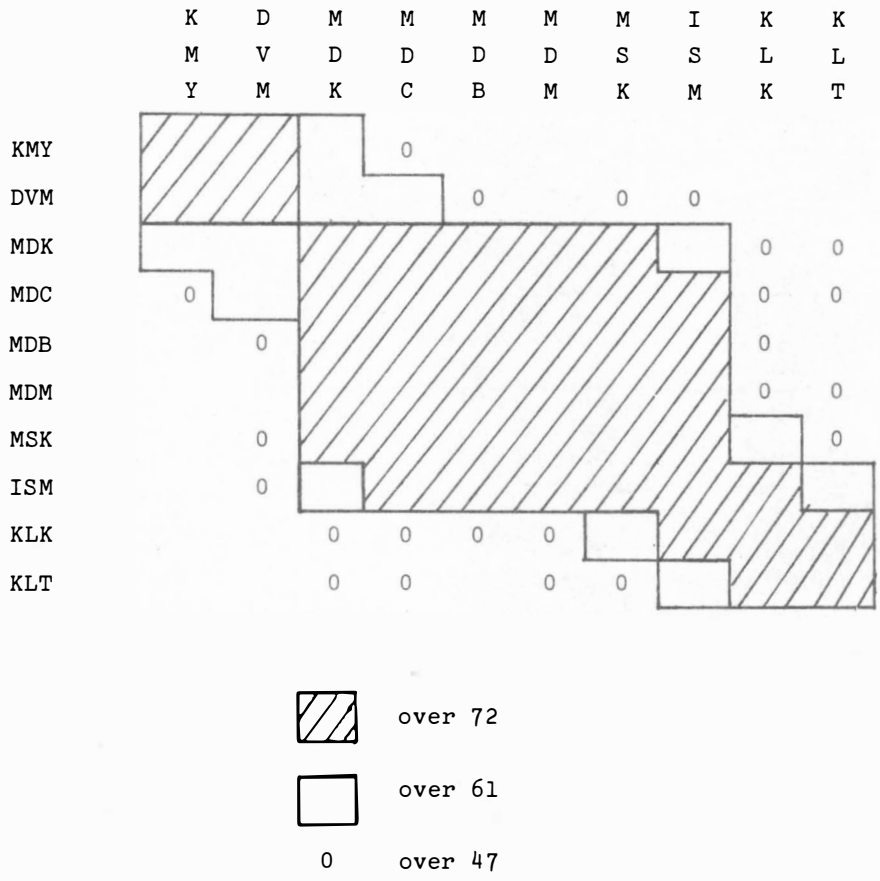
KMY	DVM	MDK	MDC	MDB	MDM	MSK	ISM	KLK	KLT
72									
69	68								
54	62	80							
43	53	79	88						
36	47	75	84	96					
41	54	77	86	87	95				
45	58	71	75	76	75	82			
35	40	51	55	58	57	64	72		
36	41	49	55	47	53	60	63	97	

Figure 4.5 displays the significant primary and secondary relationships indicated by the K values of Figure 4.4. The display is made symmetrical about the diagonal. Cut-off points for the differently shaded ranges of values were selected for maximum effect, but they are consistent with gaps in value densities.

Figure 4.5. does show the relative distinctness of the KMY-DVM cluster as it forms only a secondary relationship to the languages of SEM. Here again a break between the east and west SEM languages can be seen. What is significant here is the linking position of ISM.

FIGURE 4.5.

Chretien Analysis For South-East Mindanao



4.4. *SUMMARY AND CONCLUSIONS*

The evidence from the lexicostatistical comparisons, shared phonological features, and the analysis in terms of probabilities leads to this tentative subgrouping hypothesis.

The obvious problem is assigning ISM to either the east or west SEM languages. Lexicostatistics supports placing ISM with the eastern group. Shared pnonological innovations supports placing ISM with the western group. The Chretien method highlights the linking position of ISM.

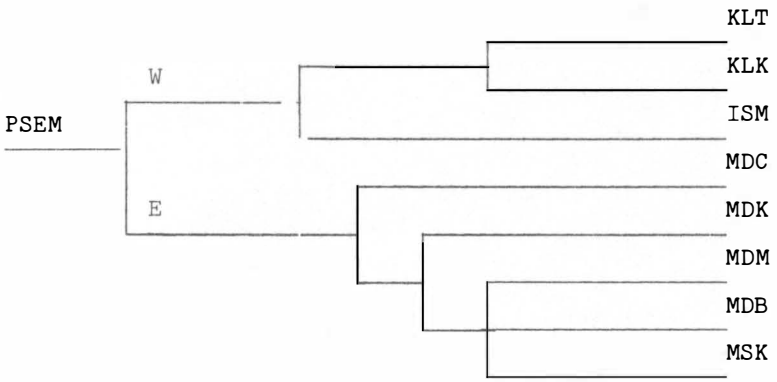
Pallesen shows that PSEM is an early phase of the southward flow of members of the PEM group from the Central Visayas (the island complex between Mindanao and Luzon). The remotest representatives of the SEM languages is KLK and KLT. They appear to have reached their present

general location, the west coast of the Gulf of Davao, quite early. We posit that ISM, part of the same early movement with KLK and KLT, emained on the east coast of the Gulf, to be modified linguistically by a later movement represented by MSK, MDB, and MDM.

The language tree of 4.6. shows the tentative conclusions of the relationships within the SEM languages. In the western subgroup, a closer relation exists between KLK and KLT than between either of these and ISM. In the eastern subgroup, a closer relationship exists between MSK, MDB, and MDM than between any of these with either MDK or MDC. However, there is a closer relationship between MDK and MSK, MDB, and MDM than between MDC and these languages.

FIGURE 4.6.

Relationships Within the SEM Group



5. RECONSTRUCTION AND COGNATE SETS

The following is an array of PSEM[12] reconstructions and cognate sets. Citations are given in the language order Mandayan-Kabasagan (MDK), Mandayan-Caraga (MDC), Mandayan-Boso (MDB), Mandayan-Maragusan (MDM), Mansaka (MSK), Mandayan-Islam (ISM), Kalagan-Kaagan (KLK), Kalagan-Tagakaolo (KLT), with the following exception: where it is convenient to group two or more languages because of a distinctively shared meaning, at that point the order indicated us suspended with regard to all but the first item of the group.

If any part of a reconstruction is indeterminate, then it is enclosed by parenthesis. For example *ꞁa(ʔ)iŋ *'coconut'* (set 166) means that the presence of a glottal stop for this word cannot be clearly determined. When the item in parenthesis consists of two or more phonemes separated by commas, it signifies that the evidence is not clear as to

which phoneme is the parent sound. This is illustrated by *(g,l)abun *'cloud'* (set 95), which means that there are forms gabun and labun, but whether the parent form contains *g or *l is indeterminate. A hyphen is used to separate morpheme boundaries. Hence, ga-galis indicates that the root galis has a prefix ga-.

The material is alphabetised according to the reconstructed form. The conventional alphabetisation is followed except that ɨ[ə] follows l, ŋ follows n, and ? follows p. Where multiple segments occur in parenthesis alphabetisation is based on the first segment shown.

6. CONCLUSION

In the introduction, it was stated that the purpose of this paper was "to test the assumption of the relatedness of the South-East Mindanao (SEM) languages by reconstructing the phonology of their parent, Proto-South-East Mindanao (PSEM) and to show their internal relationships." The following phonological system has been reconstructed.

*p	*t	*k	*?	*i	*u
*b	*d	*g		*ɨ	
*m	*n	*ŋ		*a	
	*s				
	*l				
*w	*y				

This phonological system is based on a list of 439 reconstructed vocabulary items.

In using the comparative method, it is necessary to work at the phonemic, not the phonetic, level (see Lehman 1962). As mentioned in the introduction, the wordlists for ISM, KLK, MDM, MDK, MDC, and MDB were not phonemic. The lack of this constitutes a weakness, although not as great a weakness as might at first appear. In two of the eight languages (KLT and MSK) the data is phonemic throughout. The phonology of the other languages is very similar to these two languages, so wherever I suspected phonemic inadequacy in these six lists, I reinterpreted them on the basis of the MSK and KLT forms; but these reinterpretations should only be considered tentative. For the most part this data is phonologically sound, although no claim of inerrancy can be made for it.

The evidence from lexicostatistical comparisons, shared phonological features, and an analysis in terms of probabilities led to a tentative hypothesis of the internal relationships among these languages. The

remotest representatives of the SEM languages is KLK and KLT. They appear to have reached their present general location, the west coast of the Gulf of Davao, quite early. ISM, part of that same early movement remained on the east coast of the Gulf, to be modified linguistically by a later movement represented by MSK, MDB, and MDM. I have grouped ISM, KLK, and KLT, the western languages, into a subgroup coordinate with the eastern languages of MSK, MDB, MDM, MDC, and MDK. In the western subgroup, a closer relationship exists between KLK and KLT than between either of these and ISM. In the eastern subgroup, a closer relationship exists between MSK, MDB, and MDM than between any of these with either MDK or MDC. However, there is a closer relationship between MDK and MSK, MDB, and MDM than between MDC and these languages.

PSEM

1. *baba? *'mouth'*. MDK, MDC, MDB, MDM, MSK, ISM baba?.
2. *babaw *'summit'*. MDK, MDB, MDM babaw; MDC yaka-babaw.
3. *babiŋ *'lice (head)'*. KLK, KLT babiŋ.
4. *babuy *'pig'*. MDK, MDC, MDB, MDM, MSK, KLK babuy.
5. *baga? *'lungs'*. MDK, MDC, MDB, MDM, MSK, ISM, KLK, KLT baga?.
6. *bagu *'new'*. MDK, MDB, MDM, MSK, ISM, KLK, KLT bagu.
7. *baka? *'mouth'*. KLK, KLT baka?.
8. *baklig *'old (person, male)'*. KLK, KLT baklig.
9. *balaŋaw *'rainbow'*. MDK baŋaw; MDC, MDB, MDM, MSK balaŋaw; KLK baŋaw-an; KLT balaŋaw-an.
10. *balaŋay *'canoe'*. MDB, MDM, MSK, KLT balaŋay; ISM, KLK baŋay.
11. *balay *'house'*. MDK, ISM, KLK baay; MDC, MDB, MDM, MSK KLT balay.
12. *baligya? *'sell'*. MDK, MDC, MSK, ISM baligya?; MDB ga-baligya?; MDM yam-aligya?.
13. *balliŋ *'to play'*. MDK, MDB, MDM gapa-balliŋ; MSK balliŋ; ISM ma-balliŋ.
14. *ballu *'fragrant'*. MDK, MDB, MDM, MSK, ISM ma-ballu; MDC, KLK ma-balu.
15. *balu *'widow'*. MDC, MDB, MDM, MSK, KLT balu; ISM, KLK bau.
16. *balutu *'canoe'*. MDK, MDC balutu.
17. *bana *'husband'*. MDK, MDC, MDB, MDM, MSK, ISM bana.
18. *ba?as *'dry (not wet)'*. MDK, MDC, MSK ba?as; MDB yama-baas; MDM ma-baas.

19. *ba?u *'turtle'*. MSC ba?u?u, MDB, MDM, ISM, KLK, KLT bau; MSK ba?u.

20. *ba?u? *'to smell'*. MDK ma-ba?u?; MDC ya-ba?u?: MDB, MDM ga-ba?u?; MSK ba?u?; ISM bau?; KLK mati-bau; KLT bo?.

21. *basa? *'wet'*. MDK, MDC, MSK, ISM, KLK basa?; MDB, MDM, KLT ma-basa?.

22. *baskɨg *'hard (substance)'*. MDK ma-baskɨg; MDC ma-bagsug; MDB, MDM, MSK, KLT ma-bagsɨg; ISM, KLK baskɨg; cf PPH *baskeG → baskɨg → baksɨg → bagsɨg

23. *batu *'stone'*. MDK, MDC, MDB, MDM, MSK, ISM, KLK, KLT batu.

24. *bayad *'buy, to pay'*. MDK, MDC, MDB, MSK, KLT bayad; MDM ga-bayad; ISM ma-bayad; KLK bayad-i.

25. *baybay *'shore'*. MDB, MDM, ISM baybay; MSK baybay-ɨn.

26. *bayu *'to pound rice'*. MDK yaga-bayu; KLT bayu.

27. *bayu? *'forehead'*. KLK, KLT bayu?.

28. *bɨgas *'rice (husked)'*. MDK, MDB, MDM, MSK, ISM, KLK, KLT bɨgas; MDC bugas.

29. *bɨgat *'heavy'*. MDK, MDB, MDM, MSK, KLK, KLT ma-bɨgat; MDC, ISM ma-bugat.

30. *bɨgsay *'canoe paddle'*. MDK, MSK, KLK bɨgsay; MDC, ISM, KLT bugsay; MDB, MDM ga-bɨgsay.

31. *bɨkɨ? *'not'*. MDK, MDB, MDM, MSK, KLK, KLT bɨkɨ?; MDC, ISM buku?.

32. *bɨktɨn *'hand (and arm)'*. MDK, MDB, MDM, MSK, ISM, KLK, KLT bɨktɨn; MDC buktun.

33. *bɨlad *'to dry'*. MDK ga-buwad; MDC bulad-a; MDB bɨlad-ɨn; MDM, MSK, KLT bɨlad; ISM buɨd; KLK bɨwad.

34. *bɨla? *'rattan'*. MDK buwa?; MDC, MDB, MDM, MSK bɨra?; KLK bɨa?.

35. *bɨŋɨl *'deaf'*. MDK, MDB, MDM, ISM, KLT bɨŋɨl; MDC buŋul; KLK bɨŋɨ.

36. *bɨtay *'mountain'*. MDK, MDB, MDM, MSK bɨtay; MDC, ISM butay.

37. *bɨtɨŋ *'coconut'*. MDK, MDB, MDM, MSK, ISM, KLK, KLT bɨtɨŋ; MDC butuŋ.

38. *bilaŋ *'to count'*. MDB, MDM ga-bilaŋ; MSK, KLK, KLT bilaŋ.

39. *bili *'buy'*. MDB ga-bili; MDM, MSK, ISM bili; KLK magpa-bili.

40. *binaniŋ *'yellow'*. MDB, MDM, MSK, ISM binaniŋ.

41. *biti?is *'leg (and foreleg)'*. MDC, MSK biti?is; ISM bitiis; KLK bitis.

42. *bitu?un *'star'*. MDK, MDC, MDB, MSK bitu?un; MDM, ISM bituun; KLK, KLT bitun.

43. *biyag *'full (satisfied; not hungry)'*. MDC, MSK, ISM, KLK biyag; MDB yama-biyag; MDM ya-biyag; KLT nya-biyag.

44. *bubay *'woman (female)'*. MDC, MDB, MDM, MSK, ISM, KLK, KLT bubay.

45. *bukid *'mountain'*. MDB, MDM bukid.

46. *bukubuku *'ankle'*. MDK, MDC, MDB, MDM, MSK, KLK, KLT bukubuku.

47. *bulak *'flower'*. MDK, MDC buwak; MDB, MDM, MSK, ISM, KLK, KLT bulak.

48. *bulan *'moon'*. MDK, KLK buwan; MDC, MDB, MDM, MSK, KLT bulan; ISM buan.

49. *buluŋ *'medicine'*. MDC buluŋ; MDB, MDM bu-buluŋ; MSK, KLT ba-buluŋ; ISM bu-buuŋ; KLK bu-buŋ.

50. *buntit *'belly'*. KLK, KLT buntit.

51. *buntud *'mountain top'*. KLK, KLT buntud.

52. *buŋa *'fruit'*. MDK, MDC, MDB, MDM, MSK, ISM, KLK, KLT buŋa.

53. *bu?uk *'hair'*. MDK buhuk; MDC bu?uk.

54. *buta *'blind'*. MDK, MDC, MDB, MDM, MSK, ISM, KLK buta.

55. *butbut *'anus'*. MDB, MDM, MSK butbut.

56. *butyaw *'scar'*. MDC, MDB, MDM, MSK, ISM butyaw.

57. *buwaŋin *'sand'*. MDK, MDC, MDB, MDM, MSK buwaŋin.

58. *buwaya *'crocodile'*. MDK, MDC, MDB, MDM. MSK, ISM, KLK, KLT buwaya.

59. *buyag *'old (person, female)'*. MSK, KLT buyag.

60. *buyu? *'betel leaf'*. MDK, MDC, MDB, MDM, MSK, ISM, KLK buyu?.

61. *da *'now, already'*. MDK, MDC, MDB, MDM, MSK, ISM, KLK, KLT da.

62. *dada?an *'old'*. MDC, MDM, MSK dada?an; MDB, ISM dadaan; KLT, KLT dadan.

63. *dagat *'sea'*. MDK, MDC, MDB, MDM, MSK, ISM, KLK, KLT dagat.

64. *dagɨm *'needle'*. MDK, MDB, MDM, MSK, ISM, KLK, KLT dagɨm; MDC dagum.

65. *dakmɨl *'thick'*. MDK ma-dɨkmɨl; MDC, MDB, MDM, MSK, ISM, KLK ma-dakmɨl; KLK ma-damɨ.

66. *dakula? *'big'*. MDC, MDB, MSK, KLT dakula?; ISM dakua?; KLK dakuwa.

67. *dalagan *'to run'*. MDK ya-daagan; MDC, MSK, KLT dalagan; MDB ya-dalagan; MDM yaga-dalagan; ISM, KLK daagan.

68. *dalan *'trail'*. MDK, ISM, KLK daan; MDC, MDB, MDM, MSK, KLT dalan.

69. *da(l,y)aw *'to cry (weep)'*. MDC dayaw; MDM dalaw.

70. *dalɨm *'space under house'*. MDK daum; MDC dalum; MDB, MSK, KLT dalɨm; MDM ag-dalum; ISM, KLK daɨm.

71. *dalid *'roof'*. KLK, KLT dalid.

72. *daman *'anger'*. MDK daman; MDC, ISM ma-daman; MDB, MDM yama-daman; KLK, KLT ka-daman.

73. *dami? *'throw away'*. ISM dami?; KLK i-daml.

74. *danaw *'lake'*. MDC, MDB, MDM, MSK, KLK, KLT danaw.

75. *daŋa *'to play'*. KLK, KLT daŋa.

76. *daŋaw *'span (8")'*. MDK, MDC, MDB, MDM, MSK, ISM, KLK, KLT daŋaw.

77. *da?ig *'many'*. MDK, MDC, MDB, MSK ma-da?lg; MDM, ISM ma-daig; KLK, KLT ma-deg.

78. *da?un *'leag'*. MDK, MDC, MDB, MSK da?un; MDM, ISM daun; KLK, KLT dawun.

79. *dayaw *'good'*. MDK, MDC, MDM, ISM, KLK, KLT ma-dyaw; MDB ma-dayaw; MSK dayaw.

80. *dɨbdɨb *'belly'*. MDK, MDB, MDM, MSK, ISM dɨbdɨb.

81. *dɨglɨm *'rain cloud'*. MDK, KLK dɨglɨm; MDM, ISM dɨggɨm.

82. *dɨkɨt *'to stick up'*. MDK, MSK, ISM, KLK, KLT dɨkɨt; MDC, MDB, MDM yɨ-dɨkɨt.

83. *dɨŋɨg *'hear'*. MDK, MDB yɨ-dɨŋɨg; MDC duŋug; MDM, MSK, ISM, KLK, KLT dɨŋɨg.

84. *dɨt *'hunt (for game)'*. KLK, KLT dɨt.

85. *dila? *'tongue'*. MDK, MDC, MDB, MDM, MSK, ISM, KLK, KLT dila?.

86. *dlli? *'will not be sharp'*. KLK, KLT dill?.

87. *diŋdiŋ *'wall'*. MDK, MDC, MDB, KLK, KLT diŋdiŋ.

88. *di?in *'where'*. MDM, MSK di?in.

89. *dugu? *'blood'*. MDK, MDC, MDB, MDM, MSK, ISM, KLK, KLT dugu?.

90. *dunut *'rotten; worn out'*. MDK, MDM ya-dunut; MDC dunut; MDB yama-dunut; MSK, ISM dunut.

91. *duŋgab *'to stab'*. ISM, KLK duŋgab.

92. *dusmag *'to stab'*. MDB ga-dusmag; MDM, MSK dusmag.

93. *duwa *'two'*. MDK, MDC, MDB, MDM, MSK, ISM, KLK, KLT duwa.

94. *gabi *'night'*. MDK, MDC, MDB, MDM, MSK, ISM, KLK, KLT gabi.

95. *(g,i)abun *'cloud'*. MDC, KLK, KLT iabun; MDB, ISM gabun.
The regular reflex of PAN *R in PSEM is *g.
The KLT, KLK reflexes of iabun are probably a borrowing from T'boli and Bla'an iabuŋ.

96. *gaduŋ *'green'*. MDM, ISM, KLK gaduŋ.

97. *gaɨbɨk *'to work'*. MDM ga-gaɨbɨk; MSK gawbɨk; ISM maga-gaɨbɨk.

98. *gakit *'raft'*. MDK, MSK, ISM gakit.

99. *gais *'wipe'*. MDC gais-i; MDB, MDM ga-gais; MSK, KLT gais.

100. *gaiu? *'to lie'*. MDB, MDM yagaka-gaiu?; MSK ka-gaiu?; ISM kɨ-gau?; KLK mag-gau?; KLT gaiu?.

101. *gamut *'roof'*. MDK, MDC, MDB, MDM, MSK, ISM gamut.

102. *gapas *'cotton'*. MDC, MDB, MDM, MSK, ISM, KLK, KLT gapas.

103. *gatus *'hundred'*. MDK, MDC, MDB, MDM, ISM saŋ-gatus; MSK, KLK, KLT gatus.

104. *gVdaŋ *'dry (not wet)'*. ISM, KLT ma-gdaŋ; KLK ka-gdaŋ.

105. *gɨtɨm *'hungry'*. MDK ma-gɨtɨm; MDC gutum; MDB yaga-gɨtɨm; MDM, MSK, KLK, KLT gɨtɨm.

106. *gɨya *'forehead'*. MDK, MDB, MDM, MSK, KLK gɨya; MDC, ISM guya; KLT giya.

107. *gugudanɨn *'story'*. MDB, MDM, MSK gugudanɨn.

108. *gusuk *'rib'*. MDK, MDC, MDB, MDM, MSK, ISM, KLK, KLT gusuk.

109. *guyud *'to pull'*. MDB ga-gayud; KLK, KLT guyud.

110. *kagabi *'yesterday'*. MDK, MDC, MDB, MDM, MSK, ISM, KLK, KLT kagabi.

111. *kagat *'to bite'*. MDK, MSK, ISM kagat; MDC ma-kagat; MDB kagat-ɨn.

112. *kagpa? *'short (person)'*. MDK, MDC, MDB, MDM, MSK, KLK kagpa?.

113. *ka(i,y)amdag *'morning'*. MDK kayamdag; MDB kaiamdag; KLK kamdag; ISM kɨmdɨg.

114. *kaḷig *'worm (earth)'*. MDK kaug; MDC, MDB, MSK kaḷig.

115. *kalibaŋbaŋ *'butterfly'*. MDC, MDB, MDM, MSK, ISM, KLK, KLT kalibaŋbaŋ.

116. *kalintu *'right'*. MDK, MDC, MDB, MDM, MSK, ISM, KLK, KLT kalintu.

117. *kalut *'to scratch'*. MDK ka?ut; MDC, MSK kalut; MDB ga-kalut; MDM yaŋ-alut; ISM kaut; KLK miŋ-aut; KLT ?ulut.

118. *kaluwa?an *'twenty'*. MDC, MDB, MDM, MSK kaluwa?an; KLT kaluwan.

119. *kamin *'mat'*. MDK, MDB, MDM, MSK, ISM, KLK, KLT kamin; MDC kamun.

120. *kamut *'toe (third)'*. MDC, MDB, MDM, MSK, ISM kamut.

121. *kanin *'rice'*. MDK, MDB, MDM, MSK, KLK, KLT kanin; MDC, ISM kanun.

122. *kanu *'when'*. MDK, MDC, MDB, MDM, MSK, ISM, KLK, KLT kanu.

123. *kapay *'swim'*. KLK, KLT kapay.

124. *ka?an *'eat'*. MDK ya-ka?an; MDC, MSK kagan; MDB, MDM yakaan; ISM ma-kan; KLK k-um-an; KLT kan.

125. *ka?uy *'tree'*. MDK kahuy; MDC, MDM, MSK ka?uy; MDB, ISM kauy; KLK, KLT kawuy.

126. *kasili *'eel'*. MDK, MDC, MDB, MDM, MSK, ISM, KLK, KLT kasili.

127. *katil *'itch'*. MDK, ISM, KLT ma-katil; MDC katul; MDB, MDM, MSK katil.

128. *kawala *'left (hand)'*. MDK kawaa; MDC, MDB, MDM, MSK, KLT kawala; ISM, KLK kawa.

129. *kawat *'to steal'*. MDK, MDB, MDM, yaŋ-awat; MDC maŋ-awat; ISM kawat.

130. *kaya *'fish (generic)'*. MDK, MDB, MDM, MSK kaya.

131. *kikiʔ *'chin'*. MDK kiki, MDC kuku?; MDC kuku?; MDB, MDM, MSK, ISM, KLK, KLT kikiʔ.

132. *kimiʔ *'hold'*. MDC kumu?-un; MDB, ISM, KLT kikiʔ; MDM yi-kimiʔ.

133. *kimit *'squeeze'*. MDK, MSK, KLK kimit.

134. *kisig *'strong'*. MDK ma-kusug; MDC kusug; MDM kisig-an; PNDM kasig-an; MSK, ISM kisig.

135. *kilala *'know (a person)'*. MDK ʔi-kilaa; MDC, MDM, MSK kilala; MDB ki-kilala; KLK kila.

136. *kilat *'lightning'*. MDK, MDC, MDB, MDM, MSK, ISM, KLT kilat.

137. *kilay *'eyebrow'*. MDK, MDC, MDB, MDM, MSK, ISM, KLK, KLT kilay.

138. *kinunu *'when (future)'*. KLK, KLT kinunu.

139. *kisɨlɨm *'tomorrow'*. MDK kisuum; MDC, MDB, MDM, MSK kisɨlɨm; ISM kisɨɨm; KLK kinsɨm.

140. *kita? *'to see'*. MDK, MSK, KLK, KLT kita?; MDC, MDB ya-kita?; MDM ʔi-kita?

141. *kubuŋ *'water container'*. MDM, MSK, ISM, KLK, KLT kubuŋ.

142. *kugkug *'spider'*. MDC, MSK kugkug.

143. *kulun *'fingernail'*. MDC, ISM, KLK ku-kuun; MDC, MDB, MDM, MSK ku-kulun; KLT ka-kulun.

144. *kulun *'cooking pot'*. MDC, MDB, MDM, MSK, KLT kulun; ISM kuun.

145. *kumut *'blanket'*. MDB, MDM kumut.

146. *kuŋ *'if'*. ISM, KLT kuŋ; KLK kun.

147. *kutkut *'to dig (a hole)'*. MDC, MDM, MSK, KLT kutkut; MDB ga-kutkut.

148. *kutu *'lice (chicken)'*. MDC, MDB, MDM, MSK. ISM, KLK kutu.

149. *kuwan *'what-you-may-call-it'*. MDK, MDC, MDB, MDM, MSK, ISM, KLK, KLT kuwan.

150. *kuwayan *'water container'*. MDC, MDB kuwayan.

151. *labak *'to throw'*. MDK labak; MDB ga-labak.

152. *lagɨs *'floor'*. MDK, MDB, MDM, MSK, ISM lagɨs; KLK lagus.

153. *lagsiŋ *'sour'*. ISM, KLK m-agsiŋ; KLT ma-lagsiŋ.

154. *lakay *'feather'*. KLK, KLT lakay.

155. *lakbaŋ *'wide'*. MDC, MDB, MDM, MSK, KLT ma-lakbaŋ; KLK ma-akbaŋ.

156. *lalag *'yellow'*. MDK ma-lag; MDC, MDB, KLT ma-lalag.

157. *lalɨm *'deep'*. MDC ma-lalum; MDB, MDM, MSK, KLT ma-lalɨm; ISM ma-aɨm; KLK m-aɨm.

158. *lanut *'abaca fibre'*. MDC, ISM, KLT lanut.

159. *laŋan *'woods (forests)'*. MDK gu-waŋin; MDC, MDB, MDM, MSK, KLT kagu-laŋin; ISM kagu-aŋan.

160. *laŋaw *'fly (insect)'*. MDK, MDC, MDB, MDM, MSK, ISM, KLK, KLT laŋaw.

161. *laŋga *'thirst'*. MDC ma-laŋga; MDB, MDM yama-laŋga; MSK laŋga; ISM yam-aŋga.

162. *laŋgam *'bird'*. MDK laŋgaim; MDC, MDB, MDM, MSK, ISM, KLK laŋgam.

163. *laŋit *'sky'*. MDK, MDC, MDB, MDM, ISM, KLK, KLT laŋit.

164. *laŋuy *'swim'*. MDK, MDC, MSK, ISM laŋuy; MDB, MDM yal-laŋuy.

165. *lapit *'near'*. MDK, MDC, MDB, KLT ma-lapit.

166. *la(?)iŋ *'coconut (ripe)'*. MDK la?iŋ; MDC, MDB, MSK, ISM laiŋ; KLK, KLT leŋ.

167. *la?uŋ *'say'*. MDK, MDC yaga-la?uŋ; MDB ga-la?uŋ; MDM la?uŋ; ISM yaga-lauŋ; KLK lauŋ; KLT loŋ.

168. *lawa? *'spider'*. MDK, ISM lawa?.

169. *lawas *'body'*. MDK, MDC, MDB, MDM, MSK, ISM, KLK, KLT lawas.

170. *lawi *'feather'*. MDK, MDC pa-lawi; MDB, MDM pal-lawi; ISM lawi.

171. *lawig *'long (obj)'*. ISM m-awig; KLK ma-awig; KLT ma-lawig.

172. *layug *'to fly'*. MDK, MSK, ISM, KLK layug; MDC ma-layug; MDB, MDM yal-layug.

173. *layu? *'far'*. MDK, MDC ma-layu?; MDB ma-ayu?.

174. *lɨbɨk *'to pound rice'*. MDC mag-lɨbɨk; MDB, MDM ga-lɨbɨk; MSK, ISM, KLK lɨbɨk.

175. *lɨbɨŋ *'bury (inter)'*. MDK, MDM, MSK, KLT lɨbɨŋ; MDB ga-lɨbɨŋ; KLK mag-lɨbɨŋ.

176. *lɨtɨy *'weak'*. MDM, MSK ma-lɨtɨy.

177. *libas *'sour'*. MDK ma-libas; MDM, MSK ma-libas.

178. *libɨt *'turn'*. ISM, KLK libɨt.

179. *likud *'back (of person)'*. MDK, MDM, MSK, ISM, KLK likud; MDC, MDB ta-likud-an.

180. *lima *'five'*. MDK, MDC, MDB, MDM, MSK, ISM, KLK, KLT lima.

181. *linti? *'thunder'*. MDK, MDC, MDB, MDM, MSK, ISM linti?; KLK linti.

182. *linug *'earthquake'*. MDK, MDC, MDB, MDM, MSK, ISM, KLK, KLT linug.

183. *liŋaw *'forget'*. MDK, MDC, MDM, ISM ka-liŋaw; MDB yaka-liŋaw; MSK liŋaw; KLK mi-liŋaw; KLT ka-liŋaw-an.

184. *lipaʔ *'dirty (clothes)'*. MDK, MDC, MDB, MDM, MSK, ISM, KLK ma-lipaʔ.

185. *lisɨd *'difficult'*. MDK, MDB, MDM, MSK, ISM ma-lisɨd; MDC ma-lisud.

186. *liyɨg *'neck'*. MDK, MDB, MDM, MSK, ISM, KLK, KLT liyɨg; MDC lyug.

187. *lubid *'rope'*. MDK, MDC, MDB, MDM, MSK, ISM, KLK, KLT lubid.

188. *lugay *'hair'*. MDB, MDM, MSK, ISM, KLK, KLT lugay.

189. *lulu? *'smooth'*. MDB, MDM maa-llu?; KLT ma-lulu?.

ma-lulu? → ma llu?
→ maallu?.

190. *lumay *'weak'*. ISM ma-may; KLK ma-umay; KLT ma-lumay.

191. *lumun *'sibling'*. MDK, MDC, MDB, MDM, MSK, ISM lumun; KLK lumuŋ.

192. *lunaw *'green'*. MDK, MDC, MDB, MEM, MSK, KLT ma-lunaw.

193. *lupaʔ *'earth (ground)'*. MDK, MDC, MDB, MDM, MSK, ISM, KLK, KLT lupaʔ.

194. *lusuŋ *'mortar (rice)'*. MDK, MDC, MDB, MDM, MSK, ISM, KLK, KLT lusuŋ.

195. *lutuʔ *'to cook'*. MDC, MDM, MSK, ISM, KLK, KLT lutuʔ; MDB ga-lutuʔ.

196. *luwaʔ *'tear'*. MDK, MDC, MDB, MDM, MSK, ISM, KLT luwaʔ; KLK luwa.

197. *luya *'ginger'*. MDK, MDC, MDB, MDM, MSK, ISM, KLK, KLT luya.

198. *malalan *'thousand'*. MDK, ISM saŋ-maan; MDC, MDB, MSK, KLT malalan; MDM saŋ-malalan; KLK saŋ-man.

199. *mamaʔ *'betel chew'*. MDK yaga-mamaʔ; MDC mamaʔ-un; MDB mamaʔ-ɨn; MDM mama-ɨn; MSK, KLT mamaʔ; ISM ka-mamaʔ; KLK mama.

200. *mamuk *'chicken'*. MDK, MDC, MDB, MDM, MSK, ISM, KLK, KLT manuk.

201. *maŋaʔ *'to bite'*. KLK, KLT maŋaʔ.

202. *maslɨm *'sour'*. MDC maslum; MDB maslɨm.

203. *mata *'eye'*. MDK, MDC, MDB, MDM, MSK, ISM, KLK, KLT mata.

204. *matadɨŋ *'old (person)'*. MDK, MDB, MDM matadiŋ; MDC mat-ik-adɨŋ.

205. *mat(a,ɨ)y *'bad'*. ISM matay; KLK matɨy.

206. *miŋaw *'lonely'*. MDK, MDB ya-miŋaw; MDM yama-miŋaw.

207. *-mɨs *'squeeze (in hand)'*. ISM kɨ-mɨs; KLT tig-mɨs.

208. *nana *'what'*. MDK, MDB, MDM, MSK nana; MDC niana.

209. *niki? *'cold'*. MDB, MDM, MSK, ISM, KLK, KLT ma-niki?.

210. *nipa *'nipa'*. MDB, MDM nipa.

211. *nipis *'thin (obj.)'*. MDK, MDC, MDB, MDM, MSK, ISM, KLK, KLT ma-nipis.

212. *niwaŋ *'skinny'*. MDK, MDC, MDB, MDM, MSK, KLK, KLT niwaŋ.

213. *(ŋ)alan *'name'*. MDK ŋaan; MDC, MDB, MDM, MSK galan; ISM gaan; KLK ŋan; KLT ŋalan.

214. *ŋaŋɨl *'dull (as a knife)'*. MDK ma-ŋanul; MDC ma-ŋaŋul; MDB, MDM, MSK, ISM ma-ŋaŋil.

215. *palad *'palm (of hand)'*. MDK, ISM, KLK paad; MDC, MDB, MDM, MSM, MSK, KLT palad.

216. *palapala *'sole of foot'*. MDK, MDC, MDB, MDM, MSK palapala.

217. *palis *'bark; skin'*. MDK, MDC, MDB, MDM, MSK, ISM, KLK, KLT palis.

218. *palit *'buy'*. MDK, ISM palit; MDC ma-palit; MDB ga-palit.

219. *panaw *'to walk'*. MDK, MDC, MSK, ISM, KLK, KLT panaw; MDB, MDM ya-panaw.

220. *panid *'wing'*. MDK, MDC, MDB, MDM, MSK, ISM, KLK, KLT panid.

221. *panik *'climb'*. MDC, MDM, MSK, ISM panik; MDB ga-panik; KLK manik.

222. *pantad *'sand'*. ISM, KLK, KLT pantad.

223. *paŋanud *'cloud'*. MDK, MDC, MSK paŋanud.

224. *pa?a *'thigh'*. MDK, MDB paa; MDC, MSK pa?a; ISM pa.

225. *pa?it *'bitter'*. MDK, MDM, ISM, KLK, KLT pait; MDC, MDB, MSK pa?it.

226. *pa?ud *'nipa'*. MDK pa?ud; KLK paud.

227. *pasak *'mud'*. MDK, MDC, MDB, MDM, MSK, ISM, KLK, KLT pasak.

228. *pasu? *'hot'*. MDK, MDC, MDB, MDM, MSK, ISM, KLK, KLT ma-pasu?.

229. *patay *'kill'*. MDK, MDB, MDM, MSK, ISM, KLK, KLT patay; MDC patay-an.

230. *pawa? *'swidden'*. MDC, MDB, MDM, MSK, ISM, KLT pawa?; KLK pawa.

231. *pawda? *'sweet potato'*. MSK, ISM pawda?; KLK pawda.

232. *pawis *'sweat'*. MDC, MDB pawis.

233. *pɨlaŋan *'sheath for bolo'*. MDB, MDM, MSK pɨlaŋan.

234. *pɨsa? *'bone'*. MDK, MDB, MDM, MSK pɨsa?; MDC, ISM pusa?; KLK pɨsa; KLT pisa?.

235. *pigi? *'buttocks'*. KLK, KLT pigi?.

236. *pila *'how many'*. MDK, MDC, MDB, MDM, MSK, ISM, KLK, KLT pɨla.

237. *pilɨk *'eyelashes'*. MDK, MDB, MDM, MSK, ISM, KLK, KLT pilɨk; MDC piluk.

238. *pili? *'choose'*. MDK yaga-plli?; MDC, MDB, MSK, ISM pili?; KLK ma-pili?; KLT pamalli?.

paN- + pili? → pamili? → pamli? → palli? → paN- + palli? → pamalli?.

239. *pipi? *'wash clothes'*. MDC plpl?; MDM yaga-pipi?.

240. *pisŋi *'cheek'*. MDK pisiŋi; MDC, MDB, MDM, MSK, ISM, KLK, KLT pisŋi.

241. *pitu *'seven'*. MDK, MDC, MDB, MDM, MSK, ISM, KLK, KLT pɨtu.

242. *piyɨt *'narrow'*. MDK, MDB, MDM, MSK, KLK ma-piyɨt; MDC ma-plyat.

243. *pugsa *'to boil'*. MDC, MDB, ISM, KLK, KLT pugsa; MDM pɨgsa.

244. *pula(?) . MDK, KLK ma-puwa; MDC pula; MDB, KLT ma-pula?; MDM, MSK ma-pula; ISM ma-pua.

245. *pulu? *'ten'*. MDK ya-puu?; MDC, MDB, MDM, MSK, KLT sam-pulu?; ISM sam-puu?; KLK sam-pu?.

246. *punu? *'full (sated)'*. MDK yama-punu?; MDC, MDB punu?.

247. *pu?ud *'buttocks, thigh'*. MDK, MDC, MDB, MSK pu?ud; MDM, ISM, KLK, KLT puud.

248. *pusuŋ *'heart'*. MDK, MDC, MDB, MDM, MSK pusuŋ.

249. *pusu? *'heart'*. KLK, KLT pusu?.

250. *puti? *'white'*. MDK, MDB, MDM, MSK, ISM, KLT ma-putl?; MDC, KLK puti?.

251. *?aba *'chest'*. MDK, MDC, MDB, MDM, MSK, ISM, KLK, KLT ?aba.

252. *?abaga *'shoulder'*. MDK, MDC, MDB, MDM, MSK, ISM, KLK, KLT ?abaga.

253. *?abaka *'abaca'*. MDK, MDB, MDM, MSK, ISM, KLK, KLT ?abaka.

254. *?aba? *'long (obj.)'*. MDK, MDC, MDB ma-?aba?; MDM ma-aba?; MSK ?aba?.

255. *?abɨl *'weave cloth'*. MDB ?a-abɨl; MDM ya-abɨl; MSK, KLT gabɨl.

256. *?abu *'ashes'*. MDK, MDC, MDB, MDM, MSK, ISM, KLK, KLT ?abu.

257. *?abug *'dust'*. MDK, MDB, MDM, MSK, ISM, KLK ?abug.

258. *?abul *'blanket'*. KLK, KLT gabul.

259. *?adlaw *'day'*. MDK ?adlaw; MDC, MDB, MDM, MSK, ISM, KLK, KLT gallaw.

260. *?adlɨk *'to fear'*. MDK yam-adlɨk; MDC maluk; MDB, ISM yam-allɨk; MDM, MSK ?allɨk; KLK k-allɨk; KLT m-allɨk.

261. *?adu?un *'today'*. MDK, MDC, MDB, MSK ?adu?un; MDM, ISM ?aduun; KLK, KLT ?adun.

262. *?aku? *'cough'*. MDK, MDC yam-aku?; MDB ga-aku?; MDM, MSK ?aku?.

263. *?alabat *'wall'*. MDB, MDM, MSK ?alabat; ISM ?abat.

264. *?alad *'fence'*. MDB, MDM, MSK, KLT ?alad; KLK ?aag.

265. *?allaŋ *'slave'*. MDK, MDC, MDB, MDM, MSK, KLK, KLT ?allaŋ.

266. *?alu *'pestle (rice)'*. MDK ?au; MDC, MDB, MDM, MSK, KLT ?alu.

267. *?alug *'river'*. KLK, KLT ?alug.

268. *?alu? *'cloud'*. MDB, MDM ?alu?.

269. *?ama? *'father'*. MDK, MDC, MDB, MDM, MSK, ISM ?ama?; KLK, KLT ?ama.

270. *?ambak *'frog'*. MDK, MDC, MDB, MDM, MSK, ISM, KLK, KLT ?ambak.

271. *?ambaw *'rat'*. MDK, MDC, MDB, MDM, MSK, ISM, KLK, KLT ?ambaw.

272. *?ambuŋ *'afternoon'*. MDK, MDC, MDB, MDM, MSK, ISM, KLK, KLT ?ambuŋ.

273. *?amu? *'monkey'*. MDK, MDC, MDB, MDM, MSK, ISM ?amu?.

274. *?anad *'learn'*. MDC mag-anad; MDB ga-anad; MDM yaga-anad; MSK ?anad; ISM g-anad.

275. *?anak *'offspring'*. MDK, MDM, ISM ?anak.

276. *?anay *'termite'*. MDK, MDC, MDB, MDM, MSK, ISM, KLK, KLT ?anay.

277. *?anɨg *'fast (adj.)'*. MDB, MDM ma-anɨg; MSK ma-?anɨg; ISM m-anɨg; KLK m-anug.

278. *?anɨnu *'shadow'*. MDK, MDC, MDB, MDM, MSK, ISM, KLK ?aninu.

279. *?apa *'husk of rice'*. MDK, MDC, MDB, MDM, MSK, ISM, KLK, KLT ?apa.

280. *?apug *'lime'*. MDK, MDC, MDB, MDM, MSK, ISM, KLT ?apug; KLK ?apuk.

281. *?asawa *'wife'*. MDK, MDC, MDB, MDM, MSK, KLK, KLT ?asawa.

282. *?asin *'salt'*. MDK, MDC, MDB, MDM, MSK, ISM, KLK, KLT ?asin.

283. *?atad *'raft'*. MDC, MDB, MDM, KLK, KLT ?atad.

284. *?atag *'give'*. MDK, MDC, MDB, MDM, MSK, ISM, KLK, KLT ?atag.

285. *?atay *'liver'*. MDK, MDC, MDB, MDM, MSK, ISM, KLK, KLT ?atay.

286. *?atɨp *'roof'*. MDK, MDB, MDM, MSK, ISM, KLK, KLT ?atɨp; MDC ?atup.

287. *?atmug *'full'*. MDC, ISM m-atmu?; MSK ?itmu?; KLK mɨ-atmu?; KLT ny-atmu?.

288. *?atulun *'fire'*. MDK, ISM ?atuun; MDC, MDB, MDM, MSK, KLT ?atulun; KLK ?atun.

289. *?aw *'if'*. MDK, MDC, MDB, MDM, MSK, KLK gaw.

290. *?awat *'far'*. MDC, MSK ma-?awat; MDB, MDM ma-awat; ISM, KLK, KLT m-awat.

291. *?awid *'hold'*. MDK, KLK ?awid.

292. *?ayam *'hunt (for game)'*. MDC, MDB, MDM yaŋ-ayam.

293. *?ɨbɨl *'smoke'*. MDK, MDB, MDM, MSK, ISM, KLT ?ɨbɨl; MDC ?ubɨl; KLK ?ɨbɨl.

294. *?ɨgɨŋ *'lip'*. KLK, KLT ?ɨgɨŋ.

295. *?ɨkɨt *'tie (tether an animal)'*. MDK ?ukut; MDC ?ukɨt; MDB ?ɨkɨt-an; MDC ?-ɨkɨt-an; MSK g-ɨkɨt; ISM, KLK ?ɨkɨt.

296. *?ɨlɨb *'to spit'*. KLK ?ɨɨb; KLT ?ɨlɨb.

297. *?ɨnɨm *'six'*. MDK, MDB, MDM, MSK, ISM, KLK, KLT ?ɨnɨm; MDC ?unum.

298. *?ɨpɨd *'companion'*. MDK, MDB, KLK, KLT ?ɨpɨd; MDC, ISM ?upud.

299. *?ɨsɨg *'man (male)'*. MDK, MDB, MDM, MSK, ISM, KLK, KLT ?ɨsɨg; MDC ?usug.

300. *?ɨya? *'live (dwell)'*. MDK, MDB yaga-?ɨya?; MDC ?uya?; MDM yaga-uya?; MSK ?ɨya?; ISM magø-ɨya?; KLK ?iya?; KLT m-ɨya?.

301. *?ɪdu? *'dog'*. MDK, MDV, MDB, MDM, MSK, ISM, KLK, KLT ?ɪdu?.

302. *?ikɨl *'laugh'*. MDK ?a-?ɪkɨl; MDC ?ikul; MDB, MDM ga-ilɨl; MSK, ISM, KLK, KLT ?ikɨl.

303. *?ikug *'tail'*. MDK, MDC, MDB, MDM, MSK, ISM, KLK, KLT ?ikug.

304. *?ɪluŋ *'nose'*. MDK, MDC, MDB, MDM, MSK, ISM, KLK, KLT ?ɪluŋ.

305. *?ilut *'to rub'*. MDB ga-ilut; MDM, KLK ?ilut.

306. *?imu? *'face'*. MDC, MDB, ISM ka-imu?; MDM ka-imu; MSK ka-?imu?.

307. *?imu? *'weave a mat'*. MDK, MDC, ISM pag-imu?; MDB mɨgay-imu?; MDM ?ɪ-ɪmu.

308. *?inagad *'companion'*. MDM, MSK ?ɪnagad.

309. *?ɪnaŋ(ɨ,u)n *'weave a mat'*. MDC gɪnaŋun; MDB ?inaŋɨn.

310. *?ina? *'mother'*. MDK, MDC, MDB, MDM, MSK, ISM ?ina?; KLK, KLT ?ɪna.

311. *?indɨg *'to stand'*. MDK ?indug; MDC mag-ɪndug; MDB ga-indɨg; MDM ga-?indɨg; MSK, ISM, KLK, KLT ?indɨg.

312. *?inɨm *'to drink'*. MDK, MDM, MSK, ISM, KLK, KLT ?inɨm; MDC m-inum; MDB ?im-inum.

313. *?inig *'smooth'*. MDC, MSK ma-?inɪg.

314. *?init *'sweat'*. MDK, MDM ?inɪt-an; MSK, KLK, KLT ?inɪt.

315. *?intalun *'defecate'*. MDK ga-intaun; MDC mag-intalun; MDB ga-intalun; MDM, MSK ?ɪntalun; ISM mag-intaun; KLK m-intaun; KLT m-intalun.

316. *?iŋkud *'to sit'*. MDK, MDB, MDM ga-?iŋkud; MDC maŋ-iŋkud; MSK, ISM, KLK, KLT ?iŋkud.

317. *?isa *'one'*. MDK, MDC, MDB, MDM, MSK, ISM ?isa.

318. *?ɪsda? *'fish (generic)'*. MDC, MDB, ISM, KLK, KLT ?isda?.

319. *?isɨ? *'child'*. MDK, MDC ?isu?; MDB, MSK, ISM, KLK, KLT ?isɨ?.

320. *?itɨm *'black'*. MDK, MDB, MDM, ISM, KLK, KLT ma-itɨm; MSK ma-?itɨm.

321. *?ɪtlug *'egg'*. MDK, MDC, MDB, MDM, MSK, ISM, KLK ?ɪtlug.

322. *?iwa? *'to cut (slice meat)'*. MDK, MDC ?iwa?; MDB ?ɪwa?ɨn; MDM, KLK ?ɪwa.

323. *?ubat *'tell'*. KLK, KLT ?ubat.

324. *?ubu *'cough'*. ISM, KLK, KLT ?ubu.

325. *?ugas *'wash hands'*. MDK, MDC, ISM ?ugas.

326. *?ugat *'vein (blood)'*. MDK, MDC, MDB, MDM, MSK, ISM, KLK KLT ?ugat.

327. *?ulan *'rain'*. MDK ?uwan; MDC, MDB, MDM, MSK, KLK, KLT ?ulaŋ; ISM ?uan.

328. *?ulat *'scar'*. KLK ?uwat; KLT ?ulat.

329. *?uliŋ *'charcoal'*. MDK, MDC, MDB, MDM, MSK, ISM, KLK, KLT ?uliŋ.

330. *?uli? *'return (home)'*. MDK, MDB, MDM yum-uli?; MDC, KLK m-uli?; MSK, KLT ?uli?.

331. *?ulu *'head'*. MDK, ISM, KLK ?uu; MDC, MDB, MDM, MSK, KLT ?ulu.

332. *?ulud *'snake'*. KLK ?uud; KLT ?ulud.

333. *?ulug *'to fall'*. MDK yamallug (**hulug → yama + hulug yama + hlug → yamallug); MDC ma-lug; MDB, MDM yama-ulug; MSK ?ulug; ISM ?uug; KLK ma-ug; KLT m-ulug.

334. *?ulunan *'pillow'*. MDK ?unan; MDC, MDB, MDM, MSK ?ulunan; ISM ?uunan; KLK ?unam.

335. *?uman *'repeat'*. MDB, MDM ?uman-a; MSK, KLK ?uman; KLT ?uman-in.

336. *?umay *'rice (unhusked)'*. MDK, MDC, MDM, ISM, KLK, KLT ?umay.

337. *?umay *'year'*. KLK, KLT ?umay.

338. *?unaw *'wash hands'*. MDC, MDB, MDM maŋ-unaw; MSK, KLK, KLT ?unaw.

339. *?untu *'teeth'*. MDK, MDC, MDB, MDM, MSK, ISM, KLK, KLT ?untu.

340. *?untug *'throw away'*. MDK, MDB, MDM ?untug.

341. *?unu *'what'*. MDB, ISM, KLK ?unu.

342. *?upat *'four'*. MDK, MDC, MDB, MDM, MSK, ISM, KLK, KLT ?upat.

343. *?usa *'deer'*. MDK, MDC, MDB, MDM, MSK, ISM ?usa.

344. *?utaŋ *'debt'*. MDK, MDC, MDB, MDM, MSK, ISM, KLK, KLT ?utaŋ.

345. * ?utaw *'person'*. MDK, MDC, MDB, MSK, ISM, KLK, KLT ?utaw.

346. *?utin *'penis'*. MDK, MDC, MDB, MDM, MSK, KLK, KLT ?utin.

347. *?utud *'to cut (slice meat)'*. ISM, KLK, KLT ?utud.

348. *?utuk *'brain'*. MDK, MDC, MDB, MDM, MSK, ISM, KLK, KLT ?utuk.

349. *?uwak *'crow'*. MDK, MDC, MDB, MDM, MSK, ISM, KLK, KLT ?uwak.

350. *?uway *'rattan'*. KLK, KLT ?uway.

351. *?uyampi? *'loincloth'*. MDB, MDM ?uyampi?; MSK k-uyampi?.

352. *?uyup *'blow'*. MDK, MDC, MDB, MSK, ISM, KLK ?uyup; MDM yu-uyup; KLT ?ɨyɒp.

353. *sabaw *'soup'*. MDK, MDC, MDM, MSK, ISM, KLK, KLT sabaw.

354. *sagiŋ *'banana'*. MDK, MDC, MDB, MDM, MSK, ISM, KLK, KLT sagiŋ.

355. *sakii *'heel'*. KLK saki; KLT sakii.

356. *sakit *'pain'*. MDK, MDC, MSK ma-sakit; ISM, KLK, KLT sakit.

357. *salabɨl *'throw away'*. MDB, MDM, MSK salabɨl; KLT ?ag-bɨl.

358. *salad *'under'*. MDC, MDB, MSK salad; MDM ?ag-salad; ISM saad.

359. *salɨpan *'west'*. MDK saupan; KLK salɨpan.

360. *salilɨpan *'west'*. MDC salupan; MDB, MDM, MSK, KLK salilɨpan; ISM saliupan.

361. *samɨt *'wind'*. MDC samut; MDB, MDM, MSK, ISM, KLK, KLT samɨt.

362. *sanduk *'ladle of coconut shell'*. MDK, MDB, MDM, MSK, ISM sanduk; KLK, KLT saduk.

363. *sa?id *'near'*. MDB, MSK ma-sa?id; MDM, ISM, KLK ma-said.

364. *sasa *'nipa'*. MSK, ISM, KLK sasa.

365. *sawa *'snake'*. MDK, ISM, KLT sawa.

366. *sɨpsɨp *'suck'*. MDC, KLK supsup; MDM, MSK, KLT sɨpsɨp.

367. *siki *'leg'*. MDK, MDB, MDM, KLT siki.

368. *siku *'elbow'*. MDK, MDC, MDB, MDM, MSK, ISM, KLK, KLT siku.

369. *silatan *'east'*. MDK, MDC, MDB, MDM, MSK, ISM, KLK, KLT silatan.

370. *silin *'learn'*. KLK, KLT silin.

371. *sin(i,u) *'who'*. MDK, MDC, MDB, MDM, MSK sini; ISM, KLK sinu.

372. *siŋsiŋ *'ring'*. MDK, MDB, MDM siŋsiŋ: MDC, MSK, ISM, KLK, KLT pan-iŋsiŋ.

373. *sipa? *'to kick'*. MDK, MDC, MDM, MSK, ISM, KLK, KLT sipa?; MDB ga-sipa?.

374. *siyam *'nine'*. MDK, MDC, MDB, MDM, MSK, ISM, KLK, KLT siyam.

375. *subu *'to boil'*. MDK, MDC, MSK, ISM, KLK, KLT subu; MDB, MDM yu-subu.

376. *sudlay *'comb'*. MDK sudlay; MDM sullay.

377. *sugaw *'to cry (weep)'*. KLK, KLT sugaw.

378. *sugbu *'bathe'*. MDK, MDM, MSK, ISM, KLK, KLT sugbu; MDC mag-sugbu; MDB ga-sugbu.

379. *suka(?) *'vomit'*. MDK, MDC, ISM, KLT suka; MDB, MDM ga-suka; MSK suka?; s-um-uka.

380. *sukay *'delouse'*. MDK ga-sukay; MDC, MDM, MSK, ISM, KLK, KLT sukay; MDB sukay-in.

381. *suksuk *'thorn'*. MDK, MDC, MDB, MDM, MSK, KLK, KLT suksuk; ISM siksik.

382. *sulit *'word, language'*. MDC, MDB, MDM, MSK sulit.

383. *sunug *'burn'*. MDK, MDC, MDB, MDM, MSK, ISM, KLT sunug.

384. *susu *'breast'*. MDK, MDC, MDB, MDM, MSK, ISM, KLK, KLT susu.

385. *suwagan *'deer'*. KLK, KLT suwagan.

386. *suwat *'comb'*. MDC, MDB, MSK, ISM, KLK, KLT suwat.

387. *taba? *'fast (adj.)'*. MDK, MDB, MDM, MSK, KLT ma-taba?; MDC, KLK taba?.

388. *tabiŋ *'sew'*. MDK, MDC, MDM, MSK tabiŋ; MDB ga-tabiŋ.

389. *tabuk *'heel'*. MDC, MDB, MDM, MSK, ISM tabuk.

390. *tadyaw *'water jar'*. MDK, MDB tadyaw.

391. *tagad *'to wait'*. MDK, MDC, MSK, ISM, KLK, KLT tagad; MDB yaga-tagad; MDM ga-tagad.

392. *tagaynip *'dream'*. MDK, MDB, MDM, MSK, ISM, KLK, KLT tagainip; MDC mag-tagaynup.

393. *tagbi? *'small (obj.)'*. MDC, MSK, ISM, KLK, KLT tagbi?; MDB, MDM ta-tagbi?.

394. *tagin *'squeeze (in hand)'*. MDB ga-tagin; MDM tagin.

395. *tagnik *'mosquito'*. MDK, MDB, MDM, MSK, ISM, KLT tagnik; KLK tagnak.

396. *tagub *'sheath for bolo'*. MDK, MDC, MDB, ISM, KLK tagub.

397. *tagu? *'to hide'*. MDK yaga-tagu?; MDB ga-tagu?; MDC, MDM, MSK, ISM, KLK, KLT tagu?.

398. *takaw *'to steal'*. MDB yaŋgin-akaw; MSK, KLT takaw; KLT t-um-akaw.

399. *talim *'sharp'*. MDK na-ta?um; MDC ma-talum; MDB, MDM, KLT ma-talim; ISM, KLK ma-taim.

400. *taliŋa *'ear'*. MDK, MDC, MDB, MDM, MSK, ISM, KLK, KLT taliŋa.

401. *talum *'eggplant'*. MDC, MDB, MDM, MSK, KLT talum; ISM, KLK taum.

402. *tambanukawa *'spider'*. MDB, MDM tambanukawa.

403. *tamɨs *'sweet'*. MDC, MDB, MDM, MSK, KLT ma-tamis; ISM, KLK tamis.

404. *tanak *'lose'*. MDK, MDC, MDB, MDM yama-tanak; MSK, ISM tanak; KLK mi-tanak.

405. *tanam *'fight'*. MDB yanag-tanam; MDM, MSK, ISM, KLK, KLT tanam.

406. *tanap *'snake'*. MDM, MSK t-in-anap; KLK man-anap.

407. *tanaw *'to see'*. ISM ma-tanaw; KLK tanaw.

408. *tanɨm *'to plant'*. MDK, MSK, ISM, KLK, KLT tanɨm; MDC tanum; MDB, MDM ga-tanɨm.

409. *ta?ap *'winnow'*. MDK tahap; MDC, MSK ta?ap; MDB ga-taap; MDM ga-ta?ap; ISM taap; KLK tap.

410. *ta?i *'excrement'*. MDK, MDC, MDB, MSK ta?i; MDM, ISM, KLK, KLT tay.

411. *ta?i? *'sew'*. MDB ga-tai?; ISM tai?; KLK, KLT te?.

412. *tawag *'call'*. MDK, MDC, MDB, MDM, MSK, ISM, KLK, KLT tawag.

413. *tuyuk *'turn'*. MDC, ISM tuyuk.

414. *tɨlɨn *'swallow'*. MDK ya-ta?un; MDC ta-tɨlun; MDB, MDM yi-tɨlɨn; MSK, KLT tɨlɨn; ISM a-tɨɨn.

415. *tɨtɨllan *'throat'*. MDC, MDB, MDM, MSK, ISM tɨtɨllan. (cf. tutunlan BUT, CEB.)

416. *tignaw *'cold'*. MDK, MDC ma-tignaw.

417. *timbag *'to throw'*. MDC, MSK timbag.

418. *tina?i *'intestines'*. MDK, MDC, MSK tina?i; MDB, MDM, ISM, KLK, KLT tinay.

419. *tipalay *'rice (unhusked)'*. MDB, MSK tipalay; KLK tipay.

420. *tiya?u? *'cry'*. MDK ga-tiyahu?; MDB ga-tiyau?; MSK tiya?u?; ISM tiyau?.

421. *tubad *'to spit'*. MDK, MDC, MDM, MSK, ISM tubad; MDB ga-tubad.

422. *tubag *'answer'*. MDK, MDB, MDM, MSK, ISM, KLK, KLT tubag; MDC ma-tubag.

423. *tubig *'water'*. MDK, MDC, MDB, MDM, MSK, ISM, KLK, KLT tubig.

424. *tubu *'sugar cane'*. MDK, MDC, MDB, MDM, MSK, ISM, KLK, KLT tubu.

425. *tubuk *'other'*. MDK, MDB, MDM, MSK tubuk.

426. *tudlu? *'finger'*. MDK tudlu?; MDB, MDM, ISM, KLK tullu?; KLT tullu.

427. *tugunan *'waterfall'*. MDK, MDC, MDB, MDM, MSK tugunan.

428. *tukgaw *'throat'*. KLK tukgaw; KLT tukaw.

429. *tulid *'straight'*. MDK, MDC, MDB, MDM, MSK, KLK, KLT ma-tulid; ISM tulid.

430. *tulu *'three'*. MDK, ISM tuu; MDC, MDB, MDM, MSK, KLT tulu; KLK tu.

431. *tulud *'to push'*. MDC, MDM, MDB, MSK, KLT tulud; ISM tuud; KLK ?i-tuud.

432. *tulug *'to sleep'*. MDK ya-tu?ug; MDC ma-tulug; MDB, MDM ya-tulug; MSK tulug; ISM, KLK ma-tuug; KLT ka-tulug.

433. *tu?ig *'year'*. MDK, ISM tulg; MDC, MDB, MDM, MSK tu?ig.

434. *tu?ud *'knee'*. MDK, MDM, ISM tuud; MDC, MDB, MSK tu?ud.

435. *wala? *'not'*. MDK waa; MDC, MDB, MDM, MSK, KLT wala?; ISM, KLK waa?.

436. *walu *'eight'*. MDK, ISM, KLK wau; MDC, MDB, MDM, MSK, KLT walu.

437. *wa(?)in *'where'*. MDK, MDC, MDB, ISM wain; MDM, MSK wa?in; KLK, KLT ?ain.

438. *wa?it *'lip'*. MDC, MDB, MSK wa?it; MDM, ISM wait.

439. *wati(?) *'worm (earth)'*. MDB, MDM, ISM wati; KLK, KLT wati?.

N O T E S

1. There are a few sets in the data which appear to be discrepancies. e.g. 406 *tanap mananap in KLK. This loss of /t/ is caused by the prefix maN- in which the N is replacive, i.e., it replaces the initial consonant of the stem, tanap, while assimilating to its point of articulation, there is actually no discrepancy of *tanap to mananap.

2. There are several sets in MDK in which this lost *ɨ was replaced by an intervocalic glottal stop. These include sets: 117, 399, 414 and 442.

3. In MDK this *ɨ which is lost is replaced by /w/ in the environment of u_a. In KLK it is replaced by /w/ in the environment of ɨ_a and u_a. Some examples of this are in sets: 33, 48, and 66.

4. There is one set in which it appears that *ɨ > g when it follows *g in a consonant cluster. 81. *dɨgɨɨm *'rain cloud'*. MDK, KLK dɨgɨɨm; MDB, ISM dɨggɨm.

5. There are several sets in the data which show a vowel reduction due to a loss of an intervocalic glottal. *$CV_1?V_1N$ > CV_1N in KLK and KLT. Examples of this include 42, 62, 118, 124, 247 and 261.

6. There are two sets in which this lost intervocalic glottal was replaced by /w/ in KLK and KLT. They are 78 and 124.

7. There are four sets in the data in which *? > h in MDK. These are in sets 53, 124, 409, and 420. In all other cases PEM **h > *? in PSEM. It is my assumption that these were borrowed later from KMY and DVM. On such weak evidence as this I did not reconstruct a *h for PSEM.

8. In KLT and KLK there has has been a reduction of certain vowel clusters. This reduction has introduced two more vowel phonemes in KLT: the mid front /e/ and the mid back /o/, and one more vowel in KLK: the mid front /e/. The vowel cluster in PSEM which introduced /e/ is *a?i. An example of this is set 166 *la(?)iŋ *'cocnut (ripe)'* which has a reflex leŋ in KLT and KLK. The vowel cluster in PSEM which introduced /o/ is *a?u. This is illustrated in set 167 *la?un *'say'* which has a reflex loŋ in KLT. Other examples include: 20, 77, and 411. However, not every cluster of *a?i or *a?u reduces in KLK or KLT. In set 19 * ba?u *'turtle'* has a reflex bau in KLT. In set 437 *wa?in *'where'* has a reflex ?ain in KLT and KLK. In those sets in which PSEM *? has replaced the lossed **h of PEM the reduction takes place.

9. This rule has not worked through all the ISM data. There are four sets in which *ɨ > ɨ where u is expected. These include: 28, 34, 300 and 415. There are also four sets in which *ɨ > u where ɨ is expected. These include: 31, 121, 175, and 298.

10. This rule has not worked through all the MDC data. There are nine sets in which *ɨ > ɨ rather than the expected u. These are: 34, 65, 82, 139, 204, 293, 295, 414, and 415.

11. There is no data for fire terms in DVD.

12. If a term has cognates in only the western languages (KLK, KLT, ISM) or in only the eastern languages (MSK, MDM, MDB, MDC, MDK), the validity of that term being a PSEM form is in question. Below I have listed those sets that are in question. If I could find a cognate term in DVD, DVM, KMY, SUR, BUT, MWA, TSG, PNEM, CEB, or PPH in order to verify its PSEM status, then they are listed with that term.

Those sets having only witnesses from the eastern languages include: 16, 18, 45, 53, 57, 69, 88, 130, 142, 145, 150, 151, 202, 204, 206, 208, 210, 216, 239, 246, 254, 268, 308, 309, 313, 340, 351, 376, 382, 390, 394, 402, 416, 417, and 425.

Those sets having only witnesses from the western languages include: 3, 7, 8, 27, 50, 59, 71, 73, 75, 84, 86, 91, 104, 123, 146, 153, 154, 171, 178, 205, 207, 222, 249, 258, 294, 323, 324, 328, 332, 337, 347, 350, 355, 377, 407, and 428.

Those sets having cognate terms from a language outside of the SEM group are listed below with that cognate term. The E before the set number identifies the eastern terms and the W identifies the western terms.

E51. *buntud *'mountain'*; CEB buŋtud *'hill, anthill'*.
E55. *butbut *'anus'*; CEB butbut *'red flesh of the rectum'*.
E92. *dusmag *'to stab'*; CEB dusmag *'crash into, bump'*.
E107. *gugudanɨn *'story'*; CEB sugi-lanun *'story'*.
E114. *kalɨg *'worm (earth)'*. TSG kalug *'ascaris, parasite round worm'*.
W138. *kinunu *'when (future)'*; KMY kinu; DVD kinnu.
E176. *lɨtɨy *'weak'*; PPH *letey.
E177. *lɨbas *'sour'*; CEB alabihid = lɨbas *'wild tree w/sour leaves and fruit'*.
W190. *lumay *'weak'*; CEB lumay *'slow and effeminate in speech'*.
W201. *maŋa? *'to bite'*; PNEM *baŋa?.
E232. *pawis *'sweat'*; DVM pawis.
E233. *pɨlaŋan *'sheath for bolo'*; DEB pulaŋ *'k.o. machete'*.
W235. *pigi? *'buttocks'*; TSG, BUT, SUR pigi?.
E248. *pusuŋ *'heart'*; MWA pusu-pusu.
E262. *?aku? *'cough'*; KMY haku?.
W267. *?alug *'river'*; PPH *aluR$_3$ *'water, current'*.
E292. *?ayam *'hunt (for game)'*; CEB ayam *'for dog to chase s.t.'*
W296. *?ɨlɨb *'to spit'*; MWA ?ɨlɨb.
W370. *siliŋ *'learn'*; CEB sil-ing *'to look at s.t. closely to study it'*.
W385. *suwagan *'deer'*; DVD suwagan.
E427. *tugunan *'waterfall'*; DVM tugunan.

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PROTO-DANAW: A COMPARATIVE STUDY OF MARANAW, MAGINDANAW, AND IRANUN

E. JOE ALLISON

1. INTRODUCTION

Three large groups of Muslim peoples live in the southwest part of the Philippine island of Mindanao -- the Maranaw, the Magindanaw, and the Iranun[1]. The speech varieties of these three groups have an apparent close genetic relationship and comprise what will be called in this study the Danaw[2] language group.

1.1. *PURPOSE*

The purpose of this study[3] is (1) to demonstrate the genetic unity of Maranaw (MAR), Magindanaw (MGD), and Iranun (IRN); (2) to investigate their genetic history; and (3) to reconstruct the phonology and some of the lexicon of Proto-Danaw (PDAN), the hypothetical parent language of MAR, MGD, and IRN.

1.2. *ABBREVIATIONS*

The following abbreviations appear in this paper:

IRN	Iranun
MAR	Maranaw
MGD	Magindanaw
PAN	Proto-Austronesian
PBS	Proto-Bisayan
PDAN	Proto-Danaw
PMAN	Proto-Manobo
PNEM	Proto-North-east Mindanao

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PPH	Proto-Philippine
PSEM	Proto-South-east Mindanao
PSP	Proto-Southern Philippine
PTAG	Proto-Tagalic

1.3. *PREVIOUS CLASSIFICATIONS*

Several previous classifications name one or more of the Danaw speech varieties as a discrete linguistic subgroup within the Philippine group.[4] Conklin (1952:286) subdivided the Philippine group geographically into a Luzon group, a Bisayas group and a Mindanao group. Within the latter he classified MAR and IRN together as dialects of a single language co-ordinate with MGD and 21 other languages. He gave no further subgrouping of the Mindanao group, either internally or externally.

The investigation of Thomas and Healey (1962:22) defined a "Northern Philippine Family" and a "Southern Philippine Family", the latter consisting of ten branches that began to differentiate from a common parent about 100 BC (± 300). One of these branches is the MAR-MGD branch. Their study attested to:

> ...the internal unity of the Maranao-Maguindanao branch...demonstrated by intra-branch comparisons, all of which lie within the range 60-70% probable shared cognates (1962:25)

Dyen (1965:29) identified a "Cordilleran Hesion" of northern languages and a "Sulic Hesion" of southern languages, plus nine separate languages that stand in co-ordinate relationship with both Cordilleran and Sulic. MAR is one of the co-ordinate languages, having its closest relationship lexicostatistically to the Bukidnic Subfamily (Dyen's terminology), which includes Bukidnon and Central Manobo, in the Sulic Hesion. Dyen does not list either MGD or IRN.

Chrétien (1966:207) in a classification of 21 Philippine languages placed MAR and MGD together with Tausug as an independent "Mindanao-Sulu" group. He distinguished this southern group from a northern group, the "luzon Sequence", and a central group, "Macro-Bisayan"; but he related Mindanao-Sulu and Macro-Bisayan through Tausug. He states:

> Tausog (sic) also enters into a three-member climax with Magindanaw and Maranaw... This climax thus constitutes a group to which I shall tentatively give the name Mindanao-Sulu. This is a separate group from Macro-Bisayan, but the two groups are connected through Tausog, which belongs to both and which is thus a transition language.

Even Chretien's figures, however, show Tausug more closely related to Butuanon than to MAR-MGD, and Zorc (1975) subsequently has given evidence that Tausug is a member of a subgroup of Bisayan, closest to

Butuanon. This present study, therefore, does not include Tausug for genetic comparison.

Recently, Llamzon (1974:18-19) classified 101 Philippine languages, which he divided into a "Northern Group", a Central Group", and a "Southern Group". He classifies MAR and MGD together as a subgroup co-ordinate with the large Manobo and Mansakan branches.

It can be seen that the results of investigators have not always been consistent in regard to the placement of the Danaw speech varieties. Furthermore, these classifications all fail either (1) to recognise the unity and relative independence of a Danaw subgroup; or (2) to account for all the Danaw members.

1.4. *HISTORICAL BACKGROUND*

The earliest historical records of the Danaw world are contained in 19th century documents termed 'tarsilas', written genealogies which go back over 500 years to the arrival in Mindanao of the first Muslim missionaries (Majul 1973:1, Saleeby 1905:11). Of interest to the linguist is the fact that at that early time the Danaw speakers appear to have been segregated already into three separate groups, occupying much the same areas as they do today: The Magindanaw along the Pulangi River basin; the Iranun on the coastal and inland areas off Illana Bay; and the Maranaw in the area around Lake Lanao.

The names of these three groups reflect something of their geographical history. Maranaw (ma- *'adjective marker'* + ranaw *'lake'*) means, approximately, *'lake-like'*; hence, *'by or near the lake, lake dweller'*. In the early tarsilas, and still today, this term refers to the people living around Lake Lanao (Saleeby 1905:15).

Iranun (i- *'remote prefix'* + ranaw *'lake'* + -un *'suffix designating source of people'*; thus *Iranawun > Iranun) means literally *'of or from the lake'*. This name originally applied both to the people living around Illana Bay and also to all those living along the Pulangi River basin, i.e., those now known as Magindanaw.

The name Magindanaw (mag- *'active verbal prefix'* + -in- *'verbal infix'* + danaw *'lake'*, i.e., *'to be inundated'*. It no doubt refers to the propensity of the Pulangi River to regularly overflow its banks, giving the basin a lake-like appearance (Ileto 1971:1). This name was first given by the Iranun to their town near the mouth of the Pulangi's north branch, at the site of present-day Cotabato City. Only later, during Spanish days, did it come to be applied to the people themselves (Majul 1973:31).

Another fact of some importance is revealed by the early tarsilas (Ileto 1971:28). The Iranun group were in continuous contact with the

Maranaw to the north and the Magindanaw to the south. Commercial, political, and military ties were prevalent in both directions. It can reasonably be assumed that such connections were in existence from the earliest migrations to the area. The Iranun groups, standing between both Maranaw and Magindanaw, perhaps served for centuries as an intermediary between them and remained subject to linguistic influence from both sides.

2. THE PHONEMIC SYSTEMS

Certain basic facts concerning the phonological structure of the living languages are helpful for a proper understanding of the Proto-Danaw reconstructions.

2.1. *ESSENTIAL ASPECTS OF MAR, MGD, AND IRN PHONOLOGIES*

McKaughan (1958) has described in part the phonemic system of MAR, and Lee (1962) has described, also in part, the phonemic system of the Buluan dialect of MGD. I have utilised both ananlyses for phonemic comparison, but with some modifications to be described later. At the time of writing, no phonemic statement was available for IRN. Consequently, I have prepared for it a tentative phonological analysis.

2.1.1. Consonants

The consonants of MAR, MGD, and IRN are little different from those in other Philippine languages (Table 1). With the exception of the phonemes /r/ and /ʔ/, the consonant systems of the three languages are almost identical.

Voiced and voiceless stops occur at the bilabial, alveolar, and velar points of articulation: /p,t,k,b,d,g/. The bilabial, alveolar, and velar nasals /m,n,ŋ/, also occur. There is a voiceless alveolar grooved fricative, /s/, and a voiced lateral, /l/. The alveolar flap, /ř/, occurs phonemically in MAR and IRN (symbolised throughout this text as /r/); but in MGD it occurs only as an allophone of /d/.

The glottal stop, /ʔ/, is phonemic in MAR, but it occurs only phonetically in MGD. In IRN, the glottal stop has been cited as a consonant by Constantino (1965); however, the data acquired for this study shows no evidence of its phonemic status. I shall interpret it tentatively,[5] according to my data, as phonetic.

TABLE 1

The Reflexes of PDAN Phonemes

PDAN	MAR	MGD	IRN
*p	p	p	p
*t	t	t	t
*k	k	k	k
*b	b,#(a)	b	b
*d	d,#	d	d
*g	g,#	g	g
*m	m	m	m
*n	n	n	n
*ŋ	ŋ	ŋ	ŋ
*s	s,#	s	s
*l	l	l	l
*r	r	l	r
*ʔ(b)	ʔ	#	#
*w	w	w	w
*y	y	y	y
*a	a	a	a
*ɨ	ɨ,a,u	ɨ	ɨ,a,#
*i	i	i	i,e
*u	u	u	u

(a) # indicates a null reflex.

(b) In MGD and IRN the glottal stop occurs phonetically, but not phonemically.

2.1.2. Semi-vowels

McKaughan (1958) analyses the non-syllabic high vocoids in MAR as vowels, and Lee (1962) does likewise for MGD. But there are objections to these interpretations on the grounds of the canonical syllable pattern.

The only non-suspect syllable pattern in the data for all three speech varieties -- (C)V(C) -- allows for only one vowel to a syllable and no more than two adjacent vowels in a sequence of syllables: e.g., MAR, MGD, IRN gapas *'cotton'* (CV.CVC); MGD mamaɨn *'areca nut'* (CV.CV.VC), etc. On the other hand, the vowel interpretation requires a syllable pattern of up to three vowels, with syllable sequences containing as many as five adjacent vowels (from Lee, 1962): E.g., MAR, MGD, IRN ma-yaw *'hot'*, interpreted as vowels, gives ma-iau (CV-VVV); MGD ɨg-kayawan *'will become hot'*, interpreted as vowels, gives ɨg-kaiauan (VC-CV.VVV.VC).

In contrast, treating the non-syllabic high vocoids as the semi-vowels /y/ and /w/ satisfies the canonical requirement: MAR, MGD, IRN ma-yaw is CV-CVC; MGD ɨg-kayawan is VC-CV.CV.CVC.

As will be seen, there are also historical reasons for the semi-vowel interpretation, in that /y/ and /w/ appear to be inherited forms of earlier semi-vowels. Failure to identify inherited semi-vowels confuses the distinction between syllabic and non-syllabic functions of the high vocoids both in the proto-forms and in their reflexes.

For these reasons, I have adopted the semi-vowel interpretation as the best analysis for the Danaw non-syllabic high vocoids. The phonemic notation of McKaughan for MAR is modified to reflect this interpretation in the wordlists.

2.1.3. Vowels

MAR, MGD, and IRN all share a similar, or parallel, four-vowel system, viz: /a,ɨ,i,u/ (Table 1). All the languages show a marked variation in vowel quality. McKaughan (1967:ix) states that in MAR, the high back vowel varies from [o] to [u], and the high front vowel varies from [i] to [e]. In MGD, Eck (1974:125) reports that allophonic variation between [i] and [ɪ] "tends to appear" in vertain environments for /I/, and free variation occurs in all environments between [ɨ̈] and [u], suggesting similar vowel quality variations. In fieldwork[6] conducted with both Magindanaw and Iranun speakers, I have observed pronounced variation of /u/ between [o] and [u], and some variation of /i/ between [I] and [ɪ].

The central vowel, /ɨ/, also varies, ranging from mid to high (Lee 1962:65; McKaughan 1967:ix). In IRN, I have further observed the variation of the low central vowel, /a/, from [a] to [ʌ]: E.g., [mag-anad ∿ mag-ʌnad] *'to practice'*; [pɨ-ndadarɨmɨt ∿ pɨ-ndʌdarɨmɨt] *'is playing'*.

2.2. *THE PHONEMIC SYSTEM OF PROTO-DANAW*

The reflexes of the Proto-Danaw phonemic system reveal only minimal sound change in the daughter languages. The proto-phonemes *r, *ʔ, *i, and *ɨ are the only ones evidencing developmental changes. The rest of the proto-phonemes show no phonemic change. (Refer to Table 1.)

In the illustration of each **proto-phoneme** that follows, the numbered examples refer to the reconstruction list (Section 4) and are arranged in an order that shows first, stem-initial position of the proto-phoneme; second, intervocalic position; and third, stem-final position. Following this, phoneme **clusters** are cited, which demonstrate each type of combination within a stem that has been found in the data.[7] A statement is also given of any discrepancies that occur. Conventions employed in the reconstructions and language citations are described in Section 4. For the sake of brevity, the examples shown here do not give all the comparative data contained in the individual entries of the construction list.

2.2.1. Proto-consonants

2.2.1.1. *p

In MAR, MGD, and IRN: *p → p/all environments.

192. *palad *'palm (of hand)'*. MAR, MGD, IRN palad.

310. *upis *'bark, peeling, shell'*; MAR, MGD, IRN upis.

269. *tagiɨp *'dream'*. MAR, MGD tagiɨp; IRN tagiɨp-ɨn.

257. (*)simpit *'narrow'*. MAR, MGD ma-simpit.

2.2.1.2. *t

In MAR, MGD and IRN: *t → t/all environments.

286. *tian *'belly'*. MAR, MGD, IRN tian.

101. *itɨm *'black'*. MAR, MGD, IRN ma-itɨm.

229. (*)raŋit *'anger'*. MAR raŋit; IRN ka-ra-raŋit-an.

134. *lantay *'floor'*. MAR *('bridge, floor')*, MGD lantay.

297. *udtu *'noon'*. MAR ma-utu; MGD, IRN ma-udtu.

Note reduction of the *dt cluster in MAR. (See Section 2.2.1.5.)

2.2.1.3. *k

In MAR, MGD, and IRN: *k → k/all environments.

109. *kalut *'dig'*. MAR kalut; MGD, IRN pɨg-kalut.

322. *waka *'abaca (Manila hemp)'*. MAR, MGD, IRN waka.

107. (*)kaɨk *'fear (v)'*. MAR kaɨk; IRN kaɨk-an.

189. *ŋka *'thy, thine'*. MAR, IRN ŋka; MGD niŋka.

282. *tɨgkaw *'steal'*. MAR *('sudden')* paN-tɨkaw; MGD paN-tɨgkaw; IRN tɨgkaw.

2.2.1.4. *b

(a) In MGD and IRN: *b → b/all environments.

(b) In MAR: *b → $\left\{\begin{matrix}\text{null/V\_\_\_C}\\ \text{b/elsewhere}\end{matrix}\right\}$ where:C is bilabial

30. *baka? *'chin'*. MAR baka?; MGD, IRN baka.

77. *gabun *'cloud'*. MAR, MGD, IRN gabun.

233. *rarɨb *'chest'*. MAR rarɨb; MGD laɨb; IRN rarub.

246. *sambɨr *'wind'*. MAR *('blow')*, IRN sambɨr; MGD sambɨl.

267. *t(a,ɨ)bpul *'dull, as a knife'*. MAR tɨpul; MGD ma-tabul; IRN ma-tabpul.

Discrepencies: MAR ga-gawl?i < PDAN *-gabi(?)i *'night'* has /w/ where /b/ is expected. (See discussion of PDN *w from PPH *b, Section 3.4.1.1.)

2.2.1.5. *d

(a) In MGD and IRN: *d → d/all environments.

(b) In MAR: *d → $\left\{\begin{matrix}\text{null/V\_\_C}\\ \text{d/elsewhere}\end{matrix}\right\}$ where: C is alveolar

66. *da? *'none'*. MAR da?; MGD, IRN da.

74. *duda? *'spit'*. MAR duda?; MGD, IRN pɨn-duda.

261. (*)s(ɨ)bu(d) *'fat(adj.)'*. MAR sɨbu?; MGD ma-subud; IRN ma-sɨbud.

1. *adsɨm *'sour'*. MAR m-asɨm; MGD m-adsɨm; IRN m-adsum.

54. *buludtu *'rainbow'*. MAR bulutu; MGD, IRN buludtu.

10. *(a)nda *'where?'*. MAR anda; IRN nda; MGD ndaw.

244. *salday *'comb'*. MAR, MGD, IRN salday.

2.2.1.6. *g

(a) In MGD and IRN: *g → g/all environments.

(b) In MAR: $*g \rightarrow \begin{Bmatrix} \text{null/V\_\_C} \\ \text{g/elsewhere} \end{Bmatrix}$ where: C is velar

77. *gabun *'cloud'*. MAR, MGD, IRN gabun.

241. *sagiŋ *'banana'*. MAR, MGD, IRN sagiŋ.

88. *ɨdtug *'throw'*. MAR ɨtug; MGD bɨg-ɨdtug; IRN ɨ-pag-ɨdtug.

282. *tɨgkaw *'steal'*. MAR *('sudden')* paN-tɨkaw; MGD paN-tɨgkaw; IRN tɨgkaw.

185. *ŋgay *'give'*. MAR, IRN ŋgay; MGD lɨŋgay.

Discrepancies: IRN taŋgub-an < tagub *'sheath, for bolo'* has /ŋg/ where only /g/ is expected. Such elaboration of an original single consonant is known to occur in Philippine languages (Charles:1974:3).

2.2.1.7. *m

In MAR, MGD, and IRN: *m → m/all environments.

169. *mis *'sweet'*. MAR, MGD, IRN ma-mis.

172. *(n)amag *'tomorrow'*. MAR, IRN amag: MGD namag.

101. *ɨtɨm *'black'*. MAR, MGD, IRN ma-ɨtɨm.

263. (*)sumpat *'answer'*. MGD, IRN sumpat.

145. (*)lɨmbu? *'fat (n.)'* MAR lɨmbu?; MGD ka-lɨmbu-an.

2.2.1.8. *n

In MAR, MGD, and IRN: *n → n/all environments.

182. *niug *'coconut, ripe'*. MAR, MGD, IRN niug.

164. *manuk *'chicken'*. MAR, MGD, IRN manuk.

32. *balagɨn *'rattan'*. MAR, MGD, IRN balagɨn.

308. (*)untud *'sit'*. MAR untud; IRN pag-untud.

236. *rɨndiŋ *'wall'*. MAR *('curtain, screen')*, IRN rɨndɨŋ; MGD lɨndiŋ.

2.2.1.9. *ŋ

In MAR, MGD, and IRN: *ŋ → ŋ/all environments.

186. *ŋlbu *'thousand'*. MAR, IRN sa-ŋlbu; MGD ŋibu.

273. *taŋila *'ear'*. MAR, MGD, IRN taŋila.

188. *ŋiruŋ *'nose'*. MAR, IRN ŋiruŋ; MGD ŋiluŋ.

245. *(s,t)aliŋgi? *'turn, revolve'*. MAR saliŋgi?; MGD, IRN pɨd-taliŋgi

189. *ŋka *'thy, thine'*. MAR, IRN ŋka; MGD niŋka.

Discrepancies: (1) IRN nipan < *ŋipɨn *'teeth, tooth'* has /n/ where /ŋ/ is expected.

2.2.1.10. *s

(a) In MGD and IRN: *s → s/all environments

In MAR *s → { null/ V__C ; s/elsewhere } where: C is alveolar

258. *sipa? *'kick'*. MAR sipa?; MGD sipa; IRN sipa-n.

260. *sisiŋ *'ring'*. MAR, MGD, IRN sisiŋ.

281. *tɨgas *'hard (substance)'*. MAR, MGD, IRN ma-tɨgas.

16. *asla? *'big'*. MAR m-ala?; MGD, IRN m-asla.

67. *dɨds(ɨ?)an *'shore'*. MAR *('beach')* dɨsɨ?an; MGD dɨdsan; IRN dadsan.

2.2.1.11. *l

In MAR, MGD, and IRN: *l → l/all environments.

149. *lig *'neck'*. MAR, MGD, IRN lig.

117. *kasili *'eel'*. MAR, MGD, IRN kasili.

43. *bidsul *'burn'*. MAR bisul; MGD bɨN-bidsul; IRN pɨN-bisul.

244. *salday *'comb'*. MAR, MGD, IRN salday.

16. *asla? *'big'*. MAR m-ala?; MGD, IRN m-asla.

Discrepancies: MGD tapidak < *tapilak *'scar'* has /d/ where /l/ is expected.

2.2.1.12. *r

(a) In MAR and IRN: *r → r/all environments.

(b) In MGD: *r → l/all environments.

239. *rugu? *'blood'*. MAR rugu?; MGD lugu; IRN rugu.

313. *uriŋ *'charcoal'*. MAR, IRN uriŋ; MGD uliŋ.

121. *kɨmɨr *'finger'*. MAR kɨmɨr; MGD kɨmɨl; IRN kamar.

Although consonant clusters with r do occur in the daughter languages, the study corpus does not provide sufficient evidence for reconstruction.

2.2.1.13. *?

(a) In MAR: *? → ?/ $\left\{\begin{matrix} V\_\_V^{8} \\ V\_\_\#^{9} \end{matrix}\right\}$

(b) In MGD and IRN: *? → null/ $\left\{\begin{matrix} V\_\_V \\ V\_\_\# \end{matrix}\right\}$

230. *ra?ɨt[27] *'bad'*. MAR ma-rata?; IRN ma-rata; MGD ma-lat.

27. *baga? *'lungs'*. MAR baga?; MGD, IRN baga.

PDAN *? does not occur phonemically in word-initial position following pause,[10] nor does it occur in consonant clusters word-medially.

2.2.1.14. *w

In MAR, MGD, and IRN: *w → w/all environments.

323. *walay *'house'*. MAR, MGD, IRN walay.

139. *lawas *'body'*. MAR, MGD, IRN lawas.

194. *palaw *'mountain'*. MAR, MGD, IRN palaw.

There are no cases of consonant clustering with /w/ within a word stem.

Discrepancies: MAR balay *'building'*, walay *'house'*; basa? ∿ wasa? *'wet'*; bata? ∿ wata? *'child'*; batu ∿ watu *'stone'* appear to be doublets reflecting PDAN *w (<PPH *b). Since it is certain from the evidence that a conditioned sound change of PPH *b > PDAN *w did occur, the possibility of Maranaw borrowing b-initial words cannot be excluded. Borrowing sources in contact with Maranaw include Manobo, Cebuano, Kalagan, Mansakan, Subanon, and Tausug.

2.2.1.15. *y

In MAR, MGD, and IRN: *y → y/all environments

328. *yaw *'hot (as water)'*. MAR, MGD, IRN ma-yaw.

142. *layug *'fly (v.)'*. MAR layug; MGD ɨb-layug; IRN pɨ-layug.

126. *kiray *'eyebrow'*. MAR, IRN kiray; MGD kilay.

There are no cases of consonant clustering with /y/ within a word stem.

2.2.2. Proto-vowels

2.2.2.1. *a

In MAR, MGD, and IRN: *a → a/all environments.

5. *alad *'fence'*. MAR, MGD, IRN alad.

23. *babak *'frog'*. MAR, MGD, IRN babak.

35. *basa *'word'*. MAR, MGD, IRN basa.

140. (*)lawasaig *'river'*. MAR, IRN lawasaig.

37. *bau *'smell'*. MAR bau; MGD bɨg-abau; IRN ka-bau.

Discrepancies: MAR pɨtɨd < *pɨdtad *'sand'*; tɨpul < *tabpul *'dull, as a knife'* have /ɨ/ where /a/ is expected.

2.2.2.2. *ɨ

(a) In MGD: *ɨ → ɨ/all environments.

175. *ndarɨmɨt *'play'*. MAR *('gamble')* ndarɨmɨt; MGD pɨ-ndalɨmɨt; IRN pɨ-ndarɨmɨt.

PDAN *ɨ does not occur word-initially, word-finally, nor in vowel clusters. However, the PDAN sequence *-V?ɨ- has a reflex, -Vɨ-, in MGD in two forms: sets 163 and 47, below. Note also the ambiguous *-(ɨ?)V- in set 67 below.

(b) In MAR: *ɨ → $\left\{\begin{array}{l} a/a?\_\_C \\ u/u?\_\_C \\ ɨ \text{ elsewhere} \end{array}\right\}$

163. *mama?ɨn *'areca nut'*. MAR mama?an; MGD mamaɨn.

47. *bitu?ɨn *'star'*. MAR bitu?un; MGD bituɨn; IRN bitun.[11]

67. *dɨds(ɨ?)an *'shore'*. MAR *('beach')* dɨsɨ?an; MGD dɨdsan; IRN dadsan.

(c) In IRN: *ɨ → $\left\{\begin{array}{l} a/ \quad \left\{\begin{array}{l} C_1\_\_C_2a \\ C_1\_\_C_2u \end{array}\right\} \text{ in stressed penults.}[11] \\ \text{null/} \quad \left\{\begin{array}{l} *V?\_\_ \\ *\_\_?V \end{array}\right\} \\ ɨ/\text{elsewhere} \end{array}\right\}$

where $C_1 \neq /l/$.

31. *bakɨrɨŋ *'throat'*. MAR bakɨrɨŋ; MGD bakɨlɨŋ-an; IRN bakaraŋ-an.

285. *tɨŋ(g)aw *'cold'*. MAR ma-tɨŋgaw; MGD ma-tɨŋaw; IRN ma-taŋaw.

280. *tɨbu *'sugar-cane'*. MAR, MGD tɨbu; IRN tabu.

210. *pɨnu? *'full (as of a container)'*. MAR pɨnu?; MGD pɨnu; IRN panu.

176. *nɨm *'six'*. MAR, MGD, IRN nɨm.

See also sets 47 and 67 cited above for examples of *ɨ > null.

Discrepancies: (1) A small set of IRN forms have /a/ where /ɨ/ is expected:[12] bal < *bɨl *'smoke'*; ma-dakal < *dakɨl *'many'*; kamar < *kɨmɨr *'finger'*; pɨg-kamas < *kɨmɨs *'squeeze'*; nipan < *ŋipɨn *'tooth, teeth'*; pi-pirak < *-pi(d,r)ɨk *'eyelashes'*; tanak < *tɨnɨk *'thorn'*; uripan < *uripɨn *'slave'*. (2) IRN rarub < *rarɨb *'chest'*; m-adsum < *adsɨm *'sour'* have /u/ where /ɨ/ is expected.

2.2.2.3. *i

In MAR, MGD, and IRN: *i → i/all environments.

94. *ilay *'see'*. MAR ilay; MGD bɨg-ilay; IRN pɨg-ilay.

20. *atiŋ *'sweat'*. MAR, MGD, IRN atiŋ.

117. *kasili *'eel'*. MAR, MGD, IRN kasili.

211. *pia *'good'*. MAR, MGD, IRN ma-pia.

182. *niug *'coconut, ripe'*. MAR, MGD, IRN niug.

2.2.2.4. *u

In MAR, MGD, and IRN: *u → u/all environments.

302. *ulad *'wide'*. MAR ma-ulad; MGD, IRN m-ulad.

305. *ulug *'fall (drop)'*. MAR ulug; MGD i-ulug; IRN ka-ulug.

304. *ulu *'head'*. MAR, MGD, IRN ulu.

49. *buanaw *'wash hands'*. MAR buanaw; MGD bɨN-buanaw; IRN pɨN-buanaw.

3. RELATIONSHIPS WITHIN THE DANAW GROUP

It was posited earlier in this paper that Maranaw, Magindanaw, and Iranun form a subgroup of Philippine languages, termed Danaw, which are genetically closer to each other than to any language outside the subgroup. I now give the basis for this assumption, and investigate the genetic connections among the three Danaw members.

3.1. *THE SUBGROUPING HYPOTHESIS*

Subgrouping analysis suggests that IRN holds an approximately equal genetic relationship to both MAR and MGD, and that the latter two are

both closer to IRN than they are to each other. This analysis asserts that IRN must have derived from a mix of intermediate speech forms stemming from both MAR and MGD, after these underwent a two-way split. Three lines of evidence advance this hypothesis: (1) lexicostatistical analysis; (2) functor analysis; and (3) shared phonological, morphological and lexical features.

3.2. *LEXICOSTATISTICAL ANALYSIS*

Cognate percentages relating MAR, MGD, and IRN were obtained using (a) the Reid 372-meaning list (Reid 1971); and (b) a modified Swadesh 100-meaning list (Appendix). The results are shown in Table 2.

TABLE 2

Lexicostatistical Comparisons of Danaw

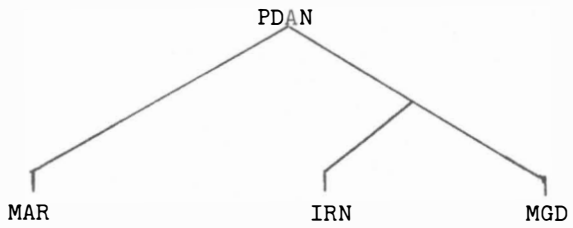
MAR	MAR
65.6 IRN	78.3 IRN
60.2 71.3 MGD	66.8 77.1 MGD
(a) Reid-372	(b) Swadesh-100

A comparison of the two sets of scores shows that the Reid percentages are considerably lower than the Swadesh percentages, as might be expected from a list which has not been compiled on the basis of high retention values. The scores in both sets are interpreted as representing three distinct languages rather than dialects.[13] Henceforth, therefore, the Danaw speech varieties will be referred to as languages.

Looking at the percentages based on the Reid list, one observes that the highest scores of MGD and IRN are with each other (71.3%). In comparison with this, the score of MGD with MAR (60.2%) is significantly different.[14]

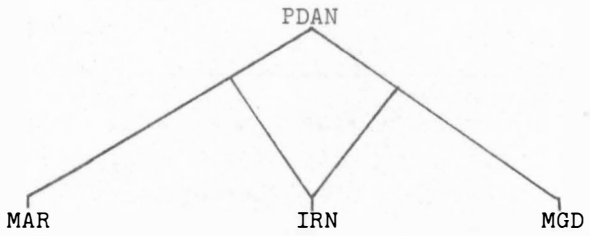
This implies that MGD and IRN are more closely related to each other than either are to MAR; the results may be interpreted in the following family tree:

(1)



Turning to the percentages based on the Swadesh list, it can be seen that the score of IRN with MAR (78.3%) is very close to the score of IRN with MGD (77.1%), placing IRN almost equidistant between its two sister languages. The MAR-MGD score (66.8%) is significantly lower than the scores of both IRN-MAR and IRN-MGD. This implies another interpretation of genetic relationship, described by the following family tree:

(2)



Tree (2) represents a mix of two intermediate (post-PDAN) speech forms, with their ultimate crystallisation into one later form, IRN. The question naturally arises: Which tree is most likely to be an accurate representation of genetic relatedness? The answer ought to be obtained by investigating each possible language pair for shared linguistic features, to see if there is qualitative evidence in favour of one tree over another. The subgrouping hypothesis already posited (Section 3.1.), represented by tree (2) above, was arrived at in this fashion. The areas of investigation included functors, phonology, morphology, and lexicon.

3.3. *FUNCTOR ANALYSIS*

The Reid-372 and Swadesh-100 lists comprise mostly contentives and are drawn, therefore, from a large, open group of forms. Functors, on the other hand, represent a closed set of language-specific forms that are essentially grammatical items. Some linguists look at functors as more stable, i.e., as having a low probability of replacement (McFarland 1974:122). Zorc (1975:226) sees functors as less likely to be retentions, and therefore more useful as subgroup indicators.

For this study I have compared a set of 100 qualitative items, consisting primarily of functors, plus a few forms that are either functor-like or may have some value in subgrouping (Appendix 2). Because the Danaw members are so closely related, I based the comparison on a principle of strict morphological identity (following Zorc 1974b:8). Forms are not counted as cognate if they differ in formation, even though they share an etymon in part. Thus MAR anda *'where?'* is in part shared by MGD nda, but the MGD form appears innovative by its loss of initial /a/ and is counted as noncognate. The results of the comparison are given in Table 3(a).

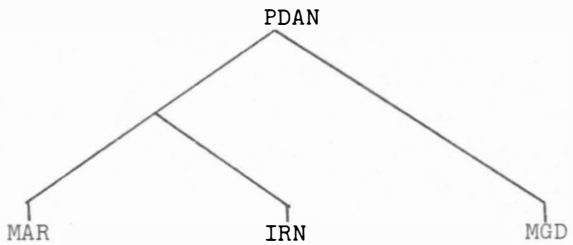
TABLE 3

Comparison of Danaw Functors and Qualitative Forms

MAR	MAR
74.5 IRN	69.4 IRN
56.5 67.2 MGD	54.4 65.6 MGD
(a) 100 forms	(b) 80 forms

The percentages resulting from the functor analysis agree with the lesicostatistical results in placing MAR-MGD considerably farther from each other than either are from IRN. However, the score of IRN with MAR (74.5%) is here greater by 7.3 percentage points than the score of IRN with MGD (67.2%). The results imply yet another possibility for subgrouping, viz:

(3)



The reason for the apparent disparity between the lexicostatistical and functor analyses appears to reside in the composition of the functor list. If a functor comparison is to reflect an accurate relationship of the grammatical core it appears axiomatic that it must reflect all sectors of the core. Ideally, all functors should be represented in the comparison, since if one sector is fully represented, but another only partially so, the results would appear to be distorted. In fact, this is what appears to have happened in the present analysis.

Since complete data were not available, the functor list contained only three verbal affixes, and an incomplete set of grammatical markers, whereas 25% of the forms were pronominals. If we allow for this unbalance, a more accurate relationship should emerge.

To test this notion I removed that 20% of the corpus consisting of pronouns and recalculated the percentages using an 80-form corpus. The results are shown in Table 3(b). IRN has now moved back toward a midposition between MAR and MGD, with a difference of only 3.8 percentage points. The results are in relative agreement with the Swadesh lexicostatistical scores, implying the grouping described by tree (2).

3.4. *PHONOLOGICAL INNOVATIONS*

Phonological innovations have been isolated in the Danaw languages, representing (1) those that occurred in Proto-Danaw prior to the development of the daughter languages and that were subsequently inherited by all three languages; and (2) those that developed in the daughter languages subsequent to Proto-Danaw and are shared by some, but not all, of the languages.

3.4.1. Phonemic Change in Proto-Danaw

A significant phonological development in Proto-Danaw was the merger of conditioned reflexes of PPH *b with PPH *w. This also had secondary effects leading to the loss in PDAN of a stem-initial reflex of PPH *b.

3.4.1.1. *PDAN *b - *w Merger*

PPH *b → PDAN *w/*__a.$C_1V(C_2)$

Where: (1) $C_1 \neq$ *?
(2) Reduplicated monosyllabic stems are excluded.
(3) $C_1V(C_2)$ is an ultimate syllable.

Contrastive stress and/or length appear to have been factors in this change also. All the PDAN forms that do not show a *b - *w merger in the above environment have PPH etyma with lengthened penultimate syllables (where PPH length and stress have been reconstructed). However, the set of forms that exhibits the change is mixed, having PPH etyma with both lengthened and unstressed penultima. Stress for PDAN forms could not be reconstructed from the data available to me during my comparison. The following examples of this merger occur in the corpus:

320. PPH *ʔaba:Ra *'shoulder'* PDAN *waga > MAR, MGD, IRN waga.

321. PPH *baRɨʔ *'boil, infection'* > PDAN *waga(ʔ) > MGD ma-uwaga. IRN ma-waga.

322. PPH *abaka *'abaca, Manila hemp'* > PDAN waka > MAR, MGD, IRN waka.

323. PPH *bálay *'house'* > PDAN *walay > MAR, MGD, IRN walay; cf. MAR (building) balay.

325. PPH *básaʔ *'wet'* > PDAN *wasaʔ > MAR ma-wasaʔ; MGD, IRN ma-wasa.

326. PPH *ba:taʔ *'child'* > PDAN *wataʔ > MAR wataʔ; MGD, IRN wata.

327. PPH *batú *'stone'* > PDAN *watu > MAR, MGD, IRN watu.

Typical examples in which the merger does not occur are:

26. PPH *ba:buy *'pig'* > PDAN *babuy > MAR, MGD, IRN babuy.

27. PPH *ba:Ra? *'lungs'* > PDAN *baga? > MAR baga?; MGD, IRN baga.

34. PPH *ba:lu *'widow'* > PDAN *balu > MAR, MGD, IRN balu.

Additional examples can be found in the list of reconstructions (Section 4.).

There are also three examples in the data in which a PDAN intervocalic *w appears to reflect PPH *b:

21. PPH *abaŋ *'canoe'* > PDAN *awaŋ > MAR *('boat')*, MGD, IRN awaŋ.

48. PPH *gibaŋ *'left'* > PDAN *(b,d)iwaŋ > MAR diwaŋ; MGD biwaŋ.

249. PPH *sabaw *'soup'* > PDAN *sawaw > MAR, MGD sawaw.

3.4.1.2. *PDAN Loss of Stem-Initial Consonant*

Apparently the change of PPH *b to PDAN *w occurred not only in the environment stated above, preceding PDAN *a, but also in a similar environment preceding PDAN *u. However, when the *w reflex occurred before *u it was lost. This produced a set of PDAN forms which show null for PPH *b. Thus:

PPH *b → PDAN null/*__u.$C_1V(C_2)$

Where: (1) $C_1 \neq$ *?
(2) Reduplicated monosyllables are excluded.
(3) $C_1V(C_2)$ is an ultimate syllable.

The following examples occur in the data:

299. PPH *bɨR?at *'heavy'* > PDAN *ugat > MGD, IRN ma-ugat.

302. PPH *bɨlaj *'spread out'* > PDAN *ulad *'wide'* > MAR ma-ulad; MGD, IRN m-ulad.

303. PPH *bu:lan *'moon'* > PDAN *ulan > MAR ulan, MGD, IRN ulan-ulan.

309. PPH *bu:ŋa *'fruit'* > PDAN *uŋa > MAR, MGD, IRN uŋa.

311. PPH *bu:Dak *'flower'* > PDAN *urak > MGD ulak, IRN urak.

315. PPH *bɨsuR *'full, satiated'* > PDAN *usug > MAR, MGD, IRN usug.

Note that in sets 299, 302 and 315, the hypothetical intermediate form (*wɨ-) appears to have affected the PDAN reflex of PPH *ɨ, which is reflected in other contexts as PDAN *ɨ. Thus, e.g. PPH *bɨR?at > (*)wɨR?at > PDAN *ugat.

Representative forms in which PPH *b does not go to PDAN *w before *u (and consequently there is no loss of a stem-initial consonant) are as follows:

55. PPH *buluŋ *'medicine'* > PDAN (*)buluŋ > MAR, IRN buluŋ.

57. PPH *bunu? *'stab, butcher'* > PDAN *'fight'* *bunu? > MAR bunu?; MGD, IRN pɨm-bunu.

Additional examples can be found in the list of reconstructions (Section 4.).

3.4.2. Phonemic Changes in MAR, MGD, and IRN

In the daughter languages, phonemic changes subsequent to PDAN are shared by IRN with both MAR and MGD. In addition, MAR and MGD show independent changes. This pattern of development is consistent with the genetic connections described by tree (2). A summary of these developments, drawn from section 2.2., but organised topically for greater ease of comparison, is presented here.

3.4.2.1. *MAR-IRN Vowel Assimilation*

MAR and IRN share a similar phenomenon of vowel assimilation -- i.e., *ɨ > a -- although not in identical environments.

In MAR the *ɨ reflex is assimilated to /a/ or /u/ following /a?/ or /u?/, respectively. Thus in MAR:

$$*ɨ \rightarrow \left\{ \begin{array}{l} a/a? \_\_\_C \\ u/u? \_\_\_C \\ ɨ \text{ elsewhere} \end{array} \right\}$$

For examples see sets 47, 67 and 163.

In IRN the *ɨ reflex is assimilated to /a/ in a stressed penult when followed by a consonant plus /a/ or /u/, unless the consonant immediately preceding the *ɨ reflex is /l/. Thus, in IRN:

$$*ɨ \rightarrow \left\{ \begin{array}{ll} a/ & \left\{ \begin{array}{l} C_1 \_\_\_\_\_ C_2{}^a \\ C_1 \_\_\_\_\_ C_2{}^u \end{array} \right\} \text{in stressed penults} \\ ɨ \text{ elsewhere} & \end{array} \right\} \quad \text{where: } C_1 \neq /l/$$

Examples are shown in sets 31, 67, 210, 280, 285.

3.4.2.2. *MGD-IRN Glottal Stop Loss*

PDAN had a phonemic *? in the intervocalic and word-final positions, but not in the word-initial position. While MAR retained *? reflexes in these same positions, MGD and IRN lost the phonemic *? altogether. Thus, in MGD and IRN:

$$*? \rightarrow \text{null} / \left\{ \begin{array}{l} V\_\_\_V \\ V\_\_\_\# \end{array} \right\}$$

Examples occur in sets 47, 58, 85, 113, 196, 202, 230, 275.

3.4.2.3. *MGD r-l Merger*

PDAN *r and *l merged in all environments as MGD l, but remained unchanged in MAR and IRN. Thus, in MGD:

*r → l/ all environments.

Examples are sets 28, 31, 80, 82, 116, 223, 224, etc.

3.4.2.4. *MAR Consonant Cluster Reduction*

Within a word base, PDAN consonant clusters with a voiced stop (*b, *d, *g) or alveolar grooved fricative (*s) as the first element undergo reduction in MAR, thus:

*b, *d, *g, *s → null/V____C

Where: C is a consonant at the same point of articulation as the first element in the cluster.

Examples are sets 1, 16, 54, 267, 282.

3.5. *MORPHOLOGICAL FEATURES*

In its morphological structure also, IRN shares several features with both MAR and MGD, reflecting a pattern similar to that established in the phonological and functor systems. The evidence to be considered here includes the deictics and a set of verbal affixes.

3.5.1. Deictics

The pronominal and locative deictic systems are as follows:

	MAR	MGD	IRN	PDAN
this (proximate)	glaya/gla?l	nlya bay	glaya	*glaya
that (nearby)	glanan	namba	glanan	*glanan
that (remote)	glutu	nan bay	glutu	*glutu
here (proximate)	saya/sl?l	nlya	saya	*saya
there (nearby)	san	nan	san	*san
there (remote)	ru?u	ntu/lu	ru	*ru?u

The deictic proto-bases are *-ya *'proximate'*; *nan *'nearby'*; and *-tu *'remote'*. These are quite old, probably Proto-Sulic, being represented in numerous Philippine languages. Their reflexes are shared by all three Danaw members.

MAR and IRN generate their pronominal deictics similarly from the reflexes of the deictic proto-bases plus the formative prefix giV-. This leads to a hypothesis that the parent system may have operated on the basis of vowel harmony:[15] When *giV- was added to a base, the vowel chosen for -V- was determined by the base vowel. Thus *giV- + *-ya = *giaya *'this'*; *giV- + *nan[16] = *gianan *'that (nearby)'*; *giV- + *-tu = *giutu *'that (remote)'*. (MAR exhibits two forms for the pronominal proximate deictic, one of which gia?i, has a cognate form in ha?i).

MGD generates its three pronominal deictics from reflexes of *nan, *-ya, and the marking particle *bay. Thus, IRN nan + -ya + bay = niya bay; nan + ba (< *bay) = namba; nan + bay = nan bay. The form niya would derive from the intermediate *naniya (< *nan + *-ya) with shortening and consequent loss of na-. The form namba represents a development through assimilation of the nasal in the earlier form nanba. The remote form *-tu is here replaced by nan bay.

In the locative system MAR and IRN alike add reflexes of the locative formative *sa- to the proto-bases to give the proximate and nearby forms: sa- + -ya = saya *'here'*; sa- + nan = san *'there (nearby)'* (< *sanan, assuming shortening and loss of -an). For the remote form, reflexes of a suppletive, *ru?u, appear. (As in the pronominal set, MAR here also has two proximate forms, saya and si?i. The latter may be related to Manobo sɨ?i).

The MGD locatives follow the same pattern as that used for the pronominal system, the only difference being the deletion of the marking particle bay and the employment of a reflex of *-tu in the remote form (ntu < *nantu, through shortening). The *ru?u reflex, lu, also appears alongside ntu.

It is postulated that the MAR-IRN forms reflect the parent system. This being the case, MGD exhibits development in an independent direction, while MAR and IRN share common retentions.

3.5.2. Verbal Affixes

MGD and IRN manifest similar morphophonemic alterations of certain verbal affixes. In MGD, the prefix indicating present progression is {pɨG-}, where G represents a voiced consonant at the same point of articulation as the initial consonant of the word stem to which it joins; e.g.: pɨmbayu *'is pounding rice'*; pɨgkalut *'is digging'*; pɨdtalu *'is saying'*. {pɨG-} has several alternant shapes, including

(1) bɨg- ∿ pag- and (2) bɨ- ∿ pa-. The first pair stand in free variation before a vowel-initial stem: bɨganad ∿ paganad *'is learning'*; bɨgidtug ∿ pagidtug *'is throwing'*; bɨgikɨt ∿ pagikɨt *'is tying'*. The second pair, which also are in free variation, occur with and precede the distributive infix {-N-}. The morphophoneme {-N-} is a nasal at the point of articulation of the initial consonant of the word stem (which it replaces), or a velar nasal before initial vowels. Thus: bɨmidsul ∿ pamidsul (< bidsul) *'is burning'*; bɨŋuta ∿ paŋuta (< uta) *'is vomiting'*; bɨŋanup ∿ paŋanup (< anup) *'is hunting'*, etc.

In IRN the present progressive verbal prefix is also {pɨG-} where G represents a voiced consonant occurring under the same conditions as described above for MGD: pɨndarɨmɨt *'is playing'*; pɨdtarutaru *'is saying'*; pɨmbuayu *'is pounding rice'*. {pɨG-} has several allomorphs, including pɨ- ∿ pa-, which occur in free variation before the distributive infix {-N-}. The morphophoneme {-N-} has the same phonemic shapes under the same conditions as the MGD distributive marker. IRN shows the following typical alternations: pɨŋuta ∿ paŋuta (< uta) *'is vomiting'*; pɨmagapa ∿ pamagapa (< agapa) *'is waiting'*; pɨmipi ∿ pamipɨ *'is washing clothes'*, etc.

There is no corresponding alternation in the MAR present tense affix system.

3.6. *SHARED LEXICON*

The Danaw members share a sizeable number of lexical items on the basis of (1) form and/or semantics that are exclusive to the group; and (2) retentions from a parent language which do not occur in surrounding (adjacent) languages, and thereby serve to mark off the Danaw group. (Such retentions may occur elsewhere, but only in a clearly unrelated language.)

Without detailed knowledge of an extremely large number of languages it is not always possible to isolate these retentions from exclusively shared forms. Hence, in the following list of examples, a distinction is not made between the two. It represents, therefore, a qualitative list that underscores the genetic unity of the Danaw grouping.

The PDAN reconstruction is given first, and next its form in the daughter languages. Any pertinent comments are then supplied, followed by forms outside the PDAN grouping. It should be noted that the citation of outside proto-forms does not necessarily imply genetic connection.

2. *agag *'dry in sun (v.)'* > MAR, MGD, IRN agag. cf. PAN (*'sieve'*) *(?)agag > PPH (*'sift, grain or powder'*) *agag; cf. also PNEM *?aag-aag.

15. *a?i *'foot, leg'* > MAR a?i, MGD, IRN ay. cf. PAN *('leg, shank')* *pa?i.

18. (*)atag *'under'* > MAR, IRN atag. cf. Samal *('location directly opposite or under')* atag.

33. *baliŋ *'return home'* > MAR, MGD, IRN baliŋ. cf. PAN *('to wind')* *baliN.

42. *bɨnɨ(n,ŋ) *'forehead'* > MAR, MGD *('face')* bɨnɨŋ; IRN bɨnɨn.

61. *dadag *'lose'* > MAR *('astray')*, MGD, IRN dadag. cf. PNEM *('to fall off main part')* *dadag; Tausug *('to diminish')*, Mamanwa *('to fall off tree, as blossoms')* dagdag.

62. *dadtɨm *'rain cloud'* > MAR datɨm, MGD dadtɨm. cf. PPH *('cloudy')* *DaG?um > PNEM *dag?ɨm.

66. *da? *'none'* > MAR da?; MGD, IRN da. cf. PPH *waDa? > PBS *wada?; also cf. PBS *('don't)* da?a; Cotabato Manobo *('none')* nda?.

75. *dumpaw *'rat'* > MAR *('guinea pig')*, MGD, IRN dumpaw. May be related to PPH *aNbaw > PEM *?ambaw.

80. *gandɨr *'pull'* > MAR *('pull and give way suddenly')*, IRN gandɨr; MGD gandɨl.

85. (*)gura?uk *'cry, weep'* > MAR gura?uk, IRN gurauk.

88. *idtug *'throw'* > MAR itug; MGD, IRN idtug. cf. PBS *('yonder')* *?idtu.

89. *ig *'water'* > MAR, MGD, IRN ig. Note shape change through loss of initial syllable. cf. PSP *wahiR.

93. (*)ilaw *'rice, unhusked'* > MAR, IRN ilaw. cf. Central Bisayan *('uncooked, unripe')* hilaw.

94. *ilay *'see'* > MAR, MGD, IRN ilay.

102. (*)itu? *'small'* > MAR ma-itu?; IRN ma-itu. cf. PPH *[ ]intuk, *iNtɨk

106. (*)kala? *'laugh'* > MAR kala?; IRN kala. cf. Aklanon *('croaking of frogs')* kala?kala?.

140. (*)lawasaig *'river'* > MAR, IRN lawasaig. Probably lexical innovation. cf. PDAN *('body')* *lawas; PDAN *('water')* *ig; PSP *('water')* *wahiR.

144. (*)lɨman *'egg'* > MGD, IRN lɨman. cf. PNEM *('to brood over, sit on eggs')* *lumlum > Mamanwa, Surigaonon, Cebuano *('hatch eggs')* lumlum.

146. *lɨndu *'long (object)'* > MAR, MGD, IRN ma-lɨndu. cf. Cordilleran *?andu.

148. (*)llbubuk *'dust'* > MGD, IRN llbubuk. cf. PAN *lɨbu; PPH *?abuk; Tigwa Manobo ?allabuk; Binukid ?allyabuk.

154. (*)linu? *'swallow'* > MAR llnu?; IRN linu.

160. *luya irisin *'ginger'* > MAR luya pag-irisin, IRN luya irisin. cf. MAR *('pepper')* luya; PPH *lɨ?uya; PNEM *luy?a.

170. (*)mudul *'lip'* > MAR, IRN mudul. cf. PAN *('mouth')* *mulut.

178. *nipay *'snake'* > MAR, MGD, IRN nipay.

184. *ŋ(a,ɨ)ri? *'mouth'* > MAR ŋari?, MGD ŋall, IRN ŋri.

185. *ŋgay *'give'* > MAR, IRN ŋgay, MGD lɨŋgay. cf. PPH *bɨgɨy.

190. *pagɨna? *'hide'* > MAR pagna?, MGD, IRN pagɨna. cf. PSB *'to store, place'* *ɨnna?.

194. *palaw *'mountain'* > MAR, MGD, IRN palaw.

196. *pamana?i *'sew'* > MAR pamana?i, MGD, IRN pamanay. Shape change. cf. PPH *tahi?; cf. also reconstruction set 275.

206. (*)pasaŋ *'difficult'* > MAR *('intelligent')*, MGD, IRN ma-pasaŋ. PAN *('to arrange, prepare')* pasaŋ.

209. *pɨdtad *'sand'* > MAR pɨdtɨd, MGD, IRN pɨdtad. Note consonant cluster reshaping. cf. PPH *p(a)(N)ta(d) > PMAN *pantad; Subanon pɨntad.

216. *pita? *'morning'* > MAR ka-pi-pita?, MGD, IRN ma-pita-pita.

219. (*)pulaŋi *'river'* > MAR, MGD pulaŋi.

223. (*)rabi(n,ŋ) *'old (object)'* > MGD labiŋ, IRN rabin.

233. *rarɨb *'chest'* > MAR rarɨb, MGD lalɨb, IRN rarub[18]. cf. PPH dɨbdɨb.

240. *ruma *'spouse'* > MAR, IRN ka-ruma, MGD ka-luma. cf. PPH *('companion')* *Duma; *'Indonesian (house)'* rumah.

245. *(s,t)alŋgi? *'turn, revolve'* > MAR salŋgi?, MGD, IRN talŋgi. cf. PPH *('turn awry, askew')* *lŋi?.

246. *sambɨr *'wind'* > MAR *('blow')* IRN sambɨr, MGD sambɨl.

263. (*)sumpat *'answer'* > MGD, IRN sumpat. Possible reshaping of medial consonant cluster. cf. PPH *suŋbat, Inibaloy soŋbat, Isneg suŋba:t, Casiguran seŋbet.

274. *tapllak *'scar'* > MAR *('cast aside')*, IRN tapllak, MGD tapidak. cf. PPH *pi(gk)lat; PAN *('sore, scab')* *pil(a,i)k.

302. *ulad *'wide'* > MAR ma-ulad, MGD, IRN m-ulad. cf. PPH *('spread out, dry in sun')* *bilaj > Sarangani Manobo mi-bilad, Itneg ?a-bilad.

307. (*)umbi *'ashes'* > MAR, IRN umbi. cf. Western Bukidnon Manobo ?ibmuk.

308. (*)untud *'sit'* > MAR, IRN untud.

328. *yaw *'hot (as water)'* > MAR, MGD, IRN ma-yaw. cf. PPH *('broil, roast')* *ihaw.

3.7. *SUMMARY AND CONCLUSIONS*

Lexicostatistical analysis using the Reid and Swadesh-100 wordlists yields two different inferences for subgrouping the Danaw languages, as displayed in trees (1) and (2). An investigation of cognate functors, using an appropriately balanced set of forms representative of the grammatical core, gives results that are essentially the same as tree (2). By comparing similar linguistic features found in the phonology and morphology, qualitative evidence has been obtained that also supports a tree (2) interpretation. This evidence is tabulated in Table 4.

The prominent pattern here shows that IRN shares features about equally with both MAR and MGD, while the latter two have independent developments.

It seems reasonable to conclude that MAR and MGD, once dialects of a single language, separated and subsequently developed into individually distinct languages. During their divergence, intermediate speech forms from both MAR and MGD mixed together and eventually crystallised out into a third distinct linguistic entity, IRN.

TABLE 4

Summary of Danaw Shared Features

FEATURES SHARED	MAR	IRN	MGD
1. *ɨ > a	X	X	
2. *gɨV- pronominal formative	X	X	
3. *sa- locative formative	X	X	
4. *ʔ > null		X	X
5. pɨg- ∿ pag- alternation		X	X
6. *dC > C	X		
7. *r > l			X
8. -bay pronominal suffix			X
9. n- deictic formative			X

4. RECONSTRUCTIONS AND COGNATE SETS

The reconstructed PDAN lexical items appear in this section in alphabetical order, along with the cognate sets on which they are based.[17] Ambiguities in the reconstructed forms are indicated by parentheses. A single proto-segment enclosed by parentheses indicates that the segment is ambiguous with respect to zero. More than one proto-segment enclosed in parentheses and separated by commas indicates ambiguity among the segments cited. Such alternative segments are placed in alphabetical order. Enclosed segments not separated by commas represent phoneme clusters. A hyphen preceding a reconstruction indicates the existence of an unreconstructed morpheme.

In the language citations, affixes and reduplications are separated from stems by hyphens. Where a gloss of an individual language is different from the reconstructed gloss, the distinctive meaning is set off in parentheses following the language. Thus a meaning in parentheses applies only to the immediately preceding languages.

Reconstructions which have attesting cognate forms only in IRN and MGD or only in IRN and MAR should be noted, inasmuch as they represent an intermediate language stage subsequent to PDAN. These reconstructions are indicated by enclosing the asterisk in parentheses (*). Sometimes, however, it is possible to ascertain that a reconstruction

represents PDAN through language forms outside Danaw. Where this is the case, the attesting forms are cited for comparison after the Danaw forms.

An English index to the reconstructions, arranged alphabetically according to the English gloss, follows the list of reconstructed words.

4.1. *PROTO-DANAW RECONSTRUCTIONS*

1. *adsɨm *'sour'*. MAR m-asɨm; MGD m-adsɨm; IRN m-adsum; cf. PPH *?alsɨm.
2. *agag *'dry in sun (v.)'*. MAR agag; MGD bɨg-agag; IRN pɨg-agag.
3. (*)agɨt *'coconut, unripe'*. MGD, IRN agɨt; MAR bɨtɨŋ.
4. *aku *'I* (lsg. topic prn.)'. MAR, MGD, IRN aku.
5. *alad *'fence'*. MAR, MGD, IRN alad.
6. *alɨb *'knee'*. MAR lɨb; MGD, IRN alɨb.
7. *aluŋ *'shadow'*. MAR aluŋ; MGD, IRN aluŋ-aluŋ.
8. *ama? *'father'*. MAR ama?; MGD, IRN ama; cf. PPH *ama(?,h).
9. *anad *'learn'*. MAR, MGD, IRN *('practice')* pag-anad.
10. *(a)nda *'where?'*. MAR anda; IRN nda; MGD ndaw; cf. PPH *(a,ɨ)Nda.
11. (*)(a)ntuna?, (*)ŋɨn *'what?'* MAR antuna?a, ŋɨn; IRN ntuna; MGD ŋin.
12. *anup *'hunt'*. MAR anup; MGD bɨŋ-anup; IRN paŋ-anup.
13. (*)apug *'lime'*. MAR, MGD apug; IRN arina.
14. *apuy *'fire'*. MAR, MGD, IRN apuy.
15. *a?i *'foot, leg'*. MAR a?l; MGD, IRN ay.
16. *asla? *'big'*. MAR m-ala?; MGD, IRN m-asla; cf. Dibabawon Manobo ma-?aslag.
17. *asu *'dog'*. MAR, MGD, IRN asu.
18. (*)atag *'under'*. MAR, IRN atag; MGD ung, baba.
19. *atay *'liver'*. MAR, MGD, IRN atay.
20. *atɨŋ *'sweat'*. MAR, MGD, IRN atɨŋ.
21. *awaŋ *'canoe'*. MAR *('boat')*, MGD, IRN awaŋ; cf. PPH *abaŋ.
22. *awat *'far'*. MAR, MGD, IRN m-awat-an; cf. Mansakan ma-?awat; PPH *('separate')* *awat.
23. *babak *'frog'*. MAR, MGD, IRN babak.
24. *baba? *'short (object)'*. MAR *('short, low')* ma-baba?; MGD ma-baba; cf. PPH *('below')* *baba?.

25. *babay *'woman, female'*. MAR, MGD, IRN babay; cf. PPH *báyi.

26. *babuy *'pig'*. MAR, MGD, IRN babuy; cf. PPH *ba:buy.

27. *baga? *'lungs'*. MAR baga?; MGD, IRN baga; cf. PPH *ba:Ra?.

28. *bagɨr *'strong'*. MAR ma-bɨgɨr; MGD ma-bagɨl; IRN ma-bagɨr; cf. MAR *('to make strong')* bagɨr.

29. *bagu *'new'*. MAR *('renew')*; MGD, IRN bagu.

30. *baka? *'chin'*. MAR baka?; MGD, IRN baka.

31. *bakɨrɨŋ *'throat'*. MAR bakɨrɨŋ; MGD bakɨlɨŋ-an; IRN bakaraŋ-an.

32. *balagɨn *'rattan'*. MAR, MGD, IRN balagɨn.

33. *baliŋ a. *'live, dwell'*. MAR baliŋ; IRN pɨm-baliŋ.
b. *'return home'*. MAR baliŋ; MGD, IRN m-baliŋ-an.

34. *balu *'widow'*. MAR, MGD, IRN balu; cf. PPH *ba:lu.

35. *basa *'word'*. MAR, MGD, IRN basa.

36. *batuk *'cough'*. MAR, MGD, IRN batuk.

37. *bau[19] *'smell'*. MAR bau; MGD bɨg-abau; IRN ka-bau; cf. PPH *ba:hug.

38. *bau?u *'turtle'*. MAR bau?u; MGD, IRN bau; cf. PPH *ba?u?u.

39. *bayad *'pay** (v.)'. MAR bayad; MGD mayad; IRN mɨm-bayad.

40. (*)bɨgas *'rice, husked'*. MGD, IRN bɨgas; MAR margas; cf. PPH *bɨRas.

41. *bɨl *'smoke'*. MAR, MGD bɨl; IRN bal; cf. PPH *bɨbɨl.

42. *bɨnɨ(n,ŋ) *'forehead'*. MAR, MGD *('face')* bɨnɨŋ; IRN bɨnɨn.

43. *bidsul *'burn'*. MAR bisul; MGD bɨN-bidsul; IRN pɨN-bisul; cf. Ilianen, Western Bukidnon Manobo *('to burn a field')* binsul.

44. *bilaŋ *'count'*. MAR, MGD bilaŋ; IRN pɨm-bilaŋ.

45. *binaniŋ *'yellow'*. MAR, MGD, IRN binaniŋ.

46. *bisu *'deaf'*. MAR, MGD, IRN bisu.

47. *bitu?ɨn *'star'*. MAR bitu?un; MGD bituɨn; IRN bitun; cf. PPH *bitu:?ɨn.

48. *(b,d)iwaŋ *'left'*. MAR diwaŋ; MGD biwaŋ; cf. PPH *gibaŋ.

49. *buanaw *'wash hands'*. MAR buanaw; MGD bɨN-buanaw; IRN pɨN-buanaw.

50. *buaya *'crocodile'*. MAR, MGD, IRN buaya; cf. PPH *bu?aya; PSB *buayɨh.

51. *b(u)ayu *'pound rice'*. MAR *('pound with pestle')* buayu; MGD pɨm-bayu; IRN pɨm-buayu; cf. PPH *bayu.

52. *bubun *'thigh'*. MAR, MGD, IRN bubun.

53. *buk *'hair'*. MAR, MGD, lRN buk.

54. *buludtu *'rainbow'*. MAR bulutu; MGD, IRN buludtu.

55. (*)buluŋ *'medicine'*. MAR, IRN buluŋ; MGD gamut.

56. (*)bu(m,ŋ)bul *'feather, generic'*. MAR bumbul; MGD buŋbul; IRN lawi? cf.PPH *('pubescent hair')* *bulbul.

57. *bunu? *'to fight'*. MAR bunu?; MGD, IRN pɨm-bunu; cf. PPH *('stab, butcher')* *bunu?.

58. *bu?uŋan *'roof ridge'*. MAR bu?uŋan; MGD, IRN buŋan; cf. PPH *bubuŋ(an).

59. *but *'bite'*. MAR but; MGD bɨŋ-ɨbut; IRN pag-but-an. (Note discrepant addition of stem-initial /ɨ/ in MGD.)

60. (*)buta *'blind'*. MAR, IRN buta; MGD pɪsɨk.

61. *dadag *'lose'*. MAR *('astray')*, MGD, IRN dadag.

62. (*)dadtɨm *'rain cloud'*. MAR datɨm; MGD dadtɨm; IRN ma-libutɨŋ; cf. PPH *('cloudy')* *DaG?um.

63. *dakɨl *'many'*. MAR, MGD ma-dakɨl; IRN ma-dakal.

64. *dalɨm *'deep'*. MAR, MGD, IRN ma-dalɨm.

65. *dalig *'root'*. MAR *('large root, buttress')*, MGD, IRN dalig.

66. *da? *'none'*. MAR da?; MGD, IRN da; cf. PPH *waDa?.

67. *dɨds(ɨ?)an *'shore'*. MAR *('beach')* dɨsɨ?an; MGD dɨdsan; IRN dadsan.

68. *dɨkɨt *'stick (adhere)'*. MAR dɨkɨt; MGD, IRN pɨn-dɨkɨt.

69. *dɨn *'now, already* (completive particle) . MAR, MGD, IRN dɨn.

70. *dila? *'tongue'*. MAR dila?; MGD, IRN dila; cf. PPH *di:la?.

71. *dl? *'not (verbal)'*. MAR dl?; MGD, IRN di; cf. PPH *-di?, *diri?, *(h)lNdi?.

72. *dua *'two'*. MAR dua; MGD dua tlmun; IRN dua.

73. *dua-pulu? *'twenty'*. MAR dua-pulu?; MGD, IRN dua-pulu; cf. PPH *('ten unit')* *-pu:lu?.

74. *duda? *'spit'*. MAR duda?; MGD, IRN pɨn-duda; cf. PPH *('saliva')* *duDa?.

75. *dumpaw *'rat'*. MAR *('guinea pig')*, MGD, IRN dumpaw.

76. *-gabi(?)i *'night'*. MAR ga-gawi?i;[20] MGD, IRN ma-gabi; MAR *('day')* gawigi; cf. PPH *Rabii.

77. *gabun *'cloud'*. MAR, MGD, IRN gabun.

78. *gaduŋ *'green'*. MAR, IRN gaduŋ; MGD gadduŋ.[21]

79. *gaɨbɨk *'work'*. MAR gaɨbɨk; MGD, IRN pɨn-gaɨbɨk.

80. *gandɨr *'pull'*. MAR *('pull and give way suddenly')*, gandɨr; MGD pɨŋ-gandɨl; IRN pɨŋ-gandɨr.

81. *gapas *'cotton'*. MAR, MGD, IRN gapas.

82. *garaŋ *'sharp'*. MAR, IRN ma-garaŋ; MGD ma-galaŋ.

83. (*)gatɨl *'itch'*. MAR gatɨl; MGD *('itchy')* ma-gatɨl; IRN kukuut.

84. *gatus *'hundred'*. MAR, MGD, IRN ma-gatus.

85. (*)gura?uk *'cry, weep'*. MAR gura?uk; IRN pɨŋ-gurauk; MGD ullang.

86. *gusuk *'rib'*. MAR, MGD, IRN gusuk.

87. *gutɨm *'hunger'*. MAR, MGD, IRN gutɨm; cf.PPH *('in want, hungry')* *gutɨm.

88. *idtug *'throw'*. MAR itug; MGD bɨg-idtug; IRN i-pag-idtug.

89. *ig *'water'*. MAR, MGD, IRN ig.

90. *ikam *'mat'*. MGD, IRN ikam; cf. PMAN *?ikam.

91. *ikɨt *'tie, tether animal'*. MAR ikɨt; MGD bɨg-ikɨt; IRN pɨg-ikɨt; cf. PPH *hikɨt.[22]

92. *ikug *'tail'*. MAR, MGD, IRN ikug.

93. (*)ilaw *'rice, unhusked'*. MAR, IRN ilaw; MGD puluy; cf. Central Bisayan *('uncooked, unripe')* hilaw.

94. *ilay *'see'*. MAR ilay; MGD bɨg-ilay; IRN pɨg-ilay.

95. (*)imantu *'today'*. MAR, IRN imantu; MGD saguna.

96. *imatay *'kill'*. MGD m-imatay; IRN imatay-an; cf. PMAN *himatay.

97. *ina? *'mother'*. MAR ina?; MGD, IRN ina; cf. PPH *ina(?,h).

98. *inum, *inɨm *'drink'*. MAR inum; MGD bɨg-inɨm; IRN pɨg-inum; cf. PPH *inum; PMAN *?inum; PSEM *?inɨm.

99. *iŋutu *'delouse'*. MAR iŋutu; MGD bɨg-iŋutu; IRN pɨŋ-iŋutu.

100. *isa, *sa *'one'*. MAR, IRN isa; MGD sa[23]; MAR *('ten')* sa-wati?; MAR *('ten')*, IRN *('ten')* sa-pulu; cf. PAN *hisah, *hɨsah.

101. *itɨm *'black'*. MAR, MGD, IRN ma-itɨm.

102. (*)itu? *'small'*. MAR ma-itu?; IRN ma-itu; MGD ma-inut.

103. *ka *'thou* (2sg. topic prn.)'. MAR, MGD, IRN ka.

104. *ka-ga?i *'yesterday'*. MAR ka-ga?i; MGD, IRN ka-gay; cf. PEM *('previously, earlier')* *ka(ga)?ina.

105. *(kak)wak[24] *'crow'*. MAR, IRN kak-wak; MGD wak, uwak; cf. PSEM *?uwak; PPH *(?)uwak.

106. (*)kala? *'laugh'*. MAR kala?; IRN pig-kala; MGD pid-tutawa; cf. Aklanon *('croaking of frogs')* kala? kala?.

107. (*)kalik *'fear* (v.)'. MAR kalik; IRN kalk-an; MGD gidut.

108. *ka-luda(?) *'ladle (of coconut shell)'*. MAR ka-luda?; MGD, IRN ka-luda.

109. *kalut *'dig'*. MAR kalut; MGD, IRN pig-kalut.

110. *kami *'we* (1pl.excl. topic prn.)'. MAR, MGD, IRN kami.

111. *kan *'eat'*. MAR kan; MGD, IRN pig-kan.

112. *kanu *'when?'*. MGD, IRN kanu; cf. PPH *k(a,u)nu(h).

113. *kanu *'you* (2pl. topic prn.)'. MAR, MGD, IRN kanu.

114. *kanuku *'fingernail'*. MAR, MGD, IRN kanuku.

115. *kapal *'thick'*. MAR, MGD, IRN ma-kapal.

116. *karad *'cut, slice'*. MAR karad; MGD biN-kalad.

117. *kasili *'eel'*. MAR, MGD, IRN kasili.

118. *kawanan *'right'*. MAR, MGD, IRN kawanan.

119. *ka-ya? *'ashamed'*. MAR ka-ya?; MGD ka-ya; IRN ka-ya-n; cf. PPH *hiya?.

120. *kayu *'tree, wood'*. MAR, MGD, IRN kayu.

121. *kimir *'finger'*. MAR kimir; MGD kimil; IRN kamar.

122. *kimis *'squeeze'*. MAR *('grip with fist')* kimis; MGD pig-kimis; IRN pig-kamas.

123. *kina? *'not* (predicative)'. MAR kina?; IRN kana; MGD kuma; cf. Binukid, Dibabawon, Sarangani Manobo kina?.

124. *kilat *'lightning'*. MAR, IRN kilat; MGD lapalap; cf. PEM *kilat.

125. *(ki)nig *'hear'*. MAR nig; MGD kinig; IRN pama-kinig.

126. *kiray *'eyebrow'*. MAR, IRN kiray; MGD kilay.

127. *ku *'my, mine* (1sg. genetive prn.)'. MAR, MGD, IRN ku.

128. *kudin *'cooking pot'*. MAR, MGD, IRN kudin.

129. *kutu *'lice (head)'*. MAR, MGD kutu.

130. *(la)laguy *'run'*. MAR, IRN pa-la-laguy; MGD pa-laguy; cf. MAR *('hurry, rush')* laguy.

131. *(la)lakaw *'walk'*. MAR la-lakaw; MGD bɨ-lakaw; IRN pɨ-la-lakaw; cf. MAR *('footprint')* lakaw; PPH *lakaw.

132. *lalan *'trail'*. MAR, MGD, IRN lalan.

133. *lalawaʔ *'spider'*. MAR lalawaʔ; MGD, IRN lalawa; cf. PEM *lawaʔ.

134. *lantay *'floor'*. MAR *('bridge, floor')*, MGD lantay; IRN papan.

135. (*)laŋaw *'fly (insect)'*. MGD, IRN laŋaw; MAR tɨndɨk.

136. *laŋit *'sky'*. MAR, MGD, IRN laŋit.

137. *laŋun *'all'*. MAR, MGD, IRN laŋun.

138. *laŋuy *'swim'*. MAR laŋuy; MGD bɨ-laŋuy; IRN pɨ-laŋuy.

139. *lawas *'body'*. MAR, MGD, IRN lawas.

140. (*)lawasaig *'river'*. MAR, IRN lawasaig; MGD pulangi.

141. *layaʔ *'water container, bamboo'*. MAR layaʔ; MGD, IRN laya.

142. *layug *'fly* (v.)'. MAR layug; MGD ɨb-layug; IRN pɨ-layug.

143. *lɨbɨŋ *'bury (inter)'*. MAR lɨbɨŋ; MGD bɨ-lɨbɨŋ; IRN pɨ-lɨbɨŋ.

144. (*)lɨman *'egg'*. MGD, IRN lɨman; MAR urak, bIga?.

145. (*)lɨmbuʔ *'fat* (n.)'. MAR lɨmbuʔ; MGD ka-lɨmbu-an; IRN unavailable.

146. *lɨndu *'long (object)'*. MAR, MGD, IRN ma-lɨndu.

147. (*)lɨsuŋ *'mortar, for rice'*. MAR, MGD lɨsuŋ; IRN nduu.

148. (*)libubuk *'dust'*. MGD, IRN libubuk; MAR lupapɨk.

149. *lig *'neck'*. MAR, MGD, IRN lig; cf. PPH *li:ʔɨR.

150. (*)likud *'back'*. MAR, IRN likud; MGD taldas; cf. Itbayaten licud; Mamanwa likod; Binukid talikud-an.

151. *lima a. *'five'* MAR, MGD, IRN lima.
(*)lima b. *'hand'*. MAR, IRN lima; MGD ŋɨlay.

152. *linaw *'lake'*. MAR *('pond')*, MGD, IRN linaw.

153. *linug *'earthquake'*. MAR, MGD, IRN linug.

154. (*)linuʔ *'swallow'*. MAR linuʔ; IRN p-linu-n; MGD lɨmɨd.

155. *lipat(an) *'forget'*. MAR lipat; MGD lipatan-an; IRN ka-lipatan-an; cf. PMAN *lipat.

156. *lugasiŋ *'peanut'*. MAR, MGD, IRN lugasiŋ.

157. *lukɨs *'old, person'*. MAR, MGD, IRN lukɨs.

158. *lupa? *'earth'*. MAR lupa?; MGD lupa; IRN unavailable; cf. PPH *lupa?.

159. *lu? *'tear (from crying)'*. MAR lu?; MGD, IRN lu; cf. PPH *lu:hi?.

160. *luya irisin *'ginger'*. MAR luya pag-irisin; IRN luya irisin; MGD unavailable; cf. PPH *li?uya.

161. *maluŋ *'blanket (skirt-like garment)'*. MAR, MGD, IRN maluŋ.

162. *mama *'man, male'*. MAR, MGD, IRN mama.

163. *mama?in *'areca nut'*. MAR mama?an; MGD mamain; IRN unavailable; cf. PMAN *mama?in; PPH *('betel chew')* *mama?-in.

164. *manuk *'chicken'*. MAR, MGD, IRN manuk.

165. *mara *'dry* (adj.)'. MAR ma-mara; MGD ma-mala.

166. *mata *'eye'*. MAR, MGD, IRN mata.

167. *matay *'die'*. MAR, IRN m-i-atay; MGD m-in-atay; cf. PPH *matay.

168. (*)may *'rice, cooked'*. MAR bigas; MGD, IRN may; cf. PPH *?imis.

169. *mis *'sweet'*. MAR, MGD, IRN ma-mis; cf. PMAN *?imis.

170. (*)mudul *'lip'*. MAR, IRN mudul; MGD bibil.

171. *mut *'fragrant'*. MAR *('perfume')*, MGD, IRN ma-mut; cf. PMAN *himut.

172. *(n)amag *'tomorrow'*. MAR, IRN amag; MGD namag.

173. (*)namat *'betel leaf'*. MAR, MGD namat; IRN unavailable.

174. *(n)ami, *ami *'our* (1pl. excl. genetive prn.)'. MAR, IRN ami, mi; MGD nami; ami; cf. PTAG (1pl. inc.) *namin; cf. also sets 177, 180, 181, 189.

175. *ndarimit *'play'*. MAR *('gamble')* ndarimit; MGD pi-ndaiimit; IRN pi-ndarimit.

176. *nim *'six'*. MAR, MGD, IRN nim; cf. PPH *inim.

177. *ni(y)an, *i(y)an *'his, hers, its* (3sg. genetive prn.)'. MAR nian, ian; MGD nin, in; IRN niyan, iyan; cf. PPH *-na.

178. *nipay *'snake'*. MAR, MGD, IRN nipay.

179. *nipis *'thin (objects)'*. MAR, MGD, IRN ma-nipis.

180. *(n)iran, *iran *'their* (3pl. genetive prn.)'. MAR, IRN iran, ran; MGD nilan, ilan; cf. PPH *niDa; cf. also sets 174, 177, 181, 189.

181. *n(i)u, *(y)u *'your* (2pl. genetive prn.)'. MAR niu, yu; MGD nu, u; IRN niu, yu; cf. PPH *i(n)yu.

182. *niug *'coconut, ripe'*. MAR, MGD, IRN niug.

183. *ŋaran *'name'*. MAR, IRN ŋaran; MGD ŋala;[25] cf. PPH *(ŋ)a:jan.

184. *ŋ(a,ɨ)ri? *'mouth'*. MAR, ŋari?; MGD ŋali; IRN ŋri.

185. *ŋgay *'give'*. MAR, IRN ŋgay; MGD lɨŋgay.

186. *ŋibu *'thousand'*. MAR, IRN sa-ŋibu; MGD ŋibu.

187. *ŋipɨn *'teeth, tooth'*. MAR, MGD ŋipɨŋ; IRN nipan.

188. *ŋiruŋ *'nose'*. MAR, IRN ŋiruŋ; MGD ŋiluŋ.

189. *ŋka, *ka *'thy, thine* (2sg. genetive prn.)'. MAR, IRN ŋka, ka; MGD nɨŋka, ka.

190. *pagɨna? *'hide'*. MAR pagna?; MGD, IRN pagɨna; cf. MAR *('secret')* pagɨnɨs; PBS *('to store, place')* *ɨnna?.

191. *(pa)igu? *'bathe'*. MAR paigu?; IRN paigu; MGD bɨŋ-liulu; cf. PPH *Di:Ru?.

192. *palad*'palm (of hand)'*. MAR, MGD, IRN palad.

193. *palad a a?i *'sole (of foot)'*. MAR palad a a?i; MGD, IRN palad a ay

194. *palaw *'mountain'*. MAR, MGD, IRN palaw.

195. *palu *'heel'*. MAR, MGD, IRN palu.

196. *pamana?i *'sew'*. MAR pamana?i; MGD ɨb-pamanay; IRN pamanay; cf. PPH *tahi?.

197. *pamasa *'buy'*. MAR, MGD, IRN pamasa.

198. *pamula *'plant* (v.)'. MAR, MGD, IRN pamula.

199. *panik *'climb'*. MAR *('climb stairs')* panik; IRN paN-panik; MGD bɨ-musu; cf. PSEM *panik.

200. *papak *'wing'*. MAR, MGD, IRN papak.

201. *papanuk *'bird'*. MAR, MGD, IRN papanuk.

202. *pa?it *'bitter'*. MAR ma-pa?it; MGD ma-palt; IRN atagadill; cf. PPH *pa?it.

203. (*)paras *'face'*. MAR, IRN paras; MGD bɨnɨŋ.

204. *paruparu *'butterfly'*. MAR, MGD, IRN paruparu.

205. (*)pasa *'sell'*. MAR, MGD pasa; IRN pɨn-dagaŋ.

206. (*)pasaŋ *'difficult'*. MAR *('intelligent')*, MGD, IRN ma-pasaŋ.

207. *pat *'four'*. MAR, MGD, IRN pat; cf. PPH *ɨpat.

208. *pɨd *'companion'*. MAR, IRN pɨd; MGD ka-pɨd.

209. *pɨdtad *'sand'*. MAR pɨtɨd;[26] MGD, IRN pɨdtad; cf. PPH *p(a)(N)ta(d).

210. *pɨnu? *'full (as of a container)'*. MAR pɨnu?; MGD panu; IRN panu; cf. PPH *pɨnu?.

211. *pia *'good'*. MAR, MGD, IRN ma-pla; cf. PAN *pia.

212. *pili? *'choose'*. MAR pili?; MGD, IRN paN-pili; cf. PPH *pl:li?.

213. *pipi? *'wash clothes'*. MAR pipl?; MGD bɨN-pipi; IRN pɨN-pipi.

214. *pira *'how many?'*. MAR, IRN pira; MGD pila.

215. *-pi(d,r)ɨk *'eyelashes'*. MAR pir-pirɨk; MGD pi-pidɨk; IRN pl-pirak. cf. PPH *pi(D)ɨk.

216. *pita? *'morning'*. MAR ka-pi-pita?; MGD, IRN ma-pita-pita.

217. *pitu *'seven'*. MAR, MGD, IRN pitu.

218. (*)pitut *'buttocks'*. MAR, IRN pitut; MGD pudit.

219. (*)pulaŋi *'river'*. MAR, MGD pulaŋi; IRN lawasayg.

220. *pura *'canoe paddle'*. MAR pura; MGD pula.

221. *pusu? *'heart'*. MAR pusu?; MGD pusuŋ; IRN pusu; cf. PPH *pu:su?.

222. *puti? *'white'*. MAR ma-putl?; MGD, IRN ma-puti; cf. PPH *putl?.

223. (*)rabi(n,ŋ) *'old (object)'*. MGD labiŋ; IRN rabin; MAR andaŋ.

224. *ragat *'sea'*. MAR, IRN ragat; MGD lagat.

225. *ragum *'needle'*. MAR, IRN ragum; MGD lagum.

226. *ragun *'year'*. MAR, IRN ragun; MGD lagun.

227. *rani *'near'*. MAR, IRN ma-rani; MGD maslkɨn; cf. Ata, Dibabawon, Tigwa Manobo ma-dani; Ilianen mɨ-rani.

228. *raŋaw *'span (8 inches)'*. MAR, IRN raŋaw; MGD laŋaw.

229. (*)raŋlt *'anger'*. MAR raŋlt; IRN ka-ra-raŋit-an; MGD ma-dlpuŋɨt.

230. *ra?ɨt[27] *'bad'*. MAR ma-rata?; MGD ma-lat; IRN ma-rata; cf. Ilianen Manobo mɨ-ra?at; Samal la?at; PPH *ma-Da?ɨt.

231. *ra?un *'leaf'*. MAR ra?un; MGD laun; IRN raun; cf. PPH *Da:hun; Bilaan do?on; Cotabato Manobo, Mansakan, Tagbanwa da?un.

232. *rara *'weave mat'*. MAR rara; MGD bɨ-lala; IRN pɨ-rara.

233. *rarɨb *'chest'*. MAR rarɨb; MGD lalɨb; IRN rarub.[18]

234. *rɨdak *'rotten'*. MAR rɨdak; MGD lɨldak; IRN m-ɨrdak; cf. Western Bukidnon Manobo rɨdak; Sarangani Manobo lɨdak.

235. *r(ɨ)dsik *'dirty (clothes)'*. MAR *('dirty, filthy, not of clothes')*, IRN[28] ma-rslk; MGD[29] ma-lldslk; cf. Ilianen Manobo mɨ-rɨdslk.

236. *rɨndiŋ *'wall'*. MAR *('curtain, screen')* IRN rɨndiŋ; MGD lɨndiŋ.

237. *riga? *'red'*. MAR ma-riga?; MGD, IRN ma-rɪga.

238. (*)ruguŋ *'thunder'*. MAR ruguŋ; MGD luguŋ; IRN dalandɨg.

239. *rugu? *'blood'*. MAR rugu?; MGD lugu; IRN rugu; cf. PPH *DuRu?.

240. *ruma *'spouse'*. MAR, IRN ka-ruma; MGD ka-luma; cf. Indonesian *('house')* rumah; PPH *('companion')* *Duma.

241. *sagiŋ *'banana'*. MAR, MGD, IRN sagɪŋ.

242. *sakit *'pain'*. MAR sakɪt; MGD, IRN ma-sakɪt.

243. *saladɨŋ *'deer'*. MAR, MGD, IRN saladɨŋ.

244. *salday *'comb'*. MAR, MGD, IRN salday.

245. *(s,t)alŋgl? *'turn, revolve'*. MAR salŋgl?; MGD, IRN pɨd-talŋgi; cf. PPH *('turn awry, askew')* *lŋi?.

246. *sambɨr *'wind'*. MAR *('blow')*, IRN sambɨr; MGD sambɨl.

247. *sandak *'stab'*. MAR sandak; MGD pɨd-sandak; IRN pɨd-sandak-an.

248. *sa-pulu? *'ten'*. MAR sa-pulu?; MGD, IRN sa-pulu; cf. PPH *('ten unit')* *-pu:lu?.

249. *sawaw *'soup'*. MAR, MGD sawaw; IRN unavailable; cf. PPH *sabaw.

250. *sɨbaŋan *'east'*. MAR, MGD, IRN sɨbaŋan; cf. MAR *('rise')* sɨbaŋ.

251. *sɨbu *'boil* (v.)'. MAR sɨbu; MGD pɨd-sɨbu; IRN pɨ-sɨbu-sɨbu.

252. *sɨda? *'fish'*. MAR sɨda?; MGD sɨda; IRN sadɨ; cf. PPH *?ɪs(ɨ)Da?.

253. *sɨkanyan *'he, she, it* (3sg. topic prn.)'. MAR, IRN sɨkanyan; MGD sɨkanɪn.

254. *sɨnɨb *'dive'*. MAR sɨnɨb; MGD pɨd-sɨnɨb; IRN pɨ-sɨnɨb.

255. *siaw *'nine'*. MAR, MGD, IRN sɪaw.

256. *siku *'elbow'*. MAR, MGD, IRN sɪku.

257. (*)simpit *'narrow'*. MAR, MGD ma-simpit; IRN mulad.

258. *sipa? *'kick'*. MAR sɪpa?; MGD sipa; IRN sɪpa-n; cf. PPH *si:pa?.

259. *siran *'they* (3pl. topic prn.)'. MAR, IRN siran; MGD sɪlan.

260. *sisiŋ *'ring'*. MAR, MGD, IRN sisiŋ.

261. (*)s(ɨ)bu(d) *'fat* (adj.)'. MAR sɪbu?; MGD ma-subud; IRN ma-sɨbud.

262. *sumag *'push'*. MAR sumag; MGD pɨd-sumag; IRN pɨ-sumag.

263. (*)sumpat *'answer'*. MGD, IRN sumpat; MAR sɨmbag; cf. PPH *suŋbat.

264. *susu *'breast'*. MAR, MGD, IRN susu.

265. *susup *'suck'*. MAR susup; MGD pɨd-susup; IRN pɨ-susup.

266. *ta *'our* (ldu. genetive prn.)'. MAR, MGD, IRN ta.

267. *t(a,ɨ)bpul *'dull, as a knife'*. MAR tɨpul; MGD ma-tabul; IRN ma-tabpul.

268. (*)tag(ɨ)nɨk *'mosquito'*. MGD, IRN tagnɨk; MAR rɨŋɨt; cf. Kalagan tagnɨk; Binukid tagɨnɨk; Sarangani Manobo tɪgʌnʌk.

269. *tagɪnɨp *'dream'*. MAR, MGD taginɨp; IRN tagɪnɨp-ɨn.

270. *tagub *'sheath, for bolo'*. MAR tagub; MGD tagub-an; IRN tagub-an; cf. PPH *ta(g)ɨb.

271. *tali *'rope'*. MAR, MGD, IRN tali.

272. *tanu *'our, we* (lpl. incl. prn., topic and genetive)'. MAR, MGD, IRN tanu.

273. *taŋila *'ear'*. MAR, MGD, IRN taŋila.

274. *tapilak *'scar'*. MAR *('cast aside')*, IRN tapilak; MGD tapidak; cf. PAN *('sore, scab')* *pil(a,ɨ)k; PPH *pl(gk)lat.

275. *ta?i *'excrement'*. MAR ta?i; MGD, IRN tay; cf. PPH *ta:?i.

276. *taru? *'say, tell'*. MAR *('vocal, talkative')* taru?; MGD pɨd-talu; IRN pɨd-taru-taru; cf. MAR *('say, tell')* tɨru?.

277. *tau *'person'*. MAR, MGD, IRN tau; cf. PPH *ta:uh.

278. *taw *'know (acquaintance)'*. MAR, MGD, IRN ka-taw-an; cf. Samal ta?u; PAN *ta?uh.

279. *tawag *'call'*. MAR, MGD, IRN tawag.

280. *tɨbu *'sugarcane'*. MAR, MGD tɨbu; IRN tabu; cf. PPH *tɨbuh.

281. *tɨgas *'hard (substance)'*. MAR, MGD, IRN ma-tɨgas.

282. *tɨgkaw *'steal'*. MAR *('sudden')* paN-tɨkaw; MGD paN-tɨgkaw; IRN tɨgkaw; cf. PPH *ta:kaw; MAR *('steal')* paN-tɨkɨw.

283. *tɨlu *'three'*. MAR, MGD tɨlu; IRN talu; cf. PPH *tɨlu.

284. *tɨnɨk *'thorn'*. MAR, MGD tɨnɨk; IRN tanak.

285. *tɨŋ(g)aw *'cold'*. MAR ma-tɨŋgaw; MGD ma-tɨŋaw; IRN ma-taŋaw.

286. *tɪan *'belly'*. MAR, MGD, IRN tɪan.

287. *tɪdtu *'straight'*. MAR ma-tɪtu; MGD, IRN ma-tɪdtu.

288. *tɪlak *'smooth'*. MAR, MGD, IRN ma-tɪlak.

289. *tɪmus *'salt'*. MAR *('salty')*, MGD, IRN tɪmus.

290. *tina?i *'intestines'*. MAR tina?I; MGD, IRN tinay; cf. PPH *tina:?i.

291. *tindɨg *'stand'*. MAR tindɨg; MGD, IRN pɨd-tindɨg.

292. *tudtul *'story'*. MAR tutul; MGD, IRN tudtul.

293. *tulan *'bone'*. MAR, MGD, IRN tulan.

294. *turug *'sleep'*. MAR turug; MGD pɨd-tulug; IRN pɨd-turug.

295. *ubal *'monkey'*. MAR, MGD, IRN ubal.

296. *ubi *'sweet potato (yam)'*. MAR, MGD, IRN ubi.

297. *udtu *'noon'*. MAR ma-utu; MGD, IRN ma-udtu.

298. *udu *'defecate'*. MAR udu; MGD bɨg-udu; IRN pɨg-udu.

299. *ugat *'heavy'*. MGD, IRN ma-ugat; MAR ma-pɨnɨd; cf. PPH *bɨR?at.

300. *ugat *'vein (blood)'*. MAR *('varicose vein')*, MGD, IRN ugat; cf. PPH *?uRat.

301. *ukap a. *'husk (of rice)'*. MAR, MGD, IRN ukap.
(*)ukap b. *'winnow'*. MAR ukap; MGD bɨg-ukap; IRN nigu.

302. *ulad *'wide'*. MAR ma-ulad; MGD, IRN m-ulad; cf. PPH *('spread out, dry in sun')* *bɨlaj.

303. *ulan *'moon'*. MAR ulan; MGD, IRN ulan-ulan; cf. PPH *bu:lan.

304. *ulu *'head'*. MAR, MGD, IRN ulu.

305. *ulug *'fall (drop)'*. MAR ulug; MGD l-ulug; IRN ka-ulug.

306. *ulunan *'pillow'*. MAR, MGD, IRN ulunan.

307. (*)umbi *'ashes'*. MAR, IRN umbi; MGD au.

308. (*)untud *'sit'*. MAR untud; IRN pag-untud; MGD bɨg-ayan.

309. *uŋa *'fruit'*. MAR, MGD, IRN uŋa; cf. PPH *bu:ŋa.

310. *upis a.*'bark, peeling, shell'*. MAR, MGD, IRN upis.
(*)upIs b.*'skin (human)'*. MAR, IRN upIs; MGD laŋitun.

311. *urak *'flower'*. MAR bulak[30]; MGD ulak; IRN urak; cf. PPH *bu:Dak.

312. *uran *'rain'*. MAR, IRN uran; MGD ulan.

313. *uriŋ *'charcoal'*. MAR, IRN uriŋ; MGD uliŋ.

314. *urIpɨn *'slave'*. MAR urIpɨn; MGD ulIpɨn; IRN urIpan; cf. PPH *?ɨDI:pɨn.

315. *usug *'full, satiated'*. MAR, MGD, IRN usug; cf. PPH *bɨsuR.

316. *uraŋ *'debt'*. MAR, MGD, IRN utaŋ.

317. *uta? *'vomit'*. MAR uta?; MGD biŋ-uta; IRN piŋ-uta; cf. PPH *?u:ta?.

318. *utik *'brain'*. MAR, MGD, IRN utik.

319. (*)utin *'penis'*. MAR, MGD utin; IRN unavailable.

320. *waga *'shoulder'*. MAR, MGD, IRN waga; cf. PPH *?aba:Ra.

321. (*)waga(?) *'boil (infection)'*. MGD ma-uwaga; IRN ma-waga; MAR kamo?o, libag; cf. PPH *baRi?.

322. *waka *'abaca (Manila hemp)'*. MAR, MGD, IRN waka.

323. *walay *'house'*. MAR, MGD, IRN walay; cf. MAR *('building')* balay; PPH *bálay.

324. *walu *'eight'*. MAR, MGD, IRN walu.

325. *wasa? *'wet'*. MAR ma-wasa?; MGD, IRN ma-wasa; cf. MAR basa?; PPH *bása?.

326. *wata? *'child'*. MAR wata?, bata?; MGD, IRN wata; cf. PPH *ba:ta?.

327. *watu *'stone'*. MAR watu, batu; MGD, IRN watu; cf. PPH *batú.

328. *yaw *'hot (as water)'*. MAR, MGD, IRN ma-yaw; cf. PPH *('broil, roast')* *lhaw.

4.2. *ENGLISH INDEX OF PROTO-DANAW RECONSTRUCTIONS*

abaca (Manila hemp) 322
all 137
anger 229
answer 263
areca nut 163
ashamed 119
ashes 307
back 150
bad 230
banana 241
bark (peeling, shell) 310
bathe 191
belly 286
betel leaf 173
big 16
bird 201
bite 59
bitter 202
black 101
blanket (skirt-like garment) 161
blind 60
blood 239
body 139
boil (infection) 321
boil (v.) 251
bone 293
brain 318
breast 264
burn 43
bury (inter) 143
butterfly 204
buttocks 218

buy 197
call 279
canoe 21
canoe paddle 220
charcoal 313
chest 233
chicken 164
child 326
chin 30
choose 212
climb 199
cloud 77
coconut, ripe 182
coconut, unripe 3
cold 285
comb 244
companion 208
cooking pot 128
cotton 81
cough 36
count 44
crocodile 50
crow 105
cry, weep 85
cut, slice 116
deaf 46
debt 316
deep 64
deer 243
defecate 298
delouse 99
die 167
difficult 206
dig 109
dirty 235
dive 254
dog 17
dream 269
drink 98
dry (adj.) 165
dry in sun (v.) 2
dull, as a knife 267
dust 148
ear 273
earth 158
earthquake 153
east 250
eat 111
eel 117
egg 144
eight 324
elbow 256
excrement 275
eye 166
eyebrow 126
eyelashes 215
face 203
fall (drop) 305
far 22
fat (adj.) 261
fat (n.) 145
father 8
fear (v.) 107
feather, (generic) 56
fence 5
fight 57
finger 121
fingernail 114
fire 14
fish 252
five 151
floor 134
flower 311
fly (insect) 135
fly (v.) 142
foot, leg 15
forehead 42
forget 155
four 207
fragrant 171
frog 23
fruit 309
full, satiated 315
full (as of a container) 210
ginger 160
give 185

good 211
green 78
hair 53
hand 151b
hard (substance) 281
he, she, it (3sg. topic prn.) 253
head 304
hear 125
heart 221
heavy 299
heel 195
hide 190
his, her, its (3sg. genetive prn.) 177
hot (as water) 328
house 323
how many? 214
hundred 84
hunger 87
hunt 12
husk of rice 301
I (1sg. topic prn.) 4
intestines 290
itch 83
kick 258
kill 96
knee 6
know (acquaintance) 278
ladle (of coconut shell) 108
lake 152
laugh 106
leaf 231
learn 9
left 48
leg, foot 15
lice (head) 129
lightning 124
lime 13
lip 170
live (dwell) 33
liver 19
long (object) 146
lose 61
lungs 27
man, male 162
many 63
mat 90
medicine 55
monkey 295
moon 303
morning 216
mortar, for rice 147
mosquito 268
mother 97
mountain 194
mouth 184
my, mine (1sg, genetive prn.) 127
name 183
narrow 257
near 227
neck 149
needle 225
new 29
night 76
nine 255
none 66
noon 297
nose 188
not (predicative) 123
not (verbal) 71
now, already (compl. particle) 69
old (object) 223
old (person) 157
one 100
our (1du. genetive prn.) 266
our (1pl.excl. genetive prn.) 174
our, we (1pl.incl. genetive prn.) 272
pain 242
palm of hand 192
pay 39
peanut 156
penis 319
person 277
pig 26
pillow 306
plant (v.) 198
play 175

pound rice 51
pull 80
push 262
rain 312
rainbow 54
rain cloud 62
rat 75
rattan 32
red 237
return home 33
rib 86
rice, husked 40
rice, unhusked 93
rice, cooked 168
right 118
ring 260
river 140, 219
roof ridge 58
root 65
rope 271
rotten 234
run 130
salt 289
sand 209
say, tell 276
scar 274
sea 224
see 94
sell 205
seven 217
sew 196
shadow 7
sharp 82
sheath, for bolo 270
shore 67
short (object) 24
shoulder 320
sit 308
six 176
skin (human) 310
sky 136
slave 314
sleep 294
small 102
smell 37
smoke 41
smooth 288
snake 178
sole of foot 193
soup 249
sour 1
span (8 inches) 228
spider 133
spit 74
spouse 240
squeeze 122
stab 247
stand 291
star 47
steal 282
stick (adhere) 68
stone 327
story 292
straight 287
strong 28
suck 265
sugarcane 280
swallow 154
sweat 20
sweet 169
sweet potato (yam) 296
swim 138
tail 92
tear (from crying) 159
teeth, tooth 187
ten 248
their (3pl. genetive prn.) 180
they (3pl. topic prn.) 259
thick 115
thigh 52
thin (of objects) 179
thorn 284
thou (2sg. topic prn.) 103
thousand 186

three 283
throat 31
throw 88
thunder 238
thy, thine (2sg. genetive prn.) 189
tie, tether animal 91
today 95
tomorrow 172
tongue 70
trail 132
tree, wood 120
turn, revolve 245
turtle 38
twenty 73
two 72
under 18
vein (blood) 300
vomit 317
walk 131
wall 236
wash clothes 213
wash hands 49
water 89
water container, bamboo 141
we (1pl.excl. topic prn.) 110
we, our (1pl.incl. topic prn.) 272
weave mat 232
wet 325
what? 11
when? 112
where? 10
white 222
wide 302
widow 34
wind 246
wing 200
winnow 301b
woman, female 25
word 35
work 79
year 226
yellow 45
yesterday 104
you (2pl. topic prn.) 113
your (2pl. genitive prn.) 181

APPENDIX 1

Modified Swadesh 100-Meaning List

It was necessary to revise the original Swadesh list because the available data did not contain all of the Swadesh vocabulary items. The revision was made by substituting forms drawn from the Swadesh 200-meaning list that had a persistence rate approximately equal to the replaced form (Swadesh 1955). In all but two cases the rates were actually equal to or greater than the replaced item. The overall average persistence rate of the items removed from the list equals 79%; the average persistence rate of the replacing items equals approximately 84%. The analytical potential of the modified list for use in comparisons should remain approximately the same in terms of the tendency of these forms to be retained in a given language. The substitute forms are indicated by an asterisk. The list of substitutions following the main list contains the persistence rates.

1. *all*
2. *ashes*
3. **back*
4. *bark*
5. *belly*
6. *big*
7. *bird*
8. *bite*
9. *black*
10. *blood*
11. *bone*
12. *breast*
13. *burn*
14. *cloud*
15. *cold*
16. *dog*
17. *drink*
18. *dry*
19. *ear*
20. *earth*
21. *eat*
22. *egg*
23. *eye*
24. **fall*
25. *fat* (adj.)
26. *feather*
27. *fire*
28. *fish* (n.)
29. *fly* (v.)
30. *full*
31. *give*
32. *good*
33. *green*
34. *hair*
35. *hand*
36. *head*
37. *hear*
38. *heart*
39. *I* (1sg. topic)
40. *kill*
41. *knee*
42. *know* (acquaintance)
43. **laugh*
44. *leaf*
45. *liver*
46. *long (object)*
47. *louse*
48. *man/male*
49. *many*
50. *moon*
51. *mountain*
52. *mouth*
53. *name*
54. *neck*
55. *new*
56. *night*
57. *nose*
58. *not (verbal)*
59. **old (person)*
60. *one*
61. *person*
62. *rain*
63. *road/trail*
64. *root*

65.	*sand*	74.	*small*	83.	*this (proximate)*	92.	*water*
66.	*say*	75.	*smoke*	84.	*thou* (2sg.emph.)	93.	*we*
67.	**sea*	76.	**snake*	85.	*tongue*	94.	*what?*
68.	*see*	77.	*stand*	86.	*tooth*	95.	*white*
69.	**seed*	78.	*star*	87.	*tree/wood*	96.	*who?*
70.	*sit*	79.	*stone*	88.	*two*	97.	**wide*
71.	*skin (person)*	80.	*swim*	89.	*walk*	98.	*woman*
72.	**sky*	81.	*tail*	90.	*warm/hot*	99.	**worm*
73.	*sleep*	82.	*that (remote)*	91.	**wash (hands)*	100.	*yellow*

SUBSTITUTIONS

'back' (83) replaces *'meat'* (77)
'fall' (67) replaces *'lie down'* (33)
'laugh' (92) replaces (92)
'old (person)' (100) replaces *'horn'* (p.r. not given)
'sea' (82) replaces *'red'* (66)
'seed' is modified in meaning as *'rice seed, husked'*
'sky' (92) replaces *'sun'* (100)
'snake' (91) replaces *'foot'* (90)
'wash (hands)' (83) replaces *'come'* (100)
'wide' (85) replaces *'round'* (p.r. not given)
'worm' (100) replaces *'claw'* (p.r. not given)

APPENDIX 2

Danaw Functor and Qualitative Wordlist

In the following list, an asterisk (*) indicates the form was not available for comparison.

AFFIX, VERB	MAR	MGD	IRN
1. Future tense	-ɨ- ∿ pɨ- ∿ pag-	m- ∿ mɨ- ∿ -ɨm-	pɨ- ∿ pɨC- ∿ paC-
2. Past tense	-i- ∿ -ni ∿ -in-	-i- ∿ -ni- ∿ -in-	-i- -ni- -in-
3. Present tense	pɨ- ∿ pɨg-	pɨC- ∿ bɨg- ∿ pag-	pɨ- ∿ pɨC ∿ paC-
COLOUR			
4. Black	ma-itɨm	ma-itɨm	ma-itɨm
5. Green	gaduŋ	gadduŋ	gaduŋ
6. Red	ma-riga?	ma-ilga	ma-riga
7. White	ma-puti?	ma-puti	ma-puti
8. Yellow	binaniŋ	binaniŋ	binaniŋ
CONJUNCTION			
9. Attributive coordinating	a	a	a
10. Clause coordinating, *'and'*	na	na	na
11. Clause coordinating, *'because'*	kagla	kagina	sabap
12. Clause coordinating, *'for'*	ka	ka	ka
13. Nominal coordinating	agu	ɨndu	gu
14. Subordinating *'if'*	u	amaika	amay
ENUMERATIVE			
15. *all*	laŋun	laŋun	laŋun
16. *count*	ituŋ, bilaŋ	bilaŋ	bilaŋ
17. *eight*	walu	walu	walu

	MAR	MGD	IRN
18. *five*	lima	lima	lima
19. *four*	pat	pat	pat
20. *hundred*	ma-gatus	ma-gatus	ma-gatus
21. *many*	ma-dakil	ma-dakil	ma-dakal
22. *nine*	siaw	siaw	siaw
23. *one*	isa	sa timun	isa
24. *seven*	pitu	pitu	pitu
25. *six*	nim	nim	nim-nam
26. *ten*	sa-watiʔ, sa-pulu	sa-pulu	sa-pulu
27. *thousand*	sa-ŋibu	ŋibu	sa-ŋibu
28. *three*	tilu	tilu, tulu	talu
29. *twenty*	dua-watiʔ, dua-pulu	duapulu	dua-pulu
30. *two*	dua	dua timun	dua
INTERROGATIVE			
31. *How many?*	pira	pila	pira
32. *What?*	antunaʔa	ŋin	ntuna
33. *When?*	andaʔi	kanu	kanu
34. *Where?*	anda	ndaw	nda
35. *Who?*	antawaʔa	ntain	ntaun
LOCATIONAL			
36. *Far*	ma-watan	ma-watan	ma-watan
37. *Left*	diwaŋ	biwaŋ	miasama
38. *Near*	ma-rani	ma-sikin	ma-rani
39. *Right*	ka-wanan	ka-wanan	ka-wanan
40. *Under*	atag didalim	uŋ, baba	atag
LOCATIVE, DEICTIC			
41. *Here (proximate)*	saya, siʔi	niya	saya
42. *There (nearby)*	san	nan	san
43. *There (remote)*	ruʔu	ntu, iu	ru
MARKER			
44. Topic, general	su	su	su
45. Topic, personal	san	si	si
46. Nominative	u	nu ~ u	u
47. Objective, locative	sa	sa	sa
48. Referent	ku	ku	ku
49. Referent, personal	ki	ki	ki

	MAR	MGD	IRN
NEGATIVE			
50. Predicative	kɨna?, dI?	kuma, dala	kana
51. Stative	da?	da, dala	da
52. Verbal	kɨna?, dI?	dI, dIII	dI
PARTICLE			
53. Discourse, completive	dɨn	dɨn	dɨn
54. Discourse, incompletive	pɨn	pan	pan
55. Existential, possessive	ədɨn	adɨn	adɨn
PRONOUN			
56. Topic, 1sing.	aku	aku	aku
57. Topic, 2sing.	ka	ka	ka
58. Topic, 3sing.	sɨkanyan	səkanIn	sɨkanyan
59. Topic, 1-2 dual	ta	ta	ta
60. Topic, 1pl. excl.	kamI	kamI	kamI
61. Topic, 1pl. incl.	tanu	tanu	tanu
62. Topic, 2pl.	kanu	kanu	kanu
63. Topic, 3pl.	siran	sIlan	siran
64. Emphatic 1sing.[31]	sIkɨn	saki	sakɨn
65. Emphatic 2sing.	sɨka	sɨka	saka
66. Emphatic 1-2 dual	sɨkta	sɨkita	*
67. Emphatic 1pl. incl.	sɨktanu	sɨkItanu	*
68. Emphatic 2pl.	sɨkanu	sɨkanu	*
69. Genetive, 1sing.	ku	ku	ku
70. Genetive, 2sing.	ŋka ∿ ka	nɨŋka ∿ ka	ŋka ∿ ka
71. Genetive, 3sing.	nian ∿ ian	nin ∿ in	niyan ∿ iyan
72. Genetive, 1-2 dual	ta	ta	ta
73. Genetive, 1pl. excl.	ami ∿ mI	namI ∿ amI	amI ∿ mI
74. Genetive, 1pl. incl.	tanu	tanu	tanu
75. Genetive, 2pl.	niu ∿ yu	nu ∿ u	niu ∿ yu
76. Genetive 3pl.	iran ∿ ran	nIlan ∿ Ilan	iran ∿ ran
77. Dative formative element	rɨk-	lɨk-	rɨk-
PRONOUN, DEICTIC			
78. *This (proximate)*	glaya, gla?i	niga bay	glaya
79. *That (nearby)*	glanun	namba ∿ amba	glanan
80. *That (remote)*	glutu	nanbay	glutu

	MAR	MGD	IRN
81. *Big*	m-ala?	m-asla	m-asla
82. *Heavy*	ma-pɨnɨd	ma-ugat	ma-ugat
83. *Long*	ma-lɨndu ma-tas	ma-lɨndu	malɨndu
84. *Small*	ma-itu?	ma-inut	ma-itu
85. *Span (8 inches)*	raŋaw	laŋaw	raŋaw
86. *Straight*	ma-titu	ma-tidtu	ma-tidtu
87. *Thick*	ma-kapal	ma-kapal	ma-kapal
88. *Thin*	ma-nipis	ma-nipis	ma-nipis
89. *Afternoon*	ma-gabi	ma-lulɨm	miapuiid
90. *Day*	gawi?i, aluŋan	gay	mapita
91. *Morning*	ka-pi-pita	ma-pita-pita	ma-pita-pita
92. *New*	bɨgu, bagu	bagu	bagu
93. *Night*	ga-gawi?i	ma-gabi	ma-gabi
94. *Noon*	ma-utu	ma-udtu	m-udtu
95. *Old (object)*	andaŋ	labiŋ	rabin
96. *Old (person)*	lukɨs	lukɨs, ma-tua	lukɨs
97. *Today*	imantu	saguna	imantu
98. *Tomorrow*	amag, ma-pita?	namag	amag, ma-pita
99. *Year*	ragun	lagun	ragun
100. *Yesterday*	ka-ga?i	ka-gay	ka-gay

NOTES

1. Maranaw is spoken primarily in the province of Lanao by approximately 250,000 persons. Magindanaw is spoken in the province of Cotabato, also by about 250,000 persons. Directly between these two groups are located the Iranun speakers, occupying a large territory eastward off the coast of Illana Bay, with an estimated 100,000 people. Iranun is also spoken on the island of Bongo off the south-west coast of Mindanao. The Danaw language group totals at least 600,000 speakers.

2. The name 'Danaw' was first suggested for these three speech varieties by Richard G. Elkins of the Summer Institute of Linguistics.

3. This paper is based on my thesis prepared during an MA study program at the University of Texas at Arlington (Allison 1974). New language data acquired since that program was completed has resulted in a modification of the original conclusions. I am indebted to my colleagues, A. Kemp Pallesen, SIL Philippine Branch, and David Thomas, SIL Asia Area, for much information and advice. I also wish to acknowledge the many insights shared with me by R. David Zorc, whose valuable help is reflected in this work.

4. The Philippine languages comprise a subdivision of the Austronesian language family (Voegelin 1973:100). The designation of Austronesian subdivisions, however, varies among scholars so that there is no commonly accepted set of terms to specify categories, such as phylum, family, stock, etc. For this reason, the Philippine group, and the position of the Danaw languages within it, will not be designated by a ranking nomenclature; instead, the general terms 'group' and 'subgroup' will be used throughout the paper.

5. The working corpus of approximately 400 words is too small to draw final conclusions regarding the phonemic status of certain segments and sequences. For this reason, the analysis is regarded as tentative only.

6. In September 1975, I conducted interviews during a limited period in Cotabato City with Magindanaw and Iranun speakers, investigating the phonology of these languages and obtaining data for the present study.

7. The limited data base does not warrant conclusions about permissable clusters. Actually, more clusters than appear here do occur in the languages. Clusters across morpheme boundaries are excluded from the illustrations.

8. A PDAN intervocalic glottal stop is reflected quite regularly in MAR, but it completely disappeared in this position in MGD and IRN. Evidence for the intervocalic glottal is based primarily on a comparison of MAR and PPH, employing the same assumptions used for reconstructing word-final glottal. (See footnote 9.) When PPH and MAR are in disagreement, intervocalic glottal is shown ambiguously by placing it in parentheses, i.e. (ʔ).

9. A distinction between word-final glottal (ʔ) and null occurs in PPH reconstructions, and the **Maranao Dictionary** (McKaughan 1967) also gives this distinction. A comparison shows that PPH and MAR generally agree regarding -ʔ and null etyma, so it is assumed that PDAN, the intermediate stage, also had the same distinction in the same etyma. Hence, in cases where PPH and MAR both attest either -ʔ or null, I reconstuct accordingly. (Null is shown in the reconstructions by the absence of any symbol.) I have disregarded the MGD and IRN forms on this point because of their apparent instability. Where PPH is unknown, I reconstruct following the MAR form. In the few cases when PPH and MAR are in disagreement, word-final glottal is shown ambiguously, i.e., as (ʔ).

10. In the daughter speech forms, in word-initial position, glottal stop occurs phonetically after pause preceding vowels, but it never occurs phonemically in this environment. Therefore, word-initial glottal stop following pause has not been reconstructed.

11. The available data indicate that stress is one component in the conditioning factors for *ɨ > IRN a. However, data for stress is incomplete and, in many forms, unattested; therefore it is not given in the citations other than in these examples. (See also fn. 12 below.)

12. All of these forms are from field survey lists and the low central vocoid is not certain. In unstressed vowels, the [ʌ] variant of /a/ and the /ə/ variant of /ɨ/ are so close in vowel quality that their distinction is often quite difficult to non-Filipino ears. Unfortunately, at the time of writing this paper, it was not possible to test these items with an Iranun speaker. They are included here to indicate potential discrepancies, even though it is quite probable that some of them can later be re-interpreted with ɨ in place of a.

When the forms are attested it may further appear that *ɨ > a in IRN ultima. However, it should be pointed out that the process of *ɨ > a in the ultima is regular in Malay, and IRN has had a long history of Malay contact. Many of these words may, therefore, simply reflect Malay influence. Further research is needed to clarify these points.

13. Dyen (1965:18) established a "provisional language limit" of 69.9% as the approximate score above which speech forms ought to be assigned as dialects of the same language. His criteria were based on the Swadesh 200-meaning list. But even using the Reid list, which contains only 170 of the Swadesh-200 items, the IRN-MGD score is 71.3% -- a value which appears to stand at the borderline between dialect and language.

In the present case, the decision to regard IRN as a separate language comes from additional evidence. Mutual intelligibility testing conducted by the Summer Institute of Linguistics shows that IRN is not mutually intelligible with either MAR or MGD, and permits us to interpret the 71.3% score as falling below the language limit (Charles Walton, personal communication).

With regard to the Swadesh-100 scores, observations made by R. David Zorc (1972) are of considerable interest. He reports that in his fieldwork with 33 West Bisayan dialects, using the Swadesh-100-meaning list,

> some difficulty in understanding was encountered if the lexicostatistical score was below 87%... Furthermore, where the score fell below 84%, intelligibility appeared to be nearly minimal...

If these figures are used as a guide, one would conclude that the Swadesh-100 percentages for all Danaw members are well below a level requiring interpretation as dialects.

14. For the use of "significantly different" see Dyen (1962).

15. First pointed out to me by R.D. Zorc.

16. Another analysis is plausible on the basis of *-an instead of *nan, but this also presents problems in explaining irregular forms. Observe, e.g. MAR, IRN gianan *'that (nearby)'* (< *giV- + *-an) instead of the expected form *gian. Such an analysis requires the postulation of an intrusive -n- for the MAR-IRN forms and an n- formative for the MGD forms.

17. The reconstructions are based on a diagnostic set of 328 vocabulary glosses drawn from Reid (1971). The wordlists and phonemic data for each language were taken from the following sources:

(1) Maranaw: (a) **The Maranao Dictionary** compiled by Howard P. McKaughan and Batua A. Macaraya (1967). (b) A grammatical analysis of Maranaw by McKaughan (1958). (c) A wordlist of 372 entries taken by Robert Ward of the Summer Institute of Linguistics in a 1966 dialect survey in the Philippines.

(2) Magindanaw: (a) A wordlist of 372 entries taken by Jerry Eck of the Summer Institute of Linguistics in a 1966 dialect survey in the Philippines. (b) A list of approximately 70 grammar-based items prepared by Jerry Eck. (c) A phonemic analysis of the Buluan dialect (Lee 1962).

(3) Iranun: (a) A wordlist of 372 entries taken by Michael Walrod of the Summer Institute of Linguistics in a 1971 dialect survey in the Philippines. (b) A text of a personal narration prepared by Miss Papua Ali of Sultan Kudarat near Cotabato City in the Philippines. The text was obtained by Mike Walrod in the 1971 survey.

(4) Other languages: (a) Batak, Bilaan, Binukid, Itneg, Kalagan, Mamanwa, Manobo (Dibabawon, Ilianen, Cotabato, Sarangani, Tigwa, Western Bukidnon), Mansaka, Samal, Sambal, Subanon, Tagabili, Tausug are from Reid (1971); (b) Malay from Wilkinson (1932); (c) Indonesian from Echols and Shadily (1968); (d) Aklanan, Tadyawan, Surigaonon, Cebuano from unpublished sources.

(5) Proto-languages: (a) Proto-Austronesian from Blust (1970); Dyen (1953); Laurens translation (undated) of Dempwolff Volume III (1938); (b) Proto-Philippine and Proto-Southern Philippine from Zorc (1971, 1974a); (c) Proto-Bisayan from Zorc (1975); (d) Proto-North-east Mindanao from Gallman and Pallesen (this issue); (e) Proto-South-east Mindanao (Proto-Mansakan) from Gallman (1974);

(f) Proto-Manobo from Elkins (1974); Proto-Tagalic from Dyen (1970).

18. The IRN /u/ in place of /ɨ/ may be due to contamination from contact with another language group, such as Subanon, which has mo-som for *'sour'* and gig-dob for *'chest'*.

19. A. Kemp Pallesen has pointed out to me that the Proto-Sama-Bajaw doublet *bahu, *bahu? is widely attested in Sama-Bajaw languages.

20. MAR ga-gawi?i is irregular with /w/ in place of /b/. The /w/ may be the result of analogy with other forms which reflect PPH *b as PDAN *w, e.g., sets 21, 48, 249. Note that the *b > *w split was a pre-Danaw change and is regularly reflected in all three languages when it occurs.

21 Geminate consonants are not a regular feature of the Danaw languages, suggesting the MGD gadduŋ may be a borrowing. A probable source is Samal gadduŋ.

22. PPH *h went to null in all positions in PDAN.

23. None of the Danaw languages lose word-initial *i. MGD sa must come from PAN *hɨsah > PDAN *sa; while MAR isa, IRN isa? must come from PAN *hisah > PDAN *isa.

24. *(kak)wak may contain the derivational morpheme *ka-, in which the medial -k- may represent an irregular development from PPH *?.

25. MGD ŋaia may represent apocope of -n, the removal being permissible by an analogy with the MGD suffixes -ɨn, -an, which have an -n allomorph.

26. I cannot account for MAR /ɨ/ in place of /a/ in the ultima syllable in this form.

27. MGD shows the regular reflex for PDAN *ra?ɨt in this form, viz: -iat. The expected form for MAR would be (*)-ra?at, but this has undergone metathesis to -rata?. The IRN word here is probably borrowed from MAR, since its expected form would be -rat, rather than -rata?.

28. The regular retention of the *dC cluster in IRN in this word would produce the non-canonical shape (*)ma-rdsik. IRN has here adopted the MAR form, ma-rsik.

29. MGD shows an irregular assimilation of *i to /i/.

30. MAR bulak is apparently a loan, the expected form is urak (< PDAN *urak < PPH *bu:Dak). Sources for bulak include Manobo, Mansakan, and Subanon bulak.

31. I am indebted to Dr. Ernesto Constantino, University of the Philippines, for providing the Magindanaw emphatic pronouns.

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PROTO-MANOBO PRONOUNS AND CASE MARKING PARTICLES[1]

CAROL W. HARMON

1. INTRODUCTION

Manobo refers to a group of languages and dialects spoken primarily in the southern Philippines, specifically in Mindanao and its offshore islands. Kagayanen, a language spoken in the Cagayan Islands and Palawan in the central Philippines, has also been identified as Manobo (Elkins 1974, Zorc 1974, Harmon 1977). Twenty-two languages have been identified by Fox and Flory (1974) as Manobo. Data on eight of these Manobo languaes is not available to me. The comparative work on which the reconstructions here presented are based includes data from fourteen Manobo languages and dialects. The languages which have been compared are: Ata, Augusan, Binukid, Blit, Cotabato, Dibabawon, Ilianen, Kagayanen, Obo, Sarangani, Tagabawa, Tigwa, and Western Bukidnon. Pronominal and case marking particle data on only seven of these are presented in this paper. These languages are Ata (ATA), Binukid (BKD), Kagayanen (KAG), Cotabato (CTM), Dibabawon (DIB), Sarangani (SAR), and Western Bukidnon (WMB). Western Bukidnon represents Western Bukidnon, Ilianen, Obo, and Tagabawa because, generally speaking, the same changes have occurred in these languages. For the same reason Ata represents both Ata and Tigwa; Cotabato represents Cotabato, Blit, and Tasaday; and Dibabawon represents Dibabawon and Agusan. Restricting the data presented to seven languages has avoided unnecessary duplication and has allowed clearer, more concise descriptions of many phonological and analogical changes.

The purpose of this study is twofold: to reconstruct the Proto-Manobo pronouns and case marking particles and to determine the possible groupings of the various Manobo languages within the Manobo subgroup.

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The evidence considered includes: (1) pronouns and case marking particles from fourteen Manobo languages, (2) regular sound changes which occurred in specific languages, (3) some pronoun forms and case marking particles found in languages spoken in areas contiguous to areas of Manobo Philippine subgroups, Proto-Philippines, and Proto-Austronesian.

2. PRONOUNS

Pronominal data for the representative Manobo languages included in this study are found in Tables 1, 2, 3, and 4 on pages 13 to 16. Reconstructions of Proto-Manobo pronouns are in Table 5 on page 17.[2]

2.1. *INDEPENDENT NOMINATIVE*

Note that all languages except Kagayanen and Cotabato show si for almost all independent nominative forms. I believe that si was present in Proto-Manobo as a nominative pronominal formative and that it was lost independently in these two languages. si has widespread use as a personal noun nominative marker in Philippine languages, but si has been lost entirely as a Kagayanen case marker. si has been replaced in Kagayanen by a post-positive an. Similarly, in Cotabato si no longer has a specifically nominative function but is also used to mark personal nouns in the oblique case. One indication that si was present in the proto-language but was lost in Kagayanen is the presence of y in KAG yaken. This y strongly suggests an earlier i vowel before aken.[3]

The 1sg. form is reconstructed as PMB *si?aken. In Binukid there was analogical pressure to reduce forms to two syllables. BKD si?ak from PMB *si?aken exemplifies the tendency in Binukid to reduce from the end all nominative forms with three syllables. Sarangani and Western Bukidnon also apparently reduced *si?aken to si?ak, but the motivation for this reduction in only this form is not clear. ATA sikanak and DIB kanak are apparently the results of an analogical development which originated with 3sg. sikandin and 3pl. sikandan forms where sikan, not si alone, came to be interpreted as the nominative formative. sikan also occurs as the nominative demonstrative near addressee *'that'* in both Ata and Dibabawon. sikan as a formative is found in every Ata nominative form. In Dibabawon sikan or the alternant reduced form kan is found in all first and third person nominative forms.

The 2sg. form is reconstructed as PMB *sikaun/*sikaw. PMB *sikaun evidently developed from *sikaw + en, with the en added by analogy with *si?aken. KAG kaun developed from *sikaun (with loss of si) and sikuna/kuna forms found in Cotabato, Sarangani, Dibabawon, and Ata are apparently the result of the metathesis of the a to work-final position

to form an optimal CVCV pattern, i.e. *sikaun became sikuna. Binukid, Western Bukidnon, and Ata show reflexes of the alternate PMB *sikaw form. (By a regular diachronic phonological change PMB *a became e before a syllable-final semivowel in Western Bukidnon, Dibabawon, and Ata (Elkins 1974:633).)

The 3sg. pronoun is reconstructed as PMB *sikandin. Kagayanen has reduced the nd cluster to n. In a similar way several Proto-Manobo oblique forms have been formed by a reduction of nC clusters to n. For example, kan- plus kami became PMB *kanami and kan- plus kita became PMB *kanita. Kagayanen also lowered i to e by analogy with other forms ending in en, e.g. yaken and danen. In Cotabato PMB *n regularly became CTM g before PMB *d (ibid:622). The final n in Cotabato was lost as a result of analogical pressure to reduce all final VC sequences in pronouns to V. Note the following changes in which the final consonant was lost:

PMB *sikandin > CTM kagdi
PMB *sikandan > CTM kagda

and the changes in oblique and nominative enclitic pronouns in which a final vowel plus semivowel sequence was reduced:

PMB *kanikaw > CTM kaniko
PMB *-kay > CTM -ké[5]

The only final vowel-consonant sequence which is allowed in Cotabato pronominal forms is eC. This is undoubtedly because schwa (e) does not occur in word-final position in Cotabato. Therefore we find CTM kenaken from *kanaken.

PMB *sikami has been reconstructed for 1pl. As noted above Dibabawon and Ata have reinterpreted the nominative formative as sikan, and sikan plus kami has produced sikanami, with reduction of the medial nk cluster to n. Binukid has generalised the nominative enclitic -kay form to include the independent nominative, forming sikay. In this way Binukid continued to reduce nominative forms to two syllables.

PMB *sikiyu is reconstructed as 2pl. BKD sinyu has apparently been influenced by Cebuano inyu/ninyu. The optional iyu form found in Dibabawon is the result of a change which occurred in the oblique pronouns (see discussion following in section 2.2.). In Ata an earlier sikan plus kiyu reduced medial nk to n and reduced iy to y, forming sikanyu.

PMB *sikandan is reconstructed for 3pl. The Cotabato *n to g change is discussed above. Binukid reduced the three-syllable proto-form to sidan.

PMB *sikita is reconstructed as the 1+2 *'we/I including thou/you'* form. I have concluded that there were no separate 1+2 singular and plural forms in Proto-Manobo. This conclusion is based on the following observations: (1) there is only one 1+2 form in Kagayanen, Cotabato, and Ata, (2) in those languages which make a distinction in number in 1+2 pronouns, the forms do not agree, cf. BKD sikit, sikuy; SAR sikita, sikitadun; DIB sikita/ita, itanew; WBM sikita, sikitew. Sarangani has apparently borrowed kitadun from Kalagan which is spoken in an area contiguous to the area where Sarangani is spoken. The other languages have added a form associated with 2pl. to the kita form. For example, -nuy and -new are found as second person genitive pronouns in Binukid and Dibabawon. In Binukid nuy was apparently added to the 1+2 pronoun, forming sikuy; likewise in Dibabawon new was added to the 1+2 oblique pronoun, ita, which was generalised to include the nominative, forming itanew. In Western Bukidnon a probable sikitanew was reduced to sikitew. The lack of agreement in the formation of the 1+2pl. forms and the lack of number distinction in three languages which do not group closely together within Manobo on the basis of any other evidence indicate that there was no number distinction in 1+2 pronouns in Proto-Manobo. Number distinction apparently developed independently in several of the languages to fill the gap in an asymmetrical system which had a number distinction in first, second and third person pronouns but not in 1+2 person.

2.2. *OBLIQUE*

Reconstructed pronominal formatives are almost identical for independent nominative and oblique pronouns (see Tables 1 and 2). Typically the major difference between oblique and nominative pronouns is in the case markers which precede the pronominal formatives. si- is the nominative formative and kan- is the oblique formative.

Whenever the oblique case marker formative kan- was prefixed the initial consonant (except homorganic d) of the pronoun formative was deleted. This consonant deletion change may have been a regular phonological rule in Proto-Manobo. kan- has been lost in Kagayanen except for the 3sg. form. Note that in this form the consonant deletion rule was extended so that it also applied to d. Therefore in Kagayanen we find PMB *kandin which became KAG kanen.

In Binukid, for example, kan- plus kita became BKD kanit, kan- plus kiyu became BKD kanuy and kan- plus kay became BKD kanay. 2sg. imu and 2pl. inyu forms which were probably borrowed from Cebuano or another Bisayan language were not prefixed with PMB *kan-. The inherited 2sg. ikaw pronoun formative lost kan- as a result of analogical pressure from other second person forms.

Kagayanen has generalised the function of ki, personal name oblique marker, to include pronouns. Without exception the oblique pronouns in Kagayanen are composed of the pronominal formatives (discussed in 2.1.) preceded by kI.

In Cotabato, Sarangani, and Western Bukidnon PMB *a became e in antepenultimate syllables (ibid:628). Therefore in these languages PMB *a became e when prefixed to a disyllabic pronominal formative. This change explains the ken- reflexes of PMB *kan- in 1, 2, and 1+2 forms in these three languages.

In Sarangani several forms have apparently been borrowed from Kalagan which is spoken in an area which is contiguous to the area where Sarangani is spoken. 2sg. kemmu (with assimilation of n to m when kan- was prefixed) and 1+2pl. kanItadun were apparent borrowings (cf. Kalagan 2sg. genitive enclitic, -mu and Kalagan 1+2pl. nominative kItadun (Reid 1971:20)).

In Western Bukidnon the formation of the oblique pronouns from kan- plus an independent pronominal formative is regular except in the 1sg. form where an innovation has occurred. Instead of the expected PMB *kanaken Western Bukidnon shows kedI ∿ kediʔey. A similar form is found in Ata keddiʔ. It is not clear what the origin of this form is, but it is possible that the deictic adverbial dI *'here (closest to speaker)'*, reconstructed as PAN (Blust) *dI(nN)I was involved in the formation of this pronoun. A deictic specifying the location of the speaker is semantically appropriate for an oblique pronoun which most often represents the person towards which movements are made, objects are transported, for whose benefit actions are performed, etc.

In Dibabawon 1+2sg. ita, 1+2pl. itanew, and 2pl. iyu were presumably formed by deletion of initial k when the kan- case formative was prefixed. kan- was then lost in these forms. Note that Dibabawon oblique pronouns may also function as nominative pronouns (see Table 1).

2.3. *NOMINATIVE ENCLITIC*

Except for third person pronouns nominative enclitics are short forms of the independent nominative pronominal formatives. In most cases the pronominal formative was reduced from the right, i.e. the end of the formative. The formatives and the reduced nominative enclitic forms are listed below. Note that singular enclitics ended in vowels and plural enclitics ended in semivowels.

PMB *aken	>	PMB *-a
PMB *Ikaw	>	PMB *-ka
PMB *kIta	>	PMB *-ki

PMB *kami > PMB *-kay
PMB *kiyu > PMB *-kaw

-kay is a plausible reduction of kami with loss of the nasal and loss of the vocalic feature of i when it occurred in consonantal position. -kaw, on the other hand, appears to be an unusual reduction of kiyu. However, since PMB *kami was reduced to *PMB -kay, we would expect PMB *kiyu to be reduced to k plus a diphthong ending in w. The only diphthongs ending in w which have been found in Manono languages are aw and ew, and the only diphthong ending in w which appears to be reconstructable for Proto-Manobo is aw. Another factor which may have influenced the reduction of kiyu to -kaw is the 2sg. ikaw form.

Both 3sg. and 3pl. forms are reconstructed as ø. In all languages a third person pronoun is assumed when an expected pronoun does not occur. In Binukid, Cotabato, Sarangani, and Western Bukidnon the 3pl. genitive pronoun has been generalised to include a nominative case function. Presumably this 3pl. form was extended to the nominative so that number would not be ambiguous for third person referents.

2.4. *GENITIVE*

Genitive pronouns are enclitic and occur as non-subject agents of verbs or possessors of nouns. They immediately follow verbs with which they have an agentive relationship, nouns with which they have an attributive, possessive relationship, and adverbial elements. When following adverbials, genitive pronouns occur between the adverbials and the verbs with which they have an agentive relationship. Genitive pronouns apparently have a source which is different from the other three sets of pronouns discussed above (independent nominative, oblique, and nominative enclitic) which all seem to have developed from a single paradigm.

PMB *-ku from PAN (Dempwolff) *ku is reconstructed for the 1sg. pronoun. PMB *-nu is reconstructed for 2sg. Cotabato has apparently replaced PMB *-nu with ko which is a reduced form of ikaw (cf. CTM keniko, 2sg. oblique and the discussion of this form in section 2.2.). There was analogical pressure to reduce all Cotabato genitive pronouns to consonant plus vowel sequences. In Ata an alternate form of nu was nikeykow, i.e. the genitive case marker for personal nouns, ni, plus the Ata independent nominative. PMB *-din is reconstructed for the 3sg. pronoun. The loss of CTM n has been discussed above.

PMB *-ta is reconstructed as 1+2 with no number distinction. The development of the 1+2pl. form in several of the daughter languages and the shift of the general 1+2 pronoun to 1+2sg. in those languages which developed a number distinction in this pronoun have been discussed above.

For the 1pl. pronoun two forms are widespread which apparently derive from -day and -nay. It appears that *day was the Proto-Manobo form which became -nay in several languages by analogy with 2sg. PMB *-nu and 2pl. PMB *-niyu which began with n's. The personal noun genitive marker ni also apparently provided analogical pressure for the d to n change in this genitive form. Cotabato has generalised the function of the nominative enclitic 1pl. and 2pl. pronouns. Thus CTM -ké and -yu function as either nominative or genitive enclitics.

PMB *-niyu is reconstructed as the 2pl. pronoun. Dibabawon and Ata have both reduced PMB *-niyu to -new in the same way they reduced the nominative 2pl. kiyu to -kew.

TABLE 1

Manobo Independent Nominative Pronouns

	KAG	BKD	CTM	SAR	WBM	DIB	ATA
SG							
1	yaken	si?ak	aken	si?ak	si?ak	si?ak/kanak	sikanak
2	kaun	sikaw	kuna	sikuna	sikew	sikuna/sikeykew	kuna
3	kanen	ø	kagdi	sikandin	sikandin	sikandin/kandin	sikandin
1+2	kiten	sikit	kita	sikita	sikita	sikita/ita	sikanta
PL							
1+2	kiten	sikuy	kita	sikitadun	sikitew	itanew	sikanta
1	kami	sikay	kami	sikami	sikami	sikanami/kanami	sikanami
2	kiyu	sinyu	kiyu	sikiyu	sikiyu	sikiyu/iyu	sikanyu
3	danen	sidan	kagda	sikandan	sikandan	sikandan/kandan	sikandan

TABLE 2

Manobo Oblique Pronouns

	KAG	BKD	CTM	SAR	WBM	DIB	ATA
SG							
1	kiyaken	kanak	kenaken	kanak/kenagen	kedi/kedi?ey	kanay	keddi?
2	kikaun	ikew/imu	kenIko	kemmu	kenikew	ikew	keykew
3	kikanen	kandin	kenagdi	kendin	kendin	kandin	kandin
1+2	kikiten	kanit	kenita	kenita	kenita	ita	kanta
PL							
1+2	kikiten	kanuy	kenita	kenitadun	kenitew	itanew	kanta
1	kikami	kanay	kenami	kenami	kenami	kanami	kanami
2	kikiyu	inyu	keniyu	kenyu	keniyu	iyu/iu	kanyu
3	kiranen	kandan	kenagda	kandan	kandan	kandan	kandan

TABLE 3

Manobo Nominative Enclitic Pronouns

	KAG	BKD	CTM	SAR	WBM	DIB	ATA
SG							
1	-a	-a	-a	-a	-a	-a	-a
2	-ka	-ka	-ka	-ka	-ka	-ka	-ka
3	ø	ø	ø	ø	ø	ø	ø
1+2	-ki	-ki	-ki	-ki	-ki	-ki	-ki
PL							
1+2	-ki	-kiyu/kuy	-ki	-kidun	-kiyu	-kinew	-kinew
1	-kay	-kay	-ké	-kay	-key	-key	-key
2	-kaw	-kaw	-yu	-kaw	-kew	-kew	-kew
3	ø	ø ?	-da	-dan	-dan	ø	ø

TABLE 4

Manobo Genitive Pronouns

	KAG	BKD	CTM	SAR	WBM	DIB	ATA
SG							
1	-ku	-ku	-ku	-ku	-ku	-ku	-ku
2	-nu	-nu	-ko	-nu/nikaw	-nu	-nu	-nu/nikeykew
3	-din	-din	-di	-din	-din	-din	-din
1+2	-ta	-ta	-ta	-ta	-ta	-ta	-ta
PL							
1+2	-ta	-taw	-ta	-tadun	-tew	-tanew	-tanew
1	-nay	-day	-ké	-day	-dey	-ney	-ney
2	-niyu	-nuy	-yu	-niyu	-niyu	-new	-new
3	-danen	-dan	-da	-dan	-dan	-dan	-dan

TABLE 5

Reconstructions of Manobo Pronouns

	SINGULAR		PLURAL
Independent Nominative			
1	*si?aken		*sikami
2	*sikaun/*sikaw		*sikiyu
3	*sikandin		*sikandan
1+2		*sikita	
Oblique			
1	*kanaken		*kanami
2	*kanikaw		*kaniyu
3	*kandin		*kandan
1+2		*kanita	
Nominative Enclitic			
1	*-a		*-kay
2	*-ka		*-kaw
3	*ø		*ø
1+2		*-ki	
Genitive			
1	*-ku		*-day
2	*-nu		*-niyu
3	*-din		*-dan
1+2		*-ta	

3. CASE MARKING PARTICLES

Case marking particle data and reconstructions are found in Tables 6 and 7. All case marking particles precede the nouns whose case they mark unless a hyphen precedes the form cited. This does not necessarily mean that the case marker is enclitic to the noun. The hyphen is merely used as a notational device to indicate the position of the case marker with respect to the noun.

In general, Kagayanen and Cotabato have lost many of their distinctions in case marking particles. Cotabato has generalised the use of the personal noun nominative marker *si to include the oblique case and has generalised the function of the common noun nominative marker *sa to apply to all cases. Kagayanen has retained only *ki as the personal noun oblique marker and *ta as the genitive/oblique common noun marker.

3.1. *PERSONAL NOUN MARKERS*

*si is reconstructed as the nominative personal noun marker. Kagayanen shows -an and Cotabato shows an alternate form, -a, for this marker. The Kagayanen and Cotabato forms probably both derive from demonstratives. Note these demonstratives which point out an entity near the addressee: KAG yan, BKD hayan, CTM iya, WBM he?iyan, DIB and ATA sikan. The Dibabawon and Ata forms seem clearly to stem from an innovation which developed from the third person nominative pronoun, PMB *sikandin and PMB *sikandan in which sikan became interpreted as a nominative, definite marker. Comparing the remaining forms it appears that iyan can be reconstructed as the nominative demonstrative near addressee, *'that'*. i is interpreted as a nominative case marker with a predictable y glide before the demonstrative formative an. The loss of the final n in the Cotabato form is parallel to the loss of final n in the third person pronouns, PMB *-din > CTM -di and PMB *-dan > CTM -da. It is suggested that Cotabato and Kagayanen case markers (-a and -an respectively) originally had a deictic function which became associated specifically with the nominative case when si was either lost or lost its specifically nominative function in these two languages.

PMB *ni is reconstructed as the genitive case marker. Sarangani and Cotabato share an i innovation. i is also found as a personal noun marker in Tiruray, Bilaan, and Sangir which are all spoken in Southern Mindanao where Cotabato and Sarangani are spoken. Cotabato and Sarangani may have both borrowed this i personal noun marker from one or more of these languages. Since ni has been reconstructed as a Proto-Austronesian agent marker for passive verbs by Blust (1974:10)

it is very likely that the form was present in Proto-Manobo but was lost in these two languages. The replacement of nI by I is a change which has evidently spread through areal influence. BKD hi as well as hu, genitive common noun marker, were apparently borrowed from the Butuan-Tausug branch of the South Bisayan group.[6] Butuanon is spoken in an area contiguous to the area in north-eastern Mindanao where Binukid is spoken. Tausug presumably was also spoken in this same area which is geographically within the Bisayan language area before the Tausug (or Proto-Butuan-Tausug) speakers migrated to their present location in the Sulu Archipeligo in extreme south-west Mindanao. Note the following Tausug and Butuanon case markers:

	Tausug	Butuanon
personal genitive	hi	nI
common genitive	sin	hung

Binukid apparently borrowed hi as hi from this South Bisayan group. hung (with ng ligature) was apparently borrowed as hu, since the enclitic ng ligature is not found in Binukid.

PMB *kI is reconstructed as the personal noun oblique case marker. Only Cotabato, which has generalised the function of the nominative marker sI to include the oblique case, does not show kI for this case marker.

3.2. *COMMON NOUN MARKERS*

PMB *sa is reconstructed as the nominative case marker. Western Bukidnon, Dibabawon, and Ata have added a second nominative case marker which apparently derived from PMB *kan-, the pronominal oblique case formative. A Manobo branch which eventually developed into these three separate languages apparently innovated this second nominative case marker. PMB *sa was generally retained as the specific nominative marker. However, in Western Bukidnon the reflex of PMB *sa was lost and replaced by is, apparently a metathesised form of the personal noun marker PMB *sI. It is possible but highly speculative that the innovative kan form originated as a predicative marker which occurred in equational sentences, viz. *'MY FATHER is the one who hit him.'*. Note that WMB kes, DIB kan, and ATA ka are similar in form to kan. What does appear clear is that two competing nominative-type forms developed in Western Bukidnon, Dibabawon, and Ata, and the form which derived from PMB *sa became interpreted as a specificity marker in the nominative case in these languages.

There are two phenomena which indicate that the development of kan as a noun marker was post-Manobo. First of all, apparent reflexes of

this form are only found in Western Bukidnon, Dibabawon, and Ata which seem to group closely together on the basis of several shared innovations. Secondly, in Sarangani, Western Bukidnon, Dibabawon, and Ata case markers which derive from PMB *sa and PMB *ta generally became se and te in these four languages. The change from *a to e in *sa and *ta was evidently the result of a reduction of a to e in unstressed monosyllabic particles. Since most substantives were disyllabic forms in which stress generally fell on the penultimate syllable, it would be most natural for the preceding particle to be unstressed. Because kan or analogically reduced ka does not show the *a to e change in Dibabawon and Ata, it is believed that kan was not a Proto-Manobo noun marker. In Western Bukidnon ka(n) is reflected as ke because the oblique marker kan is regularly reflected as ken or ke in Western Bukidnon (see Table 2).

PMB *ta is reconstructed as the genitive/oblique marker. The PMB *ta to te change is explained in the paragraph above as a change which occurred in unstressed particles. The generalisation of the function of sa in Cotabato has been discussed above.

TABLE 6

Manobo Case Marking Particles

() indicates 'usually omitted', - indicates 'same as above'

	KAG	BKD	CTM	SAR	WBM	DIB	ATA
PERSONAL							
Nominative	-an	si	si, -a	si	si	si	si
Genitive	ø	hi	i	i	ni	ni	ni
Oblique	ki	ki	(si),(diya si)	ki	ki	ki	ki
COMMON							
Nominative	-an	sa	sa	se	ke	te, ten	ka
Predicative	-	-	-	-	kes	kan	ka ?
Nominative (specific)	-	-	-	sen	is	se?i	se, se?i
Genitive	ta	hu	(sa)	te	te	te	tə
Oblique	ta	ta	(sa),(diya sa)	te	te	te,(diya te)	te

TABLE 7

Reconstructions of Manobo Case Marking Particles

	PERSONAL	COMMON
Nominative	*sI	*sa
Genitive	*nI	*ta
Oblique	*kI	*ta

4. CONCLUSIONS REGARDING MANOBO INNOVATIONS

4.1. *CHANGES FROM PROTO-AUSTRONESIAN PRONOMINAL INNOVATIONS*

Several changes are noted which apparently occurred at the Proto-Manobo stage before the various branches which became the daughter languages split from the parent language. None of these changes can be traced to regular phonological reflexes in Proto-Manobo of Proto-Austronesian sounds. In pronominal forms several differences in the Proto-Austronesian and Proto-Manobo forms appear to be attributable to analogical pressure. Examples of these changes from Proto-Austronesian (Dempwolff) forms are cited below:

Proto-Austronesian		Proto-Manobo	
2sgN	*kaw	2sgNI	*sIkaun
1sgN	*a(N)ken	1sgNE	*-a
1plN	*kamI	1plNE	*-kay
2sgG	*-mu	2sgG	*-nu
1plG	?	1plG	*-day
3plG	*-Da	3plG	*-dan

Ignoring the sI nominative case formative, the change in 2sg. nominative PAN *kaw to kaun is apparently due to analogical pressure from many Manobo nominative forms ending in n, for example, PMB 1sg. *siʔaken, PMB 3sg. *sIkandIn, and PMB 3pl. *sIkandan.

There also appears to have been analogical pressure to reduce all enclitic pronominal forms to one syllable. The first person Manobo nominative enclitic forms cited in the chart above apparently are the result of these analogically-motivated reductions.

Looking at the last three genetive forms cited above, it appears that both d and n formatives became associated with the genitive case in Proto-Manobo. The d- association was probably first made because of the third person *-dIn and *-dan forms; the n association was probably

made because of the 2pl. *-niyu and the nI personal name marker. This n- genitive association may have motivated the PAN *-mu to PMB *-nu change.

Other Proto-Manobo pronouns appear not to have developed from pronouns reconstructable for Proto-Austronesian. PMB *sikandin, for example, appears to have been formed from two case markers, si and kan plus the locative form PAN (Blust) *dI(N)I *'here'* with an innovative n added. The source of the 2sg. pronominal formative kiyu in PMB *sikiyu is obscure and appears not to be directly relatable to PAN (Dempwolff) *kamu.

4.2. *INTRA-MANOBO DEVELOPMENTS FROM PROTO-MANOBO*

Several changes have occurred in individual languages included in this study. Most of these changes have not been significant for grouping together languages within Manobo because the changes are not shared by more than one language. In several other cases only one change is found to be shared by two or more languages. Moreover, the changes which fall within this category are of the type which might have developed independently. An example of possible independent change is PMB *-day to KAG, DIB, ATA -nay which apparently developed by analogy with other genitive forms beginning with n.

However, in other cases several different changes are shared by languages which appear to form subgroups within Manobo. For example, Dibabawon and Ata share several changes which indicate that these languages previously formed what we might refer to as the East Manobo branch of the family. Changes which these languages share are:

Proto-Manobo		Proto-East-Manobo	
1plNI	*sIkami	1plNI	*sikanami
1+2NE	*-ki	1+2plNE	*-kinew
2plG	*-niyu	2plG	*-new
Nominative Common marker	*sa	Nominative common, Specific marker	*se?i

Also, Western Bukidnon, Dibabawon, and Ata share several changes which probably were introduced in the branch of Manobo which we can refer to as Central Manobo. These changes are:

Proto-Manobo	Proto-Central-Manobo
*aw	*-ew (for example, *-kaw > *-kew)
*ay	*ey (for example, *-kay > *-key)
Nominative Common marker *sa	Nominative specific *sa Nominative general *kan

I would therefore propose on the basis of innovations in pronouns and case marking particles that there was a Central branch of the Manobo family which split into two branches. One branch became Western Bukidnon and the other was an East branch. The East branch split into two branches which became Dibabawon and Ata. The remaining innovations neither support nor deny further branches within the Manobo family from which two or more languages included in this study later descended.

These findings differ somewhat from a theory of Manobo language subgrouping which was proposed by Richard Elkins (1974). Of those languages included in this study Elkins believes that Binukid and Kagayanen group together in a North branch; Cotabato, Sarangani, Western Bukidnon, Dibabawon, and Ata group together in what might be called a non-North branch; Cotabato and Sarangani group together in a South branch; Western Bikidnon, Dibabawon, and Ata group together in an East-West-Central branch; and Ata and Dibabawon group together in an East-Central branch (ibid:637).

Elkins' subgrouping theory is based primarily on reflexes of PMB *a in the daughter languages. He places Binukid and Kagayanen together because they have not participated in any of the PMB *a to e changes which occurred in other Manobo languages. He groups the remaining languages together on the basis of an antepenultimate syllable-final rule in which PMB *a became e. However, he does not believe this change occurred in Dibabawon and Ata (ibid:634-636). Cotabato and Sarangani are apparently placed together on the basis of exclusively shared lexical innovations (ibid:639). The evidence for these groupings are summarised below:

1. KAG, BKD — no PMB *a > e changes
2. CTM, SAR, WBM, (DIB,ATA) — PMB *a > e /____C.VC.V#
   () indicates non-participation in change)
3. SAR, CTM — shared lexical innovations

The fact that Kagayanen and Binukid did not participate in the *a to e changes does separate them from other Manobo languages in this study, but it does not, I believe, support grouping them together. This shared retention does not constitute subgrouping evidence. The PMB *a to e change in antepenultimate syllables is a natural type of change which might occur independently in Cotabato, Sarangani, and Western Bukidnon or any language in which stress usually occurred on the penultimate syllable. The same change, for example, also occurs in Malay (George Grace: personal communication). Moreover, because Dibabawon and Ata did not participate in this change I can see no evidence for including these two languages in the second group listed above. The Sarangani-Cotabato grouping is supported only by shared

lexical innovations which form the weakest type of subgrouping evidence. While lexical innovations are acceptable as supporting evidence, it is imperative, I believe, that they be accompanied by shared phonological and/or syntactic innovations.

In summary, I do not believe that the evidence presented in Elkins (1975) or the shared innovations in pronouns and case marking particles discussed in this paper support the three groupings listed above. That is not to say that the groupings are necessarily incorrect. Further detailed study may provide more conclusive evidence to support Elkins' grouping or other groupings of these languages. Until this evidence is provided, these languages should probably best be considered provisional first order members of the Manobo subgroup.[7]

On the other hand, Elkins' grouping of Western Bukidnon, Dibabawon, and Ata on the basis of the PMB *a to e change before syllable-final semivowels is supported by shared innovations in pronouns and case marking particles. Likewise, Elkins' grouping of Dibabawon and Ata together on the basis of the *a to e change before a laryngeal plus a high vowel is supported by shared pronominal and case marking innovations in these two languages. The Manobo subgrouping supported by both Elkins' and my studies are a Central group (Western Bukidnon, Dibabawon, and Ata) and an East group (Dibabawon and Ata).

N O T E S

1. This paper is a revision of an earlier paper entitled *Reconstructions of Proto-Manobo Pronouns and Case Marking Particles* which appeared in University of Hawaii Working Papers in Linguistics 6.6.13-46. I am indebted to Lawrence A. Reid for many insights and criticisms he offered on preliminary drafts of the original paper. Revisions in several of the reconstructions posited in that original paper have been necessary because of new evidence which was previously unavailable. Among this evidence are pronominal and case marking data on Kagayanen which I gathered in 1975 fieldwork in the Cagayan Islands and pronominal and case marking data on Butuanon, a Bisayan dialect spoken in northeastern Mindanao, which were included in David Zorc's Ph.D. thesis (1975). Our better understanding of Proto-Philippine pronominal forms has also helped to identify some forms as retentions from the Proto-Philippine stage rather than innovations as was previously assumed in some cases.

2. e represents [ə] or [ɨ] in all data presented in this paper. u represents [u] or [o] in all languages except Cotabato in which u represents [u] and o represents [o]. ʔ represents [ʔ]. é represents [e]. Data on the Manobo pronouns and case marking particles were taken from the following sources:

Ata: Austin (1966:13)
Binukid: Post
Cotabato: Kerr (1965:46)
Dibabawon: Barnard and Forster (1954:227)
Kagayanen: Harmon (1977:87,77)
Sarangani: Dubois (1977:58)
Western Bukidnon: Elkins (1970:8-9)

3. Glottal stop before a vowel-initial word is not phonemic in Kagayanen. Glottal stop is predictably inserted before a vowel preceded by a pause.

4. Kagayanen has lost many Manobo case markers. Although ki (personal noun oblique marker) and ta (genitive/oblique common noun marker) remain, in all other cases new Kagayanen case markers have been borrowed or innovated.

5. é represents [e].

6. Zorc (1975:39) has identified these languages as the members of the South Bisayan group. See Zorc:102,107 for case marking particle data.

7. However, see Harmon (1977:212-6) for weak evidence of a Kagayanen-Binukid branch of Manobo which is supported by exclusively shared innovations in functors (loosely defined as grammatically important forms of a language) and the lexicon.

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CHAMORRO PREFIXES: I

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1. INTRODUCTION

This is the first in a projected series of papers describing the prefixes of Chamorro[1]. Chamorro is the native language of the Mariana Islands, and is a language especially rich in affixes of many types. To be covered here are the prefixes having an initial /a/.

Morphemes discussed will be written phonemically, except where appropriate for allomorphs to be given phonetically, in which case the form will be enclosed in phonetic brackets [ ]. (For the phonemes of Chamorro, see Witucki 1975, 1976.) All vowels which are uttered after pause are phonetically glottal plus vowel. Two vowel phonemes placed in sequence are separated by a glottal; i.e., /ɨaa/ is [ɨa?a]. This does not, of course, apply to the second member of the diphthongs /au, ai/.

Primary word stress will not be marked unless it differs from the general rule, according to which such stress occurs on the penultimate syllable. Stress, therefore, is not regularly phonemic in Chamorro, but it is used to distinguish between a fair number of homonymous words and affixes. This is true for several pairs of prefixes which, through one or another historical process, have come to have the same segmental phonemic components. An example of this is the stress opposition between /á-/ and /a-/, prefixes discussed in the following sections.

2. KNOWN PREFIXES WITH INITIAL /a/

Topping (1973:175-6) lists the following /a/ initial prefixes for Chamorro: /á-/ reciprocal; /án-/ *'left-over'*, and /atsá-/ equality. These will be briefly discussed below.

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2.1. /á-/

Topping states that this means reciprocal, and that it "is always attached to a verb" (ibid.). This explanation is identical to that of Safford (1904:6.528). When the affixed form is used as a verb, it requires a further prefix and a noun phrase to indicate dual or plural subject involvement. /-um-/ plus /á-/ is used for dual subject, /man-/ plus /á-/ for plural.

Examples:

Umápatsa i dos.	*'The two touched each other.'*
Umádiŋan dzu? dzan i lahi.	*'I talked with the man.'*
Manágu?ti hit.	*'We* (plural) *grabbed each other.'*

In addition, the prefix /á-/ is employed as a noun-forming prefix. Nouns thus formed suggest the result of a reciprocal relation. The plural takes /á-/ + /fan-/.

Examples:

átuŋu? *'friend'* < tuŋu? *'to know'*
ágʷaidza *'love affair'* < gʷaidza *'to love'*
áfantùŋu? *'friends' (term of address)*
áfangà?tsuŋ *'companions' (term of address)* < ga?tsuŋ *'companion'*

2.2. /án-/

Topping (1973:175) assigns to this prefix the meaning of 'left-over'. However, this gloss fits the sense of only a few of the forms derived from its use. 'Left-over' is clearly inadequate, being too specific a meaning to suggest the function of the prefix with a variety of roots. The idea conveyed is more generally that which exists beyond, or overrules, the root-idea.

Examples:

án-bali	*'dust (excess from sweeping)'* < Spanish barrer.
án-kanu?	*'left-over food (excess, uneaten)'* < kanu? *'to eat'*
án-tuk	[an.nuk] *'exposed, visible'; 'beyond cover';* < */tuk/*[2] *'to hide, conceal'.* Shows morphophonemic change /n + t/ → [nn].
án-put	[am.mut] *'medicine, cure'.* As a root, */put/* means *'to swell up, swelling'.* The most talked-about native ailment on Guam is /tsi?nut malpi/ *'hot sore, a swelling that feels hot'.* To counter or 'overrule' such a swelling is to cure it. The phonetic representation results from the morphophonemic change /n + p/ → [mm].

án-di? *'show-off, gaudy'* < */di?/ *'small, smallness, small bit'*. /án-di?/ is beyond or overruling smallness.

2.3. /atsá-/

Equality, sameness. Alternates with /tsá-/ in casual or rapid speech (Safford 1904.6:110; Topping 1973:175).

Examples:

atsá-uŋak *'to balance, make equal weights'* < /uŋak/ *'to tilt'*.
atsá-taᵘtaᵘ *'peer, equal in age, status etc.'* < /taᵘtaᵘ/ *'person'*.
atsá-hit *'we* < /hit/ *'we* (pl)'
atsá-igi *'to compete, contend'* < /igi/ *'to outdo'*.

This prefix is almost certainly derived from the ancient Chamorro numeral for *'one'*. After the Spanish gained control of the Mariana Islands in the middle of the 17th century, Spanish number words were substituted for the corresponding native words. The native Chamorro word for *'one'* is /hatsa/ (Safford 1904.6:95,97) which in this prefix-usage takes stress on the second syllable. The loss of the initial /h/ is very common in modern casual Chamorro speech. (For another instance, see section 3.2. of this paper.)

As a prefix meaning *'equality, sameness'*, /atsá-/ conveys the idea that two or more entities share one quality, nature, or action. When used in an assertion of equality, it is followed by a subject phrase indicating the two or more entities being equated in some way.

Examples:

atsá-iu?ka? i dos. *'The two are the same height.'*
Literally, *'one-height the two'*.

atsá-daŋkuiu? i tres. *'The three are equally large.'*

atsá-taᵘtaᵘ si Maria i si Ana. *'Maria and Ana are equal (in status).*

3. FURTHER /a/ INITIAL PREFIXES

The prefixes in this section have not, to my knowledge, been discussed previously by other students of Chamorro.

3.1. /a-/

This prefix is unstressed, contrasting it with /á-/ reciprocal prefix (2.1.). /a-/ means something like *'self'* or *'essence'*. If affix plus root results in a noun-usage[3], it refers to something which is naturally, without cause, an instance of the root meaning. If affix plus root

results in a verb-usage, it is an intransitive verb, a verb of self-action.

Examples:

agaŋ	*'to call or beckon'* < */gaŋ/ *'noise'*. The transitive is formed by adding /-i/: /agaŋi/ *'to call someone'*.
atuk	*'to hide, conceal (oneself)'* < */tuk/ *'hug, enclose'*.
akaŋkaŋ	*'molar, tooth, thing with multiple projections'* < */kaŋ/ *'projection'*. (The root duplication acts as pluraliser.) Compare /kaŋhiiun/ *'horn or antler of animal'*, from < */kaŋ/ plus /hiiu?/ *'on top'*, plus /-n/ relator.
adumɬdidi?	*'gradually, a little bit at a time'* (adverb usage). From /dɬdidi?/ *'a little bit'*, plus /-um-/ progressive action.
agua?	*'to make a step up and over'*; the reference is to the pictured self-movement, not to what was stepped over. From */gua?/ *'upward, arching movement'*, as in /gua?gua?/ *'to cause regurgitation'*.
asu	*'smoke'* < */su/ *'coming out, away'*. Compare /na?su?i/ *'make it come out, take it out' (as the guts of a fish)*. Smoke is that which always, naturally, comes out of a fire.
asugua?	*'support, for house rafters; that which comes out and up in an arching line'*. From /a-/ + /su/ *'come out'* + /gua?/ *'arching'*.

3.2. /a-/ ∿ /ha-/

In a number of words, a prefix /ha-/ has a freely alternative form /a-/. It is not clear at present whether /ha-/, with its /a-/ allomorph, is a prefix separate from the /a-/ prefix discussed in section 3.1. The functions of /ha-/ appear to fall within the range of the usages of /a-/, which was glossed as *'self-act, self-essence'*. Topping does not give a /ha-/ prefix without stress, though he does mention a stressed prefix /há-/, said to mean *'usually, often'* (1973:178).

The following examples of the unstressed /ha-/ prefix illustrate its free alternation with /a-/:

hatiŋ ∿ atiŋ *'black ant'* < */tiŋ/ *'carry'*
ha?if ∿ a?if *'torch'*
hatsún ∿ atsún *'torch for night fishing'*

haga?ña ∿ aga?ña *'Agana'* (main town on Guam)
hagat ∿ agat *'Agat'* (town on central west coast of Guam)

That the meaning of /ha-/ overlaps with the meaning of the /a-/ of 3.1. can be seen in the following:

haduk — *'dimple, in the skin or flesh, of human, fruit, or vegetable'*. Such a dimple is an uncaused or natural dent. From */duk/ *'dent or pit'*. Compare /maduk/ *'a dent made by some agent'*.

hagu?i — *'to reach for something'* < /ha-/ (probably) self-act emphasis, plus */gu?/ *'grasp'*, plus /-i/, transitive marker. Note that the sense is not that someone grasps something, as in /gu?ti/ (see 2.1.), but rather that the actor **moves** to grasp something -- he reaches for it. Such distinctions in the pictorial quality of actions are common and very important in Chamorro.

The /ha-/ prefix has a low frequency of occurrence, and this is a further reason to assume that all cases of the /ha-/ ∿ /a-/ prefix usage belong to just one morpheme. Given my present data, I hypothesise that a former prefix /ha-/ has in the majority of its usages come to be expressed as the modern preferred allomorph, /a-/. The alternation in a great many words of /h/ and /ϕ/, in initial, medial, and final positions, strongly supports this suggestion.

3.3. /á?-/

This affix is essentially an augmentative of the previously described prefix /a-/, self-essence or self-act. The addition of the glottal stop and stress apparently adds forcefulness, and/or deliberateness, to the doing of an act, or the actor who does it. When the resultant form is used as a noun, it denotes one who does such an act regularly or professionally.

Examples:

á?gaŋ — *'(to make) a loud noise, booming sound'* < */gaŋ/ *'noise'*. Compare /agaŋ/ *'to call'*; /agaŋi/ *'to call someone'*.

á?ada? — *'one who mocks or mimics'* < /ada?/ *'to mock'*.

á?adahi — *'one who protects or guards'* < /adahi/ *'to care for'*.

á?platsa — *'dirty, unclean; impurity (entirely unclean)'* < /platsa/ *'spot'*.

á?haga [ák.ka.ga] *'fictive daughter, girl, miss'* < /haga/ *'daughter'*. An address term for one who 'acts like a daughter', in terms of social functioning.

á?amuti *'doctor, healer'* < /amuti/ *'to heal, cure'*.

á?aposta *'gambler'* < /aposta/ *'to bet'* < Spanish apostar.

3.4. /aka-/

This is a rare prefix, which is clearly derived from a general root with the meaning of *'biting, piercing, sharp'*. Compare /aka?/ *'to bite'*.

Examples:

aka-lí?lí? *'sharp-sighted'* < /aka-/ *'sharp'* + /lí?í?/ *'to see'*. Usually /ak.lí?.í?/.

aka-diduk *'having sharp point, edge'* < /diduk/ *'deep'*; hence *'(it) bites deep'*.

aka-duk *'nipple, teat'* < /aka-/ *'biting'* + /duk/ *'dent, bump'* → *'biting bump'*.

aka-gwi *'left (direction)'*; possibly refers to the *'cutting direction'*, the side one cuts to (in fighting, etc.).

This prefix is also produced as /ka-/, and as such is mentioned by Topping (1973:178). He states that this prefix "is no longer productive and is not easily labelled". He gives as examples the following:

ka-diduk *'sharp'* < /diduk/ *'deep'*. This also occurs as /aka-diduk/; see above.)

ka-laktus *'sharp'* < `laktus/ *'thorn'*.

It is probable that many other words produced with an unstressed /ka-/ prefix are likewise exhibiting a reduced form of the /aka-/ prefix. There will be more on this in a future paper covering /k/ initial prefixes.

N O T E S

1. My analysis of Chamorro is based on speech data from four informants, all of whom derive from the same general geographical area, the environs of Agaña, the capital city of Guam. Two of these informants, Ruperta Blas and Robert Underwood, were Chamorro speakers temporarily residing in Los Angeles. The other two were Rosario Sablan and Remedios Perez, who generously aided me during a summer (1971) of fieldwork on Guam.

2. Asterisked forms are general roots which are not used in speech without grammatical alteration by affixing, duplication, etc.

3. The basic meaning forms in Chamorro are general roots, without distinction as to 'parts of speech', like nouns, verbs, adverbs, adjectives, etc. Roots are changed, by context as much as by affixing, to have use as verbs, nouns, and so-on; even pronouns may be used as verbs in this way. Hence the terms 'noun-usage, verb-usage', etc. are convenient labels when discussing a root and its functions which differ according to how it is employed in a phrase, sometimes regardless of its affixes.

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