

A SUBGROUPING OF 100 PHILIPPINE LANGUAGES

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1.0 INTRODUCTION

The subgrouping of the so-called 'Philippine Languages' dates back to at least Wilhelm R. von Humboldt (1836), Wilhelm P. Schmidt (1926), Hendrik Kern (1887) and Otto Dempwolff (1934). These men attempted to relate these languages to the austronesian language family and cited one or two of them as examples of the type of languages which belonged to this subgroup. A much larger number (59) of these languages were included by Isidore Dyen (1965) in his lexicostatistical classification of some 371 speech communities belonging to the Austronesian language family.

Within the Philippine subfamily itself, efforts to classify the various daughter languages were made preliminarily by Harold C. Conklin (1952, 1955). These were then followed by two lexicostatistical classifications: one by Robert B. Fox, Willis E. Sibley and Fred Eggan (1954), and the other by David Thomas and Alan Healey (1962). Douglas Chretien (1951) made a classification of 21 Philippine languages according to the distribution of 1,904 morphemes; and Teodoro A. Llamzon (1969) subgrouped nine of these languages according to their exclusively shared innovations.

Dyen's study identified two large subgroups within the Philippine

language family: the 'Sulic Hesion', which included 28 speech communities together with five major languages (Tagalog, Cebuano, Ilonggo, Bikol, and Pampanggo), and the 'Cordilleran Hesion', which included all the other languages (together with Ilocano) except nine (Maranao, Casiguran, Yakan, Baler, Tiruray, Dusun, Murutic Subfamily, Bilic Subfamily, and Ivatan), which stood in coordinate relationship with the two groups mentioned above. He left Ilonggot unclassified.

Thomas and Healey's work posited an early (ca. 700 B.C.) triple split of the 'Philippine Stock' into a 'Northern Philippine Family', a 'Southern Philippine Family', and 'Pangasinan'. These three groups together lay in coordinate relationship with Ivatan, Ilonggot, and Baler Dumagat, and formed the 'Philippine Superstock', which broke away from the 'Southern Mindanao Family' and the 'Malay Stock' around 1300 B.C.

Chretien's method of classifying 21 Philippine languages on the basis of the distribution of 1,904 morphemes yielded three divisions: the 'Luzon Sequence', the 'Macro-Bisayan Group', and the 'Mindanao-Sulu Group'. This last group was linked to the Macro-Bisayan Group by Tausug, while the Macro-Bisayan Group was linked to the Luzon Sequence by Bicol.

This study of 100 Philippine languages is, I hope, another effort towards completing the subgrouping of all the Philippine languages. It differs from the above mentioned studies in two respects, namely: in the number of languages included in the study group, and in the method used to classify these languages.

The classification of the present set of 100 languages is based on their exclusively shared innovations (ESI) as the principles which underlie the method were explained by Brugmann (1884). The details of the procedures for determining probable ESI's and setting up a *Stammbaum* on the basis of these ESI's were elaborated by Llamzon (1969). The use of glotto-chronology, as suggested by George W. Grace (1964), has been restricted only to the calculation of time depth of separation between the languages of the study group.

2.0 THE LANGUAGES OF THE STUDY GROUP

This subgrouping includes 100 Philippine languages, the data for which were obtained from three main sources: Lawrence A. Reid's *PHILIPPINE MINOR LANGUAGES* (PML), the files of the Summer Institute of Linguistics in the Philippines (SIL), and the files of the Ateneo de Manila University Language Centre (ALC).¹ The following list gives the number assigned to each of these 100 languages, their names, location, and the sources from which data on them were obtained:

S O U R C E S

NO.	LANGUAGE	LOCATION	Phonology	Morphology	Syntax
1.	Agta	Central Cagayan Valley	PML	PML	SIL
2.	Atta	Pamplona, Cagayan	PML	PML	SIL
3.	Balangaw	Botak, Natonin, Mt. Province	PML	PML	SIL
4.	Batak	Tagnipa, Palawan Is.	PML	PML	ALC
5.	Bilaan (Koronodal)	Koronodal Valley, Cotabato	PML	PML	SIL
6.	Bilaan (Sarangani)	Southern Davao	PML	PML	ALC
7.	Binukid	Northern Bukidnon	PML	PML	ALC
8.	Bontoc	Bontoc, Mt. Province	PML	PML	ALC
9.	Dumagat	Casiguran, Quezon	PML	PML	SIL
10.	Gaddang	Butigui, Mt. Province	PML	PML	SIL
11.	Amganad (Ifugao)	Amganad, Ifugao	PML	PML	SIL
12.	Batad (Ifugao)	Batad, Ifugao	PML	PML	SIL
13.	Bayninan (Ifugao)	Bayninan, Ifugao	PML	PML	ALC
14.	Ilonggot	Kakidugen, Nueva Vizcaya	PML	PML	ALC
15.	Inibaloi	Kabayan, Benguet	PML	PML	SIL
16.	Isneg	Kabugao, Kalinga-Apayao	PML	PML	SIL
17.	Itbayaten	Itbayat Is., Batanes	PML	PML	ALC
18.	Itneg	Ba'ay Valley, Abra	PML	PML	SIL
19.	Ivatan	Basco, Batanes	PML	PML	SIL
20.	Kalagan	Digos, S. Davao	PML	PML	SIL
21.	Kalinga	Guinaang, Kalinga-Apayao	PML	PML	SIL
22.	Kallahan (Kayapa)	Kayapa, Nueva Vizcaya	PML	PML	ALC
23.	Kallahan (Keleyqiq)	Antipolo, Ifugao	PML	PML	SIL
24.	Kankanay	Sagada, Mt. Province	PML	PML	SIL
25.	Mamanua	Santiago, Agusan	PML	PML	ALC
26.	Ata (Manobo)	Mansalinao, N. Davao	PML	PML	SIL
27.	Dibabawon (Manobo)	Asuncion, N. Cavao	PML	PML	SIL
28.	Ilianen (Manobo)	Kibudtungan, Cotabato	PML	PML	SIL
29.	Kalamansig (Manobo)	Kalamansig, Cotabato	PML	PML	SIL
30.	Sarangani (Manobo)	Jose Abad Santos, Cotabato	PML	PML	SIL
31.	Tigwa (Manobo)	San Fernando, Bukidnon	PML	PML	SIL
32.	Western Bukidnon (Manobo)	West Bukidnon	PML	PML	SIL
33.	Mansaka	Pantukan, N. Davao	PML	PML	SIL
34.	Siasi	Siasi, Sulu	PML	PML	SIL
35.	Sambal	Botolan, Zambales	PML	PML	SIL
36.	Sangil	Sarangani Is., Davao	PML	PML	ALC
37.	Sangir	Tabukang, Davao	PML	PML	SIL
38.	Sindangan (Subanon)	Sindangan, N. Zamboanga	PML	PML	SIL
39.	Siocon (Subanon)	Siocon S. Zamboanga	PML	PML	SIL

NO.	LANGUAGE	LOCATION	S O U R C E S		
			Phonology	Morphology	Syntax
40.	T'boli	Eduards, Cotabato	PML	PML	SIL
41.	Aborlan (Tagbanwa)	Aborlan, Palawan	PML	PML	ALC
42.	Kalamian (Tagbanwa)	Kalamian Is., Palawan	PML	PML	SIL
43.	Tausug	Jolo, Sulu	PML	PML	ALC
44.	Tagalog	Manila City	ALC	ALC	ALC
45.	Cebuano	Cebu City	ALC	ALC	ALC
46.	Hiligaynon	Iloilo City	ALC	ALC	ALC
47.	Waray	Catbalogan, Samar	ALC	ALC	ALC
48.	Ilocano	San Fernando, LaUnion	ALC	ALC	ALC
49.	Bicol	Naga, Camarines Sur	ALC	ALC	ALC
50.	Pampango	San Fernando City	ALC	ALC	ALC
51.	Pangasinan	Dagupan City	ALC	ALC	ALC
52.	Tagakaolo	Malita, S. Davao	ALC	ALC	ALC
53.	Dabawenyo	Davao City	ALC	ALC	ALC
54.	Isamal	Samal Is., Davao	ALC	ALC	ALC
55.	Bagobo (Tagabawaq)	Kidapawan, Cotabato	ALC	ALC	ALC
56.	Yakan	Lamitan, Basilan Is.	ALC	ALC	ALC
57.	Simunul	Bongao, Sulu	ALC	ALC	ALC
58.	Sibutu	Tawi-Tawi, Sulu	ALC	ALC	ALC
59.	Kapul	Kapul Is.	ALC	ALC	ALC
60.	Palun Mapun	Cagayan de Sulu Is.	ALC	ALC	ALC
61.	Maranao	Marawi City	ALC	ALC	ALC
62.	Magindanaon	Cotabato City	ALC	ALC	ALC
63.	Tasaday	Tasaday, Cotabato	ALC	ALC	ALC
64.	Kiniray'a	Sta Barbara, Iloilo	ALC	ALC	ALC
65.	Masbateño	Masbate Is.	ALC	ALC	ALC
66.	Sorsogonon	Sorsogon, Sorsogon	ALC	ALC	ALC
67.	Cuyunen	Cuyu Is., Palawan	ALC	ALC	ALC
68.	Butuanon	Butuan, Agusan	ALC	ALC	ALC
69.	Hanunoo	Mansalay, Or. Mindoro	ALC	ALC	ALC
70.	Isinay	Dupax, Neuva Vizcaya	ALC	ALC	ALC
71.	Itawes	Enrile, Cagayan	ALC	ALC	ALC
72.	Ibanag	Tuguegarao, Cagayan	ALC	ALC	ALC
73.	Yogad	Echague, Isabela	ALC	ALC	ALC
74.	Malaweg	Rizal, Cagayan	ALC	ALC	ALC
75.	Aklanon	Kalibo, Aklan	ALC	ALC	ALC
76.	Capiznon	Roxas City	ALC	ALC	ALC
77.	Cagayancillo	Cagayan Is.	ALC	ALC	ALC
78.	Inunhan	Looc, Tablas Is.	ALC	ALC	ALC

NO.	LANGUAGES	LOCATION	S O U R C E S		
			Phonology	Morphology	Syntax
79.	Romblonon	Romblon, Romblon	ALC	ALC	ALC
80.	Hamtikon	San Jose, Antique	ALC	ALC	ALC
81.	Higaanon	Pusilaw, Agusan	ALC	ALC	ALC
82.	Alangan	Baco, Or. Mindoro	ALC	ALC	ALC
83.	Datagnon	Bulalakaw, Or. Mindoro	ALC	ALC	ALC
84.	Bulalakaw	Bulalakaw, Or. Mindoro	ALC	ALC	ALC
85.	Iraya (Mangyan)	San Teodoro, Or. Mindoro	ALC	ALC	ALC
86.	Tagaydan	Paitan, Or. Mindoro	ALC	ALC	ALC
87.	Buhid	Bongabon, Or. Mindoro	ALC	ALC	ALC
88.	Tadyawan	Victoria, Or. Mindoro	ALC	ALC	ALC
89.	Tiruray	Upi, Cotabato	ALC	ALC	ALC
90.	Kamayu	Tagu, N. Davao	ALC	ALC	ALC
91.	Mandaya	Mati, Or. Davao	ALC	ALC	ALC
92.	Agutaynon	Agutaya Is., Palawan	ALC	ALC	ALC
93.	Iraya (Cagayan)	Cabagan, Isabela	ALC	ALC	ALC
94.	Talaud	N. Celebes	ALC	ALC	ALC
95.	Bol'anon	Talibon, Bohol	ALC	ALC	ALC
96.	Bantoanon	Banton Is.	ALC	ALC	ALC
97.	Yami	Botel Tobago Is., RC	ALC	ALC	ALC
98.	Zamboangeño	Zamboanga City	ALC	ALC	ALC
99.	Caviteño	Cavite City	ALC	ALC	ALC
100.	Jaun-Jaun	Surigao del Norte	ALC	ALC	ALC
101.	Palawano	Quezon, Palawan	ALC	ALC	ALC

The control languages used in this study were primarily those included in Otto Dempwolff's work (1934). Data on the pronominal forms of the Formosan languages, however, found at the ALC, as well as those of the Micronesian languages in A. Thalheimer (1908) were also used. Finally, the languages included in J.A.L. Brandes (1884) and H. Kern (1887) were also employed.

3.0 INVENTORY OF ESI'S

The ESI's on which the subgrouping hypothesis in 4.0 is based are the following:

I - PHONOLOGICAL

These ESI's consist of vowels, Diphthongs, Labials, Apicals and Dorsals. The laryngeals have not been included.

1. Vowels:

a. *e, u > u:	Cebuano Waray Aklanon Isamal Sibutu Hanunoo Buhid Jaun-Jaun	Hiligaynon Kiniray'a Masbateño Siasi Palun Mapun Datagnon Tagaydan Kamayu	Tausug Capiznon Dabawenyo Simunul Higaonon Romblonon Bulalakaw Sorsogonon
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2. Diphthongs:

a. *ay, uy > uy:	Ifugao (Amganad) Ifugao (Bayninan)	Ifugao (Batad) Kallahan (Keleyqiq)
b. *aw, ew > ew:	Manobo (Dibabawon) Manobo (Kalamansig)	Manobo (Ilisanen) Yakan
c. *ew, iw > ew:	Balangaw Kallahan (Keleyqiq) Kallahan (Kayapa)	Bontoc Inibaloi

3. Consonants:

a. *l, -r > l:	Itawes	Malaweg
b. *r-, -r, l-, -l-:	Masbateño	Hanunoo
c. *r, l > l:	Bulalakaw	Datagnon
d. *l, -d- > l:	Mamanua Tasaday Manobo (Tigwa)	Manobo (Ata) Manobo (Dibabawon) Manobo (Sarangani)
e. *l, r-, -rr-, -d- > l:	Inunhan Cagayancillo	Butuanon
f. *l, -j-, -d > l:	Subanon (Siocon) Mansaka	Subanon (Sindangan)
g. *l-, -l-, R-, -R, -R ₁ , -R ₁ -, R ₂ -, -R ₂ > l: Itneg		Inibaloi
h. *l, r, R, R ₁ , R ₂ -, -R ₂ -, -d- > l: Bontoc	Ifugao (Batad)	Ifugao (Amganad)
i. *r-, -j-, R, R ₁ , R ₂ -, -R ₂ -, l, d-, -d-, -z- > l: Bilaan (Koronodal)	Bilaan (Sarangani)	
j. *r, l, -j-, -z-, -z-, -d- > l: Tagalog	Cebuano	Hiligaynon

k.	$*R, R_1, R_2, -R_3-, -R_3, g-, -g- > g:$		
	Cuyunen	Akloanon	Jaun-Jaun
	Kamayu	Bulalakaw	Inunhan
	Kiniray'a	Capiznon	Higaonon
	Masbateño	Butuanon	Datagnon
	Sorsogonon	Cagayancillo	
l.	$*R, R_1, R_2, g > g:$		
	Tagbanwa (Aborlan)	Tausug	Waray
	Cebuano	Bicol	Hiligaynon
m.	$*j, R_2, -R_1-, -R_1, -R-, -R > g:$		
	Agta	Atta	
n.	$*-R, -R_2, -j-, -j > g:$	Kalinga	Bontoc
o.	$*-R_2, -j-, -j > g:$	Kallahan (Keleyqiq)	Ifugao (Batad)
	Ifugao (Bayninan)	Kallahan (Kayapa)	Ifugao (Amganad)
p.	$*-R-, -R, R_1, -R_2-, -R_2, R_3, g > g:$		
	Hanunoo	Buhid	
q.	$*-j-, -j, R, R_1, R_2, R_3-, g-, -g- > g:$	Ibanag	Yogad
r.	$*R-, -R-, -R, R_2, R_3, g-, -g- > g:$	Magindanaon	Kapul
s.	$*-R, R_1-, -R_1-, -g-, g- > g:$	Simunul	Palun Mapun
t.	$*R, R_1, R_2, -R_3-, -R_3, g > g:$	Tagakaolo	Dabaweno
			Isamal
u.	$*d, D-, -D, z-, Z- > d:$		
	Kalagan	Batak	Pampango
	Pangasinan	Subanon (Sindangan)	Mansaka
	Sangil	Subanon (Siocon)	Tausug
v.	$*d-, -d, D-, -D, z-, Z- > d:$		
	Tagalog	Cebuano	
	Manobo (Ilianen)	Manobo (Western Bukidnon)	
w.	$*d, D-, -D, z-, Z- > d:$		
	Haligaynon	Waray	Bicol
x.	$*Z-, D-, z- > d:$	Itawes	Ibanag
y.	$*d, D-, -D, Z, z > d:$	Manobo (Ata)	Manobo (Dibabawon)
	Manobo (Tigwa)	Manobo (Kalamansig)	Manobo (Sarangani)

z.	*d, D, z, Z > d:	Kallahan (Keleyqiq)	Bontoc
	Balangaw	Kallahan (Kayapa)	Kakanay
	Isneg	Ifugao (Bayninan)	Ifugao (Amganad)
	Ifugao (Batad)	Itneg	
aa.	*d-, -d, D-, -D, Z-, z-, j- > d:		
	Kiniray'a	Masbateño	Sorsogonon
bb.	*-d-, -d, D-, -D > d:	Itbayaten	Ivatan
cc.	*d, -D, -z, Z- > d:	Bilaan (Koronodal)	Bilaan (Sarangani)
dd.	*d, D, Z-, z-, j-, -j, > d:		
	Tagakaolo	Aklanon	Cagayancillo
	Dabaweño	Capiznon	Inunhan
	Isamal	Romblonon	
ee.	*d, D-, -D, Z-, z-, j-, -j > d:		
	Butuanon	Hanunoo	Datagnon
	Bulalakaw	Mandaya	
ff.	*-y-, -R-, -R ₁ -, -R ₂ - > y:		
	Itbayaten	Sambal	Iraya (Mangyan)
	Ivatan	Pampango	
gg.	*Metathesis of s and t in a syllable:		
	Ifugao (Amganad)	Bontoc	Isneg
	Ifugao (Bayninan)	Kakanay	Gaddang
	Ifugao (Batad)	Kalinga	Ibanag
	Kallahan (Keleyqiq)	Malaweg	Itawes
	Itneg	Ilocano	Yogad
	Sangil	Balangaw	Atta
	Sangir	Agta	

II - PERSONAL PRONOUNS

1. *^caku^c (Demp.), ?akú? (Dyen) I

a.

b. *yaken:² Ivatan Itbayaten Yami

c. *siak: Agta Manobo (Dibabawon)

Sangir Binukid

Manobo (Tigwa) Ilocano

Ilonggot Manobo (Western Bukidnon)

Pangasinan Isneg

Sangil Magindanaon

Higaonon

d.	*sikaak:	Inibaloi	Kallahan (Keleyqiq)	Kallahan (Kayapa)	
e.	*sikanak:	Gaddang	Iraya (Cagayan)		
f.	*aken:	Manobo (Kalamansig)	Subanon (Siocon)	Tasaday	
g.	*siaken:	Balangaw Kankanay Bagobo Yogad Bontoc	Ifugao (Amganad) Ifugao (Batad) Ifugao (Bayninan) Maranao	Kalinga Manobo (Ilianen) Ibanag Magindanaon	
2.	*kav (Demp.), kaw (Dyen)	<i>you</i> (Sing.)			
a.	*sikaw:	Atta Binukid Manobo (Ata) Higaonon	Manobo (Western Bukidnon) Manobo (Tigwa) Ibanag		
b.	*ikaw:	Tagalog Kiniray'a Datagnon Capiznon Cuyunen Kamayu Mandaya	Palawano Kalagan Mansaka Haligaynon Waray Sangil Sangir	Cebuano Aklanon Itawes Malaweg Butuanon Masbateño Dabawenyo	Isamal Sorsogonon Tagakaolo Jaun-Jaun Hamtikon Romblonon Inunhan
c.	*sika:	Balangaw Kankanay Isinay Ilonggot Yogad Ilocano Sambal Magindanaon	Bilaan (Koronodal) Bilaan (Sarangani) Gaddang Bicol Tagbanwa (Aborlan) Pangasinan Subanon (Siocon)	Bontoc Pampango Ifugao (Amganad) Ifugao (Batad) Ifugao (Bayninan) Kalinga Maranao	
d.	*sikamu:	Inibaloi	Kallahan (Keleyqiq)	Kallahan (Kayapa)	
e.	*siku:	Mamanua	Dumagat (Casiguran)	Agta	
f.	*sikuna:	Manobo (Ilianen) Manobo (Kalamansig)	Manobo (Sarangani) Bagobo		
g.	*kaqaw:	Kapul Siasi	Palun Mapun Yakan	Sibutu Cagayancillo	
h.	*kawu:	Hanunoo	Iraya (Mangyan)		

3. *^ci ja^c (Demp.), ?ia? (Dyen) *he, she*

a.	*sia:	Bontoc Dumagat (Casiguran) Ilonggot Kalinga Kankanay Sambal Kapul Masbateño Dabawenyo Jaun-Jaun Kiniray'a Bulalakaw Kamayu Palawano	Tagalog Cebuano Hiligaynon Waray Bicol Sangil Butuanon Tasaday Sorsogonon Hamtikon Alangan Tagaydan Mandaya	Tausug Balangaw Ifugao (Amganad) Ifugao (Batad) Ifugao (Bayninan) Sangir Hanunoo Isinay Tagakaolo Romblonon Datagnon Capiznon Yami
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b. *kania: Batak Tagbanwa (Aborlan) Tagbanwa (Kalamian)

c. *imaw: Aklanon Hamtikon Inunhan

d. *sikania: Itneg Gaddang Maranao

e. *sikandin:	Manobo (Ata) Manobo (Kalamansig) Manobo (Dibabawon) Bagobo Magindanaon Higaonon	Manobo (Sarangani) Manobo (Tigwa) Manobo (Ilianen) Manobo (Western Bukidnon) Cagayancillo
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f. *sikatu:	Inibaloi Kallahan (Kayapa)	Pangasinan Kallahan (Keleyqiq)
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g. *aggina:	Isneg Atta Malaweg Yogad	Itawes
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h. *tana: Kiniray'a Cuyunen

4. *kami^c (Demp.), kami? (Dyen) *we* (exclusive)

a.	*siqkami:	Atta Dumagat (Casiguran) Inibaloi Yogad Manobo (Sarangani) Manobo (Western Bukidnon) Manobo (Ilianen) Manobo (Ata) Kallahan (Kayapa)	Pangasinan Ilonggot Ibanag Manobo (Dibabawon) Maranao Magindanaon Kallahan (Keleyqiq) Manobo (Tigwa) Iraya (Cagayan)
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b.	*qikami:	Agta	Sangir	Gaddang
		Pampango	Itawes	Sangil
		Malaweg		
c.	*dikami:	Itneg	Isneg	Ifugao (Amganad)
		Kalinga	Kankanay	Ifugao (Batad)
		Bontoc	Ilocano	Ifugao (Bayninan)
		Isinay		
d.	*yamen:	Itbayaten		Ivatan
		Tagbanwa (Kalamian)		Yami
				Iraya (Mangyan)
5.	*kita ^c (Demp.), kítà? (Dyen) we (inclusive)			
a.	*sikita:	Manobo (Ilisanen)	Sangir	Yogad
		Manobo (Ata)	Inibaloi	Higaonon
		Manobo (Tigwa)	Bagobo	
b.	*sikitayu:	Kallahan (Keleyqiq)	Kallahan (Kayapa)	Pangasinan
c.	*sikitam:	Agta	Dumagat (Casiguran)	
d.	*ditayu:	Ilocano	Itneg	
e.	*ditaku:	Ifugao (Amganad)	Bontoc	Balangaw
		Ifugao (Bayninan)	Kankanay	Isinay
		Ifugao (Batad)	Kalinga	
f.	*sikitadun:	Kalagan	Tagakaolo	Manobo (Sarangani)
g.	*sitamu:	Sambal	Pampango	Ibanag
		Iraya (Cagayan)		
h.	*kitabi:	Palun Mapun	Yakan	Simunul
i.	*sikitamu:	Maranao		Siasi
j.	*kitam:	Sibutu	Kapul	Alangan
		Siasi	Tagaydan	
6.	*kamu ^c (Demp.), kamú? (Dyen) you (plural)			
a.	*sikamu:	Bilaan (Koronodal)	Agta	Yogad
		Bilaan (Sarangani)		
b.	*sikam:	Dumagat (Casiguran)	Iraya (Cagayan)	Yogad
c.	*sikayu:	Atta		Pampango
		Inibaloi		Pangasinan
		Gaddang		Manobo (Ilisanen)
		Kallahan (Keleyqiq)		Manobo (Ata)
		Manobo (Tigwa)		Kallahan (Kayapa)
		Manobo (Western Bukidnon)		Manobo (Dibabawon)
		Manobo (Sarangani)		

- d. **i kayu*: Malaweg Itawes
- e. **dikayu*: Itneg Ilocano
Isneg Kalinga
Bontoc Isinay
Ifugao (Bayninan) Ifugao (Amganad)
Ifugao (Batad) Kankanay
- f. **dikayu*: Kapul Palun Mapun Sibutu
Siasi Yakan Simunul
7. **t'ida*^c (Demp.) *they*
- a. **isiDa*: Sangil Sangir
- b. **sikaDa*: Kallahan (Keleyqiq) Inibaloi Pangasinan
Kallahan (Kayapa) Iraya (Mangyan)
- c. **sikanDa*: Manobo (Ata) Manobo (Tigwa)
Manobo (Western Bukidnon) Manobo (Ilisanen)
Manobo (Dibabawon) Manobo (Sarangani)
- d. **kagDa*: Manobo (Kalamansig) Tasaday
- e. **aggiDa*: Isneg Atta Malaweg
- f. **diDa*: Balangaw Bontoc Ifugao (Amganad)
Kankanay Itneg Ifugao (Bayninan)
Isinay Kalinga Ifugao (Batad)
- g. **siDan*: Maranao Isamal Higaonon
Magindanaon Tagakaolo Mandaya
Sibutu Kamayu
- h. **sinda*: Bicol Romblonon Mastateño
Aklanon Kiniray'a Hamtikon
Inunhan

III - NUMERALS

1. **et'a*^c (Demp.), ?esa?/?isa? (Dyen) *one*
- a. **takday*: Agta Atta Ibanag
- b. **satu*: Bilaan (Koronodal) T'boli Bilaan (Sarangani)
- c. **sebeka*: Manobo (Ilisanen) Manobo (Tigwa)
Manobo (Western Bukidnon)
- d. **sakey*: Inibaloi Kallahan (Keleyqiq) Kallahan (Kayapa)
- e. **sala*: Subanon (Siocon) Subanon (Sindangan)
Aklanon Bol'anon

f.	*usaiq:	Alangan	Tagaydan	
g.	*issa:	Bagobo	Malaweg	Siasi
		Simunul		
h.	*isara:	Datagnon	Bulalakaw	Hamtikon
2.	*duva ^c (Demp.), Dews ₃ a? (Dyen)	two		
a.	*lewe:	Bilaan (Koronodal)	T'bolí	
		Bilaan (Sarangani)	Tiruray	
b.	*DaDawe:	Binukid	Tagalog	
		Ivatan	Ata	
		Manobo (Dibabawon)	Manobo (Ilisanen)	
		Manobo (Tigwa)	Manobo (Western Bukidnon)	
		Sangil	Sangir	
		Tagbanwa (Kalamian)	Agutaynon	
		Bulalakaw	Cagayancillo	
		Cuyunen	Higaonon	
		Iraya (Mangyan)	Kiniray'a	
		Hamtikon	Datagnon	
		Talaud	Yami	
c.	*duwaiq:	Alangan	Tagaydan	
d.	*duha:	Itbayaten	Tausug	Bantoanon
		Capiznon	Cebuano	Hiligaynon
		Jaun-Jaun	Mandaya	Masbateño
		Romblonon	Waray	
e.	*eduwaq:	Dumagat (Casiguran)	Gaddang	Yogad
		Pampango		
3.	*telu ^c (Demp.), telu (Dyen)	three		
a.	*tatelu:	Binukid	Sambal	Dabawenyo
		Ivatan	Sangil	Higaonon
		Atta	Sangir	Hiligaynon
		Manobo (Dibabawon)	Aklan	Iraya (Mangyan)
		Manobo (Ilisanen)	Bantoanon	Kiniray'a
		Manobo (Tigwa)	Bulalakaw	Hamtikon
		Cuyunen	Manobo (Western Bukidnon)	
		Tagalog	Datagnon	Yami
b.	*tellu:	Bagobo	Agta	Atta
		Gaddang	Isneg	Kallahan (Keleyqiq)
		Cagayancillo	Siasi	Kallahan (Kayapa)
		Ibanag	Ilocano	Iraya (Cagayan)

Itawes	Itneg	Magindanaon
Maranao	Pangasinan	Kapul
Sibutu	Simunul	Yakan
Yogad		

4. *^cə(m)pat (Demp.), x₂epeate (Dyen) *four*

- a. *heqepeat: Atta Manobo (Tigwa) Manobo (Western Bukidnon)
Binukid
- b. *pat: Bilaan (Koronodal) Magindanaon Bogobo
Bilaan (Sarangani) Maranao
- c. *mpat: Palun Mapun Sibutu Siasi
Simunul T'boli
- d. *qapqat: Yogad Aklanon Ivatan
Agta Atta Cagayancillo
Gaddang Isneg Binukid
Itbayaten Malaweg Talaud
Bantoanon Ibanag Iraya (Cagayan)
Itawes
- e. *apat: Tagalog Bol'anon Hiligaynon
Bicol Bulalakaw Iraya (Mangyan)
Pangasinan Pampango Cuyunen
Kiniray'a Hanunoo Yami
- f. *ampat: Kapul Yakan
- g. *epat: Tasaday Tiruray

5. *lima^c (Demp.), līma? (Dyen) *five*

- a. *lalima: Binukid Ivatan Atta
Manobo (Ilianen) Manobo (Western Bukidnon)
Manobo (Tigwa) Higaonon
- b. *limaq: Isneg Dumagat (Casiguran)
Kallahan (Keleyqiq) T'boli
Tagbanwa (Kalamian) Tausug

6. *^cənəm (Demp.), ?eneme (Dyen) *six*

- a. *qennem: Agta Inibaloi Yogad
Atta Ibanag Iraya (Cagayan)
Siasi Simunul Itawes
Yakan Malaweg

b.	*anem:	Gaddang Ivatan Sambal Bulalakaw Cagayancillo Pampango	Hiligaynon Iraya (Mangyan) Jaun-Jaun Kiniray'a Pangasinan	Datagnon Tagalog Tasaday Yami Cuyunen
c.	*nem:	Bilaan (Koronodal) Bilaan (Sarangani) Magindanaon	Maranao T'boli	Palun Mapun Sibutu
d.	*heqenem:	Manobo (Western Bukidnon) Manobo (Ata)		Manobo (Tigwa)
e.	*anqem:	Itbayaten Alangan		Bantoanon
7.	*pitu ^c (Demp.), pitu? (dyen)	seven		
a.	*pituq:	Dumagat (Casiguran) Itbayaten Kallahan (Keleyqiq) Siasi T'boli Tagbanwa (Kalamian)	Agutaynon Sibutu Simunul Yakan Palun Mapun Tausug	
b.	*pittu:	Isneg Bagobo		
c.	*papitu:	Ivatan Manobo (Ata)		
8.	*valu[^c] (Demp.), w ₂ alu? (Dyen)	eight		
a.	*waluq:	Dumagat (Casiguran) Itbayaten Kallahan (Keleyqiq) Kankanay Siasi Kapul	Yakan Tausug T'boli Tagbanwa (Kalamian) Agutaynon Sibutu	
b.	*wawalu:	Ivatan Manobo (Ata)		
c.	*wau:	Manobo (Dibabawon) Palun Mapun	Sangil Yami	Isamal
9.	*t'iva[^c] (Demp.), s ₂ iwa? (Dyen)	nine		
a.	*siam:	Bicol Buhid Butuanon Bulalakaw Cagayancillo Capiznon	Ifugao (Amganad) Ifugao (Batac) Ifugao (Bayninan) Inibaloi Isneg Itbayaten	Subanon (Sindangan) Ilocano Iraya (Cagayan) Iraya (Mangyan) Isamal Isinay

Cebuano	Ivatan	Itawes	
Cuyunen	Kalagan	Jaun-Jaun	
Dabaweño	Itneg	Kiniray'a	
Hanunoo	Kallahan (Keleyqiq)	Hamtikon	
Higaonon	Kallahan (Kayapa)	Malaweg	
Hiligaynon	Kalinga	Kamaya	
Ibanag	Kankanay	Mansaka	
Agta	Mamanua	Masbateño	
Atta	Manobo (Tigwa)	Palawano	
Balangaw	Manobo (Sarangani)	Palun Mapun	
Batak	Manobo (Dibabawon)	Pangasinan	
Bilaan (Koronodal)	Manobo (Ata)	Pampango	
Bilaan (Sarangani)	Tagakaolo	Datagnon	
Binukid	Bontoc	Romblonon	
Dumagat (Casiguran)	Siasi	Kapul	
Simunul	Sambal	Sibutu	
Tadyawan	Sorsogonon	Tagalog	
Tagaydan	Waray	T'boli	
Tausug	Yami	Yogad	
Yakan			
b. *siyew:	Tiruray	Maranao	Magindanaon
	Tasaday	Sangil	Manobo (Ilisanen)
	Manobo (Kalamansig)	Manobo (Western Bukidnon)	
	Talaud	Sangir	Bagobo
10. *pulu ^c (Demp.), puluqe (Dyen) ten			
a. *mapulu:	Agta	Itawes	Ibanag
	Atta	Sangil	Malaweg
	Bol'anon.	Talaud	Iraya (Cagayan)
	Sambal		
b. *simpulu:	Balangaw	Kalinga	Ifugao (Amganad)
	Ifugao (Batad)		
c. *sampuluq:	Binukid	Bicol	Kallahan (Kayapa)
	Kalagan	Cagayancillo	Pangasinan
	Manobo (Ata)	Cuyunen	Mansaka
	Bantoanon	Kallahan (Keleyqiq)	Higaonon
	Yakan	Inibaloi	Mandaya
	Manobo (Sarangani)		
d. *sanpuluq:	Batak	Agutaynon	Tagbanwa (Kalamian)
	Tagbanwa (Aborlan)		

e.	*sepuluq:	Manobo (Ilianen)	Tasaday	
		Bilaan (Sarangani)	T'boli	
		Manobo (Kalamansig)	Bilaan (Koronodal)	
		Subanon (Sindangan)	Manobo (Western Bukidnon)	
f.	*sampuq:	Alangan	Siasi	Manobo (Dibabawon)
		Tausug	Dabaweño	Tagaydan
		Simunul	Sambal	Isamal
		Tagalog	Iraya (Mangyan)	Palawano
g.	*napuluq:	Mamanua	Aklanon	Butuanon
		Capiznon	Cebuano	Bulalakaw
		Jaun-Jaun	Hamtikon	Masbateño
		Datagnon	Romblonon	Sorsogonon
		Kamayu	Waray	
h.	*sapuluq:	Dumagat (Casiguran)	Ivatan	Bagobo
		Buhid	Gaddang	Manobo (Tigwa)
		Magindanaon	Tadyawan	Itbayaten
		Subanon (Sindangan)	Maranao	Yogad
11.	*yatut' (Demp.), R ₂ á̄tús (Dyen)	<i>hundred</i>		
a.	*meRatus:	Agta	Iraya (Cagayan)	
		Manobo (Kalamansig)	Atta	
		Maranao	Magindanaon	
		Bilaan (Koronodal)	T'boli	
		Talaud	Itawes	
		Malaweg	Bilaan (Sarangani)	
b.	*sanRatus:	Kallahan (Keleyqiq)	Aklanon	Tausug
		Kalagan	Hamtikon	Palawano
		Datagnon	Agutaynon	Sorsogonon
		Tagbanwa (Kalamian)		
c.	*singRatus:	Balangaw	Kalinga	Ifugao (Amganad)
d.	*Rasut:	Bontoc	Gaddang	Ifugao (Bataad)
		Isneg	Kankanay	Ifugao (Bayninan)
		Kalinga	Sangir	Kallahan (Keleyqiq)
		Sangil		
e.	*saŋaRasut:	Itneg	Ilocano	
f.	*naŋRatus:	Manobo (Tigwa)	Higaonon	
g.	*esa ka Ratus:	Dabaweño	Hiligaynon	Jaun-Jaun
		Kiniray'a	Mandaya	Romblonon
h.	*sa ka Ratus:	Capiznon	Cuyunen	

1. *dahatus: Palun Mapun Sibutu Simunul
Siasi Yakan Kapul
12. *libu^c (Demp.), ribu (Dyen) thousand
- a. *meribu: Agta Bilaan (Koronodal) Iraya (Cagayan)
Atta Bilaan (Sarangani) Itawes
T'boli Malaweg
- b. *sinribu: Balangaw Ifugao (Bayninan)
Kalinga Ifugao (Amganad)
- c. *saŋribu: Dumagat (Casiguran) Pangasinan Datagnon
Bicol Alangan Sorsogonon
- d. *seŋibu: Manobo (Ililanen) Maranao Palawano
Manobo (Kalamsig) Magindanaon Tausug
Subanon (Sindangan) Subanon (Siocon) Tiruray
- e. *qumribuq: Ivatan Itbayaten
- f. *mararan: Kalagan Manobo (Sarangani)
Bagobo Mansaka
- g. *saribu: Gaddang Yogad
- h. *esa ka ribu: Gebuano Hiligaynon Butuanon
Capiznon Cuyunen Jaun-Jaun
Hanunoo Kamayu Kiniray'a
Romblonon
- i. *esa n ribu: Bulalakaw Tagalog
- j. *daŋibu: Siasi Simunul Yakan

IV - SYNTACTIC²

1. Ang + N_c (topic)³
- a. *ya + N_c (topic): Agta Itawes Iraya (Cagayan)
Malaweg Isamal Kalagan
Mamanua Sambal Tagakaolo
- b. *yəŋ + N_c (topic): Mandaya Mansaka Kalamian
- c. *nan + N_c (topic): Bontoc Ifugao (Amganad)
Kankanay Ifugao (Batad)
- d. *in + N_c (topic): Alangan Palawano Tausug
- e. *so + N_c (topic): Higaonon Inibaloi
Manobo (Ata) Maranao
Magindanaon Pangasinan
Subanon (Sindangan) Kallahan (Kayapa)
Kallahan (Keleyqiq)

- f. *sa + N_c (topic): Manobo (Kalamansig) Binukid
- g. *to + N_c (topic): Bagobo Batak
- h. *pag + N_c (topic): Iraya (Mangyan) Tadyawan
- i. *an + N_c (topic): Masbateño Sorsogonon Waray
- j. *in + N_c (topic): Ibanag Pampango
- k. *i + N_c (topic): Bilaan (Koronodal) Bilaan (Sarangani)
2. Si + Np (topic)
- a. *i + Np (topic): Dumagat (Casiguran) Tiruray Pampango
Sangir
3. Ng + N_c (possessor)
- a. *nəŋ + N_c (possessor): Tagalog Dabawenyo Cuyunen
Kamayu Mandaya Mansaka
- b. *na + N_c (possessor): Agta Isamal Mamanua
Atta Ibanag Tagakaolo
Gaddang
- c. *nan + N_c (possessor): Jaun-Jaun Bontoc Kanakanay
Ifugao (Amganad)
- d. *it + N_c (possessor): Batak Aklanon Butuanon
Bulalakaw Datagnon Tagbanwa (Aborlan)
- e. *to + N_c (possessor): Manobo (Ata) Manobo (Dibabawon)
Manobo (Tigwa) Manobo (Ilianen)
Manobo (Western Bukidnon)
Manobo (Sarangani)
- f. *saŋ + N_c (possessor): Capiznon Hiligaynon Kiniray'a
Masbateño Waray
- g. *ni + N_c (possessor): Dumagat (Casiguran) Kallahan (Keleyqiq)
Inibaloi Kallahan (Kayapa)
- h. *sa + N_c (possessor): Bol'anon Cebuano
- i. *nɪŋ + N_c (possessor): Pampango Romblonon
- j. *ya + N_c (possessor): Iraya (Cagayan) Malaweg
- k. *ta + N_c (possessor): Cagayancillo Tagbanwa (Kalamian)
- l. *nu + N_c (possessor): Maranao Magindanaon
Yogad Subanon (Sindangan)
Yami Ivatan

- m. *i + N_c (possessor): Bilaan (Sarangani) Bilaan (Koronodal)
n. *del + N_c (possessor): Caviteño Zamboangeño

4. Ni + Np (possessor)

- a. *si + Np (possessor): Sibutu Siasi Simunul
Binukid Kakanay Palawano
Tausug
- b. *i + Np (possessor): Manobo (Kalamansig) Itawes
Sangir Gaddang

5. Sa + N_c (location)

- a. *sa + N_c (location): Tagalog Dabawenyo Magindanaon
Aklanon Tadyawan Tagaydan
Alangan Bicol Cebuano
Butuanon Isamal Bulalakaw
Kamayu Bol'anon Waray
Capiznon Hanunoo Masbateño
Hiligaynon Kiniray'a Sorsogonon
Hamtikon Maranao Tagakaolo
Tausug Datagnon Palawano
Romblonon Sambal Bantoanon
Iraya (Mangyan)
- b. *ta + N_c (location): Agta Bagobo Binukid
Atta Cagayancillo Iraya (Cagayan)
- c. *to + N_c (location): Manobo (Ata) Manobo (Dibabawon)
Manobo (Western Bukidnon) Manobo (Tigwa)
Manobo (Iliganen) Manobo (Sarangani)
Yogad
- d. *su + N_c (location): Sangir Talaud
- e. *tuŋ + N_c (location): Agutaynon Tagbanwa (Kalamian)
- f. *du + N_c (location): Yami Ivatan
- g. *kat + N_c (location): Tagbanwa (Aborlan) Batak
- h. *ad + N_c (location): Ifugao (Amganad) Bontoc
Pangasinan Balangaw
- i. *san + N_c (location): Mandaya Mansaka
- j. *si + N_c (location): Kapul Gaddang

6. *Kay + Np* (Indirect Object)

a.	* <i>kay</i> + Np (IO):	Tagalog Butuanon Capiznon Kiniray'a Romblonon	Aklanon Bulalakaw Cuyunen Hamtikon Palawano	Alangan Bol'anon Hiligaynon Datagnon
b.	* <i>tun ni</i> + Np (IO):	Tagbanwa (Aborlan)	Tagbanwa (Kalamian)	
c.	* <i>ki</i> + Np (IO):	Tagbanwa (Aborlan) Bagobo Higaonon Manobo (Ata) Manobo (Ililanen) Manobo (Dibabawon) Maranao	Batak Binukid Bicol Manobo (Western Bukidnon) Manobo (Sarangani) Manobo (Tigwa) Bilaan (Sarangani)	
d.	* <i>kan</i> + Np (IO):	Itawes Waray Tagakaolo Tausug	Hanunoo Mandaya Mamanua	Sorsogonon Jaun-Jaun Masbateño
e.	* <i>kani</i> + Np (IO):	Ilocano	Magindanaon	
f.	* <i>kəŋ</i> + Np (IO):	Pampango Mansaka Bantoanon	Dabaweño Butuanon Cebuano	Isamal Kamayu Waray
g.	* <i>ken</i> + Np (IO):	Bontoc	Kankanay	
h.	* <i>kun</i> + Np (IO):	Caviteño	Zamboangeño	

7. *Ang mga + N_C* (Plural Topic)

a.	* <i>ang</i> <i>maga</i> + N _C (PT):	Tagalog Bicol Butuanon Cuyunen Waray Hiligaynon	Kiniray'a Hamtikon Datagnon Sorsogonon Capiznon Bol'anon	Jaun-Jaun Kamayu Masbateño Bulalakaw Cebuano
b.	* <i>ya</i> <i>maga</i> + N _C (PT):	Isamal Tagakaolo	Mamanua	Kalagan
c.	* <i>yəŋ</i> <i>maga</i> + N _C (PT):	Tagbanwa (Kalamian)	Dabaweño	
d.	* <i>su</i> <i>maga</i> + N _C (PT):	Higaonon Magindanaon	Maranao Manobo (Sarangani)	
e.	* <i>in</i> <i>maga</i> + N _C (PT):	Palawano Tagaydan	Alangan Tausug	

- f. *yan maña + N_c (PT): Mandaya Mansaka
- g. *to maña + N_c (PT): Bagobo Batak
- h. *idad + N_c (PT): Bilaan (Koronodal) Bilaan (Sarangani)
- i. *nan + Re + N_c (PT): Ifugao (Amganad) Kankanay
8. Sina + Np (Plural Number of Personal Names)
- a. *da + Np (PP): Agutaynon Ifugao (Amganad)
Bontoc Balangaw
Ifugao (Bataad) Buhid
Isinay Ifugao (Bayninan)
Kankanay Iraya (Cagayan)
Ibanag Kalinga
- b. *sina + Np (PP): Tagalog Caviteño Romblonon
- c. *si(n)Da + Np (PP): Tagalog Waray Sorsogonon
Butuanon Cuyunen Jaun-Jaun
Magindanaon Subanon (Siocon)
- d. *kura + Np (PP): Alangan Tagaydan Iraya (Mangyan)
- e. *sin + Np (PP): Mamanua Higaonon
- f. *sa + Np (PP): Bantoanon Bicol
- g. *sanday + Np (PP): Bulalakaw Capiznon Hiligaynon
Kiniray'a Hamtikon Datagnon
- h. *siDa ni + Np (PP): Bol'anon Hanunoo
- i. *hinda + Np (PP): Palawano Tausug
- j. *en si + Np (PP): Manobo (Ilianen) Manobo (Western Bukidnon)
- k. *di + Np (PP): Kallahan (Keleyqiq) Pampango
9. A + Na~Ng + B (modification)
- a. *A' na B ~ A'' nañ B (Mod): Tagalog Isamal Batak
Kamayu Bicol Mamanua
Bulalakaw
- b. *A' ~ A'' na B (Mod): Agta Dabawéño
Mandaya Manobo (Kalagan)
Cagayancillo Mansaka
- c. A' ña B ~ A'' ñ B (Mod): Tagbanwa (Aborlan) Cuyunen
Romblonon Aklanon
Kiniray'a Hamtikon
Bol'anon Capiznon
Batagnon

- d. *A **ay** B (Mod): Bontoc Ifugao (Baynninan)
- e. *A **pag** B (Mod): Hanunoo Alangan Buhid
Tagaydan
- f. *A **a** B (Mod): Ilocano Ivatan Magindanaon
Yami Yogad Maranao
- g. *A **ŋa** B (Mod): Bagobo Kapul Butuanon
Cebuano Hiligaynon Ibanag
- h. *A **no** B (Mod): Manobo (Tigwa) Manobo (Dibabawon)
Manobo (Ililanen)
- i. *A **ay** B (Mod): Kakanay Bontoc Ifugao (Baynninan)
- j. *A **ha** B (Mod): Binukid Higaonon
- k. * **an** B (Mod): Ifugao (Amganad) Ifugao (Batad)

10. X **ay** Y, Y ϕ X (Predication)

- a. *X **ay** Y, Y X (Pred): Tagalog Agutaynon Aklanon
Alangan Bantoanon Bicol
Bulalakaw Cuyunen Kiniray'a
Hamtikon Datagnon Romblonon
Hanunoo
- b. *X **e** Y, YX (Pred): Ibanag Kallahan (Keleyqiq) Malaweg
- c. X Y, YX (Pred): Maranao Magindanaon

4.0 SUBGROUPING HYPOTHESIS

The Family Tree Diagram of 100 Philippine Languages (on folding page 165) presents the subgrouping hypothesis arrived at on the basis of the ESI's enumerated above: 4

An alternate hypothesis to the one given would be to link the 'Northern Philippine Group' (NP) to the 'Central Philippine Group' (CP) first, and then link the 'Southern Philippine Group' (SP) to the NP-CP. This would be supported by the following ESI's:

- a. NP-CP: II 5.g, 7.b, III 6.b, 6.c, 11.c, IV 3.c, 3.i;
 - b. NP+CP-SP: I 3.ff, III 10.g, 10.f, IV 1.b, 1.g, 7.c, 7.g, 9.f.
- A second alternate hypothesis would be to link the NP to the SP first, and then link the CP to this NP + SP. This hypothesis would be supported by the following ESI's:
- a. NP-SP: I 3.hh, II 1.c, 1.g, 2.a, 2.e, 3.a, 4.a, 5.a, 6.a, 6.d, 8.a, III 1.g, 4.a, 5.a, 6.a, 7.b, 7.c, 11.a, 11.d, 12.a, IV 1.e, 2.a, 3.a, 3.b, 3.l, 4.b, 5.c, 5.j, 6.e;
 - b. NP+SP-CP: II 5.g, 7.b, III 6.b, 6.c, 11.c, IV 3.c, 3.i.

The two alternate hypotheses given above, however, do not substantially alter the main lines of the hypothesis presented above, nor do they contradict the following interesting findings of this study: that

1. there is enough evidence for the genetic unity of the Philippine languages;
2. there are, apparently, three major subgroups within the Philippine subfamily, namely: the Northern Philippine, the Central Philippine, and the Southern Philippine groups;
3. the positions of most of these languages seem to correlate highly with their geographic location in the archipelago;
4. however, there are noteworthy exceptions to No. 3 above, namely; Kapul, Tausug, Ivatan, Itbayaten, and Yami;
5. the higher nodes in the family tree seem to have more ESI's to support them than the lower nodes, though there are some exceptions to this;
6. on the other hand, the ESI's on the lower nodes are shared by more languages in the subgroup than the ESI's on the higher nodes.

5.0 GLOTTOCHRONOLOGY

There remains the task of calculating the time depth of separation between the languages included in the study group. For this purpose, it is sufficient to present the percentages of cognates scored by each language with every other language.⁵ From these percentages, the formula $t = \frac{\log C}{r}$ can be used to obtain the time depth.

In preparing the charts below (on folding page 167), Reid's lists (1971) were used, which contain Swadesh's basic word list minus 'one member of frequently occurring doublets, such as husband/wife ... and relational words which have no unambiguous equivalents in Philippine languages, such as and, at, because, if and with. Words that generally have no indigenous equivalents such as freeze, snow, animal and correct. Altogether, 170 items were retained.' (viii). Several languages were not included in the charts (i.e. Yami, Zamboangeño, Caviteño, Jaun-Jaun, Bantoanon, Bol'anon, and Palawano). These remain to be done, except that Caviteño and Zamboangeño will not be included in the final tabulation, since work on both languages has shown that they turn out to be Indo-European languages on the basis of their basic vocabulary.

53 57.5 53
 54 67.0 58.5 54
 55 28.0 28.5 34.0 55
 56 29.0 28.0 29.0 28.0 56
 57 27.5 28.5 27.5 26.0 56.0 57
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 48 49.7 49.7 48.3 39.7 20.3 27.9 35.2 49.3 45.5 44.1 40.0 38.2 41.0 32.1 42.8 49.0 34
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SHARE

SHARE

ISINAY			
IFUGAO (ANGANAD)		IV 9.k	
IFUGAO (BATAD)			I 2.a, 3.b, 3.p
IFUGAO (BAYANIAN)			
KALLAHAN (KALAYOQ)	II 5.b	II 3.f, 1.d, 2.d; III 1.d	
KALLAHAN (KAYAPA)			
PANGASINAN			
INIBALOI			
BONTOC	I 3.n		
KALINGA		IV 6.g	
KANKANAY			
BALANGAW			
ISNEG			
ILOCANO	II 5.d; III 11.e		
ITNEG			
AGTA	II 5.c	I 3.m	
DUMAGAT			
ATTAB			
IBANAG	I 3.g		
YOGAD			
ITAWES			
GADDANG	II 1.e	I 3.a; II 6.a	
IRAYA (CAGAYAN)		IV 3.j	
MALAWEG			
PAMPANGGO			
YAKAN			
IVATAN	III 12.e; I 3.bb	II 1.b; III 5.f	
ITBAYATEN			
SAMBAL			
TAGLOS			
CAVITEÑO	IV 5.k, 6.h, 3.n	IV 8.b	
ZAMBANGUEÑO			
ROMBLONON			
BIKOL	IV 8.f		
BANTONON			
CEBUANO	IV 3.h		
BOL'ANON			
HILIGAYNON			
CAPIZHON	III 11.h	II 3.h	
CUYUNEN			I 3.aa
KINIRAYA			
SORSOGONON	IV 1.1		
WARAY			
MASBATEÑO			
JAUN-JAUN			
KAMAYU			
HANUNOO			
IRAYA (MANGYAN)	IV 1.h	II 2.h	I 3.p
TADYAWAN			
BUIID			
AKLANON			
INUNHAN			
HAMTIKON			
DATAGNON	I 3.c	III 1.h	
BULALAKAW			
BUTUKNON			
CAGBANCILLO			
TAGBANUA (KALAMIAN)	III 1.k	IV 13.k, 5.e	
ACUTAYNON			IV 6.b; II 3.b; III 10.d
TAGBANUA (ABORLAN)	IV 5.g		
BATAK			
TAGAYDAN	III 1.f, 2.c		
ALANGAN			
PALAMANO	IV 8.1	IV 1.d, 7.e	
TAUSUG			
MANOBO (ATA)			
MANOBO (DIABAWON)	I 3.y		
MANOBO (SARANGGAN)			
MANOBO (TIGWA)			
MANOBO (ILIANEN)	IV 8.j		
MANOBO (WEST BUKIDNON)			
MANOBO (KALAMANSIG)			III 11.f
BINUKID	IV 9.j	IV 1.f	
HIGAONON			
TASADAY	III 1.j, 4.g		
TIRURAY			
ISAMAL			
DABAWENO	I 3.u		
TAGAKAOLO			
MAMAHUA			
KALAGAN			
BAGGAO (TAGABABA)			
SUBANON (SIOCON)			
SUBANON (SINDANGAN)	I 3.f	IV 5.i, 7.r	
MANSAKA			
MANDAYA			
BILAAN (SARANGGAN)	I 3.i, 3.cc; IV 7.h		
BILAAN (KORONADAL)			III 1.b
T'BOLI			
MAGINDANAON	II 5.i; IV 10.c		
MARANAO			
SIMUNUL	I 3.s		
PALUN MAPUN			
SIASI			
YAKAN	III 4.f		
KAPUL			
SIBUTU			
SANGIL			
SANGIR	IV 5.d	II 7.a	
TALAUD			

6.0 CONCLUSION

The study just concluded is one more step towards the complete classification of all the Philippine languages. Some 100 languages remain to be classified. Moreover, a comparison of the lexicons of these languages together with those of the 100 languages mentioned need to be done.

Only when this task is accomplished will reliable linguistic evidence for the cultural history and prehistorical contacts and migrations of the Filipino peoples be forthcoming.

N O T E S

1. Under the heading SIL and ALC are included a large number of individuals who have contributed data for this subgrouping project. Space limitations do not allow them to be mentioned individually. At any rate, their contributions are gratefully acknowledged in the files of both institutions.
2. The asterisked forms after the alphabetical subdivisions are not necessarily reconstructions. At this stage, they should be considered as merely convenient formulas for classifying the various ESI's.
3. In this section, the following symbols are used: N_c = common noun, N_p = personal noun (name), Re = reduplication, A' = words ending in consonants (except n, ñ or q), A'' = words ending in vowels, X = topic, Y = predicate. In subsections 9 and 10, there is reversing allowed, with only stylistic difference in meaning.
4. In the preparation of this hypothesis, I have profited from discussions with Patricia O. Afable of Yale University.
5. The languages in the two tables of cognate percentages above need to be further compared with each other, a task that awaits us.

A SUBGROUPING OF 100 PHILIPPINE LANGUAGES

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