

CHAPTER 9

THE GULF AREA IN THE LIGHT OF GREENBERG'S INDO-PACIFIC HYPOTHESIS

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9.1. Introduction

Joseph H. Greenberg has now (1971) published materials, primarily etymologies of common IP (Indo-Pacific) words, but also including grammatical materials, mainly of pronoun sets, in which he classifies practically all NAN (Non-Austronesian) languages of the Pacific into one large group. The notable exception is the languages of the Australian mainland, i.e. he includes Tasmania. However H.B. Kerr (quoted in S.A. Wurm, 1971) also sees a linguistic connection between Papuan and Australian.

The problem now is just how to evaluate Greenberg's work, due to the magnitude of its contents. The only practical manner is for scholars who are well acquainted with a particular area to assess Greenberg's comments and classification of that area.

In this chapter I shall examine Greenberg's hypothesis as it is related to languages in and surrounding the Gulf District of Papua New Guinea. After summarising Greenberg's work I shall deal with the groups of languages and individual languages or dialects which he mentions in or near the Gulf area. Finally, I shall close by suggesting that the IP hypothesis has some basic problems, if Greenberg's treatment of the Gulf area is representative of his general thesis.

9.2. The Hypothesis

In an earlier study (1958, unpublished) Greenberg stated that he had determined nine major groups in New Guinea (=Papua New Guinea), as well as five other independent groups on other islands. Later, in another

unpublished report (1960), he demonstrated that by basing his classification on etymologies, all of the independent groups could be included within a single family and that his previous major groups were then subgroups of the family. The published version (1971), with certain additions here and there within subgroups, is substantially the same as the 1960 classification. Its publication coincides with that of three other works whose authors also present evidence for establishing certain broad groupings in the Papua New Guinea region (McElhanon and Voorhoeve 1970; Wurm 1971, 1972).

Greenberg implies that all of these NAN languages are genetically related. His taxonomic labels, however, do not always seem to reflect his confidence in this fact. Although he speaks of a 'single family' (p. 807), he also talks of a 'major linguistic stock' (p. 854), a 'super-group' (p. 833), and 'broader subgroups' (p. 809).

Wurm has long postulated the broader relationship of languages in the Highlands and elsewhere. See, for example, his studies in the same volume as Greenberg's IP hypothesis, in which he summarises the linguistic situation, as well as his most recent work on the problems inherent in classifying Papua New Guinea languages (1972). McElhanon and Voorhoeve (1970) were the first to publish evidence indicating a cross New Guinea type of linguistic relationship, although many others (including Greenberg) had hinted at it.

Greenberg's compiled materials are from published and unpublished sources. Listed it is indeed impressive: a maximum of 350 entries per language in some twelve main notebooks, plus three additional notebooks of grammatical notes. There are some sixty-eighty languages in each notebook, resulting in around, say, 840 sources. Each language is recorded within a similar (assumed) group in the appropriate notebook.

The description of the groups is from a West to East direction, with external New Guinea groups described before the internal ones. The groups proposed are (with Greenberg's abbreviations given for future references): (1) the Andaman Islands (AN, but usually written to avoid confusion with Austronesian); (2) Timor and Alor Islands (TA); (3) the North Halmahera (HA); (4) New Britain and New Ireland (NB); (5) Bougainville (BO); (6) the Georgia Archipelago, or Central Melanesia (CM); (7) Tasmania (TS); and (8) New Guinea Proper.

Eight major New Guinea groups are distinguished: (1) Western (WNG), which is generally Cowan's West Papuan Phylum; (2) the North New Guinea

'Stock' (NNG), which is divided into five 'major sub-families'; (3) the South-Western (SWNG) or Marind-Ok subgroup; (4) the Southern (SNG) or Kiwaic subgroup; (5) Northeastern (NENG), which is mainly the Madang area; (6) the Central subfamily (CNG), which is mainly but not entirely the Highlands; (7) the Eastern group (ENG); and finally (8) Unclassified New Guinea (UNG). Usually the latter refers to previously unclassified languages which Greenberg now places within one group or another of New Guinea Proper.

The languages of the Gulf District area are primarily within the SNG, but also within SWNG, CNG, and ENG.

Greenberg has attempted to deal with the problem of AN loans in his IP etymons by comparison with Dempwolff's Proto-AN reconstructions and with Malay. He also assembled vocabularies from some fifty AN languages for comparison. It does not seem that he has been entirely successful, as I shall mention later.

Lexical evidence for the validity of each IP group is given in sets of etymologies. A most general set of widespread etyma is also given, some eighty-four words in all. The sets given for each separate group varies from ninety-two for TA to twenty-seven for WNG. Within each set common IP etymons are noted, the most frequent representation being within the TA group. There are none within the WNG set and only one within the SNG and ENG groups.

Greenberg's grammatical evidence, as already mentioned consists almost completely of pronominal features: the form of the first person singular pronoun, the second person singular pronoun, first person plural, first person inclusive plural, third person plural, the suffix pronominal pattern, the pronominal prefix pattern, an alternate pattern (where the second and third persons are identical or where the first person is distinguished by vowel changes which are the same in the dual and plural), the inflection of the noun for number, the expression of sex genders (generally by vowel alternation), and finally the formation of a past tense by means of a suffix containing a velar consonant. In this last regard, in passing, it is interesting to note that Greenberg includes Kewa (of the Southern Highlands) by virtue of the -uga 'remote past' suffix. However, as the article he cites clearly indicates (Franklin 1964), this velar occurs only in the first person singular. All other persons are marked by an -s- instead of a velar consonant. In fact only the East Kewa contains such a velar at all (Franklin 1968 outlines the

dialects of Kewa and mentions this suffix in particular).

9.3. The SNG Subfamily

Greenberg (p. 829) numbers seven subgroups within his SNG subfamily. He also seems to use certain taxonomic labels interchangeable: 'Southern subgroup' on p. 829, but 'Southern subfamily' on p. 830. The seven groups of the subfamily or subgroups must then be implied sub-subgroups or sub-subfamilies, or of some such assumed 'closer' relationship. It is not clear what the status of each of these is, but his 'Kiwai' includes not only known Kiwai-type languages, but also Karami, Eme-eme and Mahigi. The known Kiwai languages, are those clearly demonstrated by S.A. Wurm (1951) to be members of one genetic family. Wurm has also shown the relationship of Kiwai on a broader front and his latest assessment of the whole Kiwaian situation can be found in Chapter 6 of this book.

Greenberg's 'Barika' language group of the SNG subfamily includes Barika, Dugeme, Karima, Tumu, (also Dumu or Kibiri), as well as Teberan (see Chapter 3) languages. Our own classification (Chapter 7) of these languages (excluding the Kiwaian) demonstrates that Karami, Eme-eme (or Pepeha), and Mahigi are members of a small group of languages which also includes Ipikoi. Greenberg includes the latter in his 'Kiwai', rather than 'Barika' sub-subgroup. But even within the so-called 'Barika', Greenberg's subgrouping does not clearly demonstrate the relationships which exist, or the fact that there is a great degree of variation within a group. For instance, Barika, Dugeme and Karima clearly belong together in one group, which we call the Turama-Omatian Family (Chapter 7), while Foroba, Ro and Sesa belong in the very distinct Teberan Family (Chapter 3). Tumu or Kairi as it is known in the Gulf, is only distantly related to any member of the Turama-Omatian Family. To call all of these families one subfamily implies a genetic closeness that cannot be demonstrated at present by any technique. In fact the inclusion of the Teberan Family (Foroba, etc.) with those of the Turama-Omatian Family (Barika, etc.) is probably the most misleading of the SNG subgroup, but the inclusion of all of these with the Kiwaian languages is equally without genetic proof. With the one language (Ipikoi, near the Purari River) where some degree of genetic relationship can be noted with Karami, Eme-eme and Mahigi, Greenberg classifies it instead in a subgroup much closer to the Kiwaian Family. On the whole his listing of languages within the seven groups is mixed and misleading. His group five (Parb) and six (Peremka) should

be considered as the same, while his group one (Kiwai) and two (Barika) should be divided into at least four groups. The same problem applies to his other subgroups such as ENG. If the sub-subgroups, where languages should be closely related, is in error, obviously this should cast some doubt on the broader high-level groups.

Returning to Ipikoi and its inclusion within 'Kiwai', there are no examples given which demonstrate its relationship with other groups. This would seem to indicate that it is in the wrong group. Nor are any examples given to reflect Pepeha (Eme-eme) clearly within the 'Kiwai' group. Other apparent faults in the relationships of languages in the seven groups of the SNG can be suggested: (1) in Greenberg's materials Tumu shows no relationship to the Kiwaian Family (with which it is adjacent), nor to the 'Kunini' or 'Bugi' groups, yet displays a relationship with the 'Jei' group which is in West Irian; (2) Foraba, etc. (of the Teberan Family, but in Greenberg's 'Barika' group) should be in the same group as Mikaru, which, however is in his Highland languages of the Central Group (p. 834-5). Or conversely, to be consistent, Greenberg should place Mikaru in the 'Barika' group. In both instances the languages appear seriously misplaced, although these are not by any means the only cases. Such instances do, however, cast doubt on the degree of exactness in the whole scheme.

Out of the eighty common IP etymologies listed (pp. 854-65) there are twelve that are found in the Kiwai subfamily. In Table 1 each of these words is noted and its presence or absence in the fifteen major IP groups (or subfamilies as Greenberg implies) is noted by a plus or minus. By examining the table it can be seen that the ratio of words which are cognate between the Kiwai subfamily and the other groups correlates somewhat with geographical proximity. The one notable exception is Bougainville, to which we shall return later.

The strong implied correlation between Kiwaian and NENG (eight/twelve words) is also somewhat surprising. Elsewhere in his work Greenberg reminds us that languages in the NENG area (Sepik-Madang) are generally as closely related to languages outside of NG proper as they are to languages within. However, Table 1 reveals that any member of the Kiwaian Family diverges from its centre of comparison (SNG) in terms of what might be illustrated by circles or waves. Chart 1, which follows Table 1 and illustrates this effect, is based on the information contained in Table 1. The numbering corresponds to Greenbergs; the glosses are as

follows: 4. *upper arm*, 5. *arrow*, 11. *blood*, 17. *cloud*, 20. *to dance*, 23. *ear*, 25. *eat*, 30. *fire*, 44. *leaf*, 47. *louse*, 67. *sleep*, and 82. *white*.

Those Indo-Pacific etymologies which are commonly found throughout several of Greenberg's subgroups (Greenberg 1971:854-65) are called 'Common IP' in the charts which follow. The numbers in the charts following the equal sign is the sum of the number of etyma in each subgroup.

Table 1

Common IP Etyma Found in Kiwaian Family

Ref. of Gloss	4	5	11	17	20	23	25	30	44	47	67	82	= 12
AN	+	+	-	-	-	-	-	+	-	-	-	-	= 3
TA	-	-	-	+	-	-	+	+	-	+	+	-	= 5
HA	-	-	-	+	-	-	+	-	-	-	+	-	= 3
NB	-	-	-	-	+	+	-	-	+	+	-	+	= 5
BO	-	-	+	+	-	+	+	+	+	-	+	-	= 7
CM	-	-	+	+	-	-	-	-	-	-	+	-	= 3
TS	-	-	-	-	-	-	-	+	-	-	+	-	= 2
WNG	+	+	+	+	-	+	+	+	-	+	+	-	= 9
SWNG	+	-	-	-	-	-	+	+	-	+	-	-	= 4
SNG	+	+	+	+	+	+	+	+	-	+	+	+	= 11
CNG	+	+	+	-	+	-	+	+	-	+	+	+	= 9
NENG	+	-	+	-	+	+	-	+	-	+	+	+	= 8
ENG	-	-	+	-	+	+	+	+	+	+	+	+	= 9
UNG	+	+	-	-	-	-	+	+	+	+	+	-	= 7
No. of Groups Exhibiting IP Etymon	7	5	7	6	5	5	9	11	4	9	11	5	

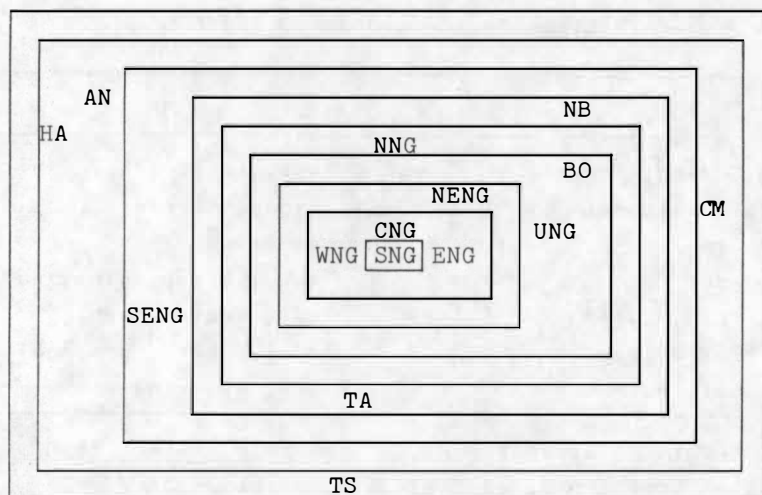


Figure 1

Kiwaian (SNG) Divergence Pattern

Greenberg's Kiwaian subgroup is the only one in the Gulf area with enough words compared to suggest that his etymological listing may correlate simply most often with geographical distance. If this is the case, such lines can probably be drawn on a similar basis from any given language group to the remaining, but this will not, necessarily, demonstrate that the languages belong to the same genetic group.

Turning now to the alleged relationship between SNG and BO, the etyma listed by Greenberg are given in Table 2. For the purposes of the argument all languages of his SNG subfamily are included. If only the true Kiwaian Family were included the lack of cognates would be even more obvious. All words which are similar are not included in the table, e.g. No.17 *tubeitubei* is listed, but not *tubetube*. The meanings again are: 11. *blood*, 17. *cloud*, 23. *ear*, 25. *eat*, 30. *fire*, 44. *leaf*, and 67. *sleep*.

Table 2

IP Etyma Found in Both BO and SNG

	BO	SNG
11.	ereng, ereere	ora, irii, arau
17.	tubeitubei	dapar, tobore
23.	rom	demeriwai
25.	noi	noku, anang, nina, na*
30.	nta, tai**	tai, taetae, atha
44.	***bara, pana	pori, iboro, proingai, epur
67.	at, asi	ute, ut, utua

* In SNG the forms are often glossed as *food*, rather than *to eat*.

** In BO the forms are glossed as *burn*, rather than *fire*.

*** The forms are incorrectly listed by Greenberg for CNG, rather than SNG.

Upon examination of the seven words in Table 2 and by the usual process of examining cognates by inspection (Gudschinsky 1956), only No.67 is plausible in all cases, Nos.25 and 30 are in some cases, No.44 is in one case, and the remainder only by some stretch of the imagination. No.25 *eat* crosses so many language families (or groups) that it does indeed appear to be some sort of universal etymon (see also Wurm 1973). But is it enough to support the whole IP hypothesis? What in fact can be inferred after examining the alleged relationship between SNG and BO?. What can be 'proven' by any chain relationship of two words, or are these observations on the same level as the common terms for *mama* or *papa* around the world (Jakobson 1962).

Of course for those who, such as the author, may believe that the universal basis for all human languages was simply a divine act coupled with a dispersal at the tower of Babel (as recorded in the book of Genesis, Chapter 11) such lexical remnants are expected and do reflect a common 'genetic' origin. But this is beside the point of Greenberg's argument and without a theoretical linguistic basis.

We shall now examine Greenberg's common IP etyma as they are reflected in three language families of the Gulf: the Inland Gulf, Teberan, and

Turama-Omatian. (More details on Teberan can be found in Chapter 3 of this volume, and on Inland Gulf and Turama-Omatian in Chapter 7). All of these are within Greenberg's 'Kiwai' and 'Barika' groups of his SNG subfamily. The first of our proposed language families, the Inland Gulf has from 0-6/8 common IP etyma. The occurrence of these in the other IP groups is displayed in Table 3.

Table 3

Common IP Etyma Found in Inland Gulf Family

Ref. of Gloss	4	5	22	30	42	71	73	74	= 8
AN	+	+	-	+	-	+	-	-	= 4
TA	-	-	-	+	-	-	-	-	= 1
HA	-	-	+	-	-	-	-	+	= 2
NB	-	-	-	-	-	-	-	-	= 0
BO	-	-	-	-	-	+	-	-	= 1
TS	-	-	-	+	+	+	-	-	= 3
WNG	+	+	-	+	+	-	+	+	= 6
NNG	-	-	-	-	-	-	-	+	= 1
SWNG	+	-	-	-	+	+	+	-	= 4
SNG	+	+	+	+	+	+	+	+	= 8
CNG	+	+	+	+	+	+	+	+	= 8
NENG	-	-	-	-	+	+	-	+	= 3
ENG	-	-	-	+	+	+	+	+	= 5
UNG	+	+	-	+	+	+	+	+	= 6
No. of Groups Exhibiting IP Etymon	6	5	3	8	8	9	5	8	

Glosses for Table 3 are:

4. *upper arm*, 5. *arrow*, 22. *dog*, 30. *fire*, 42. *husband*,
71. *star*, 73. *stone*, 74. *stone*.

On Table 3 we note that Eme-eme (of our Inland Gulf Stock, Chapter 7), as a member of Greenberg's SNG subgroup, displays a close relationship with not only other members of the same subgroup, but also with CNG. Greenberg's language members of the CNG are not listed, but examples

in the common IP set of etyma include languages as diverse as Tsaga (West Central Family and better known as Enga), Fore (ECF), Fasu (Kutubuan Stock, see Chapter 4), Gende (subfamily of ECF), Chimbu. etc. (CF) Jabi or Kapauku (of the WNGHP and Wissel Lakes-Kemandoga Stock), Aförö (Karam Family) and Hube (NC Huon Stock). All classifications given in parenthesis are from Wurm (1971), in the same volume as Greenberg's IP hypothesis. It is not possible to identify from the checklist or index of that volume languages such as Tjranki, Nangamb or Kuno, although Greenberg gives examples from each of these in his CNG subgroup. In fact what Greenberg calls CNG includes languages which have no demonstrated relationship between them, unless divergence from a specified language coupled with the well-known dialect chaining effect satisfies this requirement. The closeness that Eme-eme shares with CNG, UNG or WNG, as shown in Table 3, reflects the fact that there is often one language out of dozens in each subgroup that have a cognate shared with some other one language in some other subgroup. The sparceness of the genetic evidence does not disprove the IP hypothesis, but it does often discredit the subgroupings upon which the hypothesis rests. Further, does the presence of a cognate form for *dog* in several scattered areas suggest a genetic relationship, or do the cognates rather imply a common introduction of the dog into New Guinea? One guess may be as acceptable as the other. We should expect a common sub-stratum of cultural similarity in New Guinea which may also be reflected lexically, even today (for more on this point, see Chapter 10 of this book).

Table 4

Common IP Etyma Found in the Teberan Family

Ref. of Gloss	25	42	71	73	80	= 5
AN	+	-	-	-	+	= 2
TA	-	-	+	-	+	= 2
HA	+	-	-	-	+	= 2
NB	-	-	-	-	-	= 0
BO	+	-	-	+	-	= 2
CM	-	+	+	-	+	= 3
TS	-	-	+	-	-	= 1
WNG	+	+	+	-	-	= 3
NNG	+	+	+	+	-	= 4
SWNG	+	-	+	+	+	= 4
SNG	+	+	+	+	+	= 5
CNG	+	+	+	-	+	= 4
NENG	-	+	+	-	-	= 2
ENG	+	+	+	+	-	= 4
UNG	+	+	+	+	-	= 4
No. of Groups Exhibiting IP Etymon	10	8	11	6	7	

Table 4 outlines words from the Teberan Family (Greenberg's 'Barika'). The glosses are: 25. *to eat*, 42. *husband*, 71. *star*, 73. *stone*, and 80. *to walk*.

In that Mikaru is included by Greenberg (p.835n.) within the CNG subgroup (Highland languages), but other known members of this same Teberan Family are included in his 'Barika' group, cognates between the two areas will be now given in Table 5.

Table 5

IP Etyma Found in Both the Teberan Family and CNG

	Teberan	CNG
25. <i>to eat</i>	na (<i>food</i>)	ne, no, na, etc.
42. <i>husband</i>	mui (<i>man</i>)	eme (<i>man</i>)
71. <i>star</i>	bafa (<i>moon</i>)	bui, mbei, babang, ba (<i>moon</i>)
73. <i>stone</i>	kabu, kabo	kombuglo, kobule, kimp, etc.
80. <i>to walk</i>	togoi (<i>leg</i>)	(ne)sok ((<i>my</i>) <i>foot</i>) (nu)juk, togo, saga, tag (hip), etc.

Only one of the CNG forms is from Mikaru, namely *saga to walk*. It is not clear why all of Greenberg's 'Barika' group is not included on the CNG subgroup, if there is lexical justification for Mikaru to be placed in that group. However, and as MacDonald clearly demonstrates in Chapter 3 of this book, the Teberan Family does show an 11-13% average lexico-statistical relationship with Sau of the WF (Greenberg's CNG). Therefore either by its relationship to Sau or Mikaru, Greenberg should include the 'Barika' group in his CNG subfamily.

Finally, to conclude this section we shall compare words from those members of Greenbergs 'Barika' group (Barika, Dugeme and Karima) which we call the Turama-Omatian Family, with other IP subgroups.

Table 6

Common IP Etyma Found in Turama-Omatian Family

Ref. of Gloss	7	22	25	71	73	= 5
AN	+	-	+	-	-	= 2
TA	+	-	-	+	-	= 2
HA	-	+	+	-	-	= 2
NB	-	-	-	-	-	= 0
BO	+	+	+	-	+	= 4
CM	-	-	-	+	-	= 1
TS	-	-	-	+	-	= 1
WNG	-	-	+	+	-	= 2
NNG	+	-	+	+	+	= 4
SWNG	-	-	+	+	+	= 3
SNG	+	+	+	+	+	= 5
CNG	+	+	+	+	-	= 4
NENG	-	-	-	+	-	= 1
ENG	+	-	+	+	+	= 4
UNG	-	-	+	+	+	= 3
No. of Groups Exhibiting IP + Etymon	7	4	10	11	6	

Glosses for Table 6 are:

7. *bark of tree*, 22. *dog*, 25. *to eat*, 71. *star*, 73. *stone*.

There are several additional facts which should be pointed out with regard to Tables 3-6: (1) there are no common IP etyma shared by any pair of the three families and NB; (2) all of them, as should be expected, demonstrate a closeness within Greenberg's SNG subfamily; (3) the Inland Gulf group has an equal number of cognates with CNG, and the other two families have but one less with CNG than with SNG; (4) the number of cognates with NENG is in each case small, paralleling the numbers with such distant groups as AN, TA, HA or TS; (5) only the words for *star* and *stone* occur in all three families and common IP.

9.4. The ENG Subfamily

There are two main language families in the Gulf District which Greenberg includes in his ENG subfamily: the Eleman and Purarian, both described by H. Brown in Chapter 8 of this book. There are, however, a total of ten distinct groups of languages which Greenberg lists in his Eastern subgroup, which according to classifications proposed by Dutton (1969, 1970, 1971, 1973) are in eight separate language families. The family names given by Dutton (with the corresponding 'group' names of Greenberg) are: Mailuan (Mailu), Binanderean (Binandere), Dagan (Dimuga), Koiarian (Kobio(?) and Koita), Gailalan (Afoa and Fuyuge) and Kwalean (Koita). Eleman and Purarian, which are outside of the areas described by Dutton, correspond to Greenberg's Elema and Namau groups.

Greenberg's Kovio group is problematic. Except for the language called Kovio, the group is clearly a part of Dutton's Gailalan Family. As Dutton points out (1973:43) Kovio is a common name for Mt. Yule in this general area and what is now called Mountain Koiari and a dialect of Mekeo have both been called by this name. A. Capell calls Kovio, of the same general area, an AN language (1971:292).

In Greenberg's inter-group common etyma for his ENG subfamily, Elema has cognates listed with other groups as outlined in Table 7.

Table 7

Common IP Etyma Found in Both Eleman and ENG

Eleman Language	Cognate Group	Word No. and Gloss
Milareipi	Kovio	4. <i>bad</i>
Orokolo	Mulaha, Namau	8. <i>blood</i>
Toaripi	Fuyuge, Koita, Namau	13. <i>to cut</i>
Milareipi	Koita	18. <i>to fear</i>
Elema, etc.	Fuyuge, Koita	22. <i>girl</i>
Elema	Mulaha, Koita	27. <i>to hear</i>
Uaripi, etc.	Koita	40. <i>star</i>
Toaripi, etc.	Mailu, Binandere	41. <i>to steal</i>
Toaripi	Fuyuge, Koita	47. <i>word</i>

From Table 7 it seems apparent that, aside from Koita (Dutton's Koiarian), the relationship of Eleman within the ENG subfamily is tenuous. No cognates are given to show its relationship with Dimuga (=Dagan) or Afoa (=Goilalan), and only one with Mailu, Binandere, or Kovio.

Greenberg cites no pronominal forms from Eleman being in common with other members of the Eastern group. In short, the inclusion of Eleman (or Namau) within the ENG subfamily appear to be based more on geography than upon lexical or grammatical evidence.

There are seven words from Eleman which occur in Greenberg's common IP etyma. These were compared with the fifteen major subfamilies of the IP Family. Their presence or absence is indicated now in Table 8. The glosses are: 16. *child*, 24. *earth*, 27. *to fall*, 31. *fish*, 36. *hair*, 45. *lip*, and 59. *rain*.

Table 8

Common IP Etyma Found in the Eleman Family

Ref. of Gloss	16	24	27	31	36	45	59	= 7
AN	+	+	+	-	+	+	+	= 6
TA	+	+	+	-	+	-	-	= 4
HA	-	-	-	-	+	-	-	= 1
NB	+	+	-	-	-	-	+	= 3
BO	-	-	-	+	-	-	-	= 1
CM	-	-	+	+	-	-	-	= 2
TS	-	+	-	-	-	-	+	= 2
WNG	-	-	-	+	-	+	-	= 2
NNG	+	-	-	+	-	+	-	= 3
SWNG	-	+	-	+	-	+	-	= 3
SNG	-	-	+	+	-	-	-	= 2
CNG	-	+	+	-	+	-	-	= 3
NENG	-	-	+	+	-	-	-	= 2
ENG	+	-	+	+	+	+	-	= 5
UNG	+	-	-	-	-	-	+	= 2
No. of Groups Exhibiting IP Etymon	6	6	7	8	5	5	4	

The strong incidence of assumed cognate between Eleman and the AN (Andaman Islands) subgroup is illustrated in Table 9. No.36 is based on a t:d correspondence which crosses seven of Greenberg's subfamilies for this word. Except for AN and TA, the vowels are generally back and rounded.

Table 9

Assumed Cognates Between Eleman and TA

Gloss	Eleman	Andaman
16. <i>child</i>	aturea	etira
24. <i>earth</i>	mea	moga (<i>bottom</i>) mika(m) (<i>underneath</i>)
27. <i>to fall</i>	foi	pa
36. <i>hair</i>	utu	de
45. <i>lip</i>	ape (<i>mouth</i>)	pe, pa
59. <i>rain</i>	lai	leke

The position of Namau (our Purari) within the ENG subfamily by Greenberg again suggests a much closer relationship than is the case. The result of comparing Namau and common IP words is outlined in Table 10. Glosses are: 1. *above*, 7. *bark*, 11. *blood*, 18. *to come*, 21. *to die*, 25. *to eat*, 54. *name*.

Table 10

Common IP Etyma Found in Namau

Ref. of Gloss	1	7	11	18	21	25	54	= 7
AN	-	-	-	-	-	-	-	= 0
TA	+	+	-	+	+	+	+	= 6
HA	-	-	-	-	-	+	-	= 1
NB	-	-	-	-	-	-	-	= 0
BO	+	+	+	+	-	+	-	= 5
CM	+	-	+	-	-	-	+	= 3
TS	-	-	-	-	-	+	-	= 1
WNG	+	-	+	-	-	-	+	= 3
NNG	+	+	+	-	-	+	+	= 5
SWNG	-	-	-	+	-	+	-	= 2
SNG	-	+	+	+	-	+	+	= 5
CNG	+	+	+	+	-	+	+	= 6
NENG	+	-	+	+	+	-	-	= 4
ENG	-	-	+	+	-	+	-	= 3
UNG	-	-	-	+	-	+	-	= 2
No. of Groups Exhibiting IP Etymon	7	5	8	8	2	10	6	

Table 10 indicates that, on the basis of cognates between Namau and other IP subfamilies, it is most closely related to CNG and TA (six each), then BO, NNG, and SNG. Table 11 illustrates some of these assumed cognates.

Table 11

Assumed Cognates Between Namau and Other IP Subfamilies

Gloss	Namau	TA	CNG	BO	SNG
1. <i>above</i>	upai	epe (<i>upon,</i> <i>at</i>)	epa (<i>sky</i>) pu (<i>up</i>)	piai (<i>upwards</i>)	-
7. <i>bark</i> (<i>of tree</i>)	(iri)kape	koma	(na)kap (<i>(my) skin</i>)	kamu	kaibo (<i>skin</i>)
11. <i>blood</i>	aro	-	era	ereng (<i>red</i>)	oro, irri, arau (<i>red</i>)
18. <i>to come</i>	mina (<i>bring</i>)	man	nem, mena, mindi	maniai (<i>to go</i>)	umon, muinane, aman, man
21. <i>to die</i>	imua	umu	-	-	
25. <i>to eat</i>	nav	nawa, nei	nega, na, etc.	noi	noku, anang
54. <i>name</i>	noi	neene, nai, hanin	ena	-	ne, neene, ngi

In that Namau is placed within Greenberg's ENG, it is surprising that only three forms are cognate with any of the nine other groups within ENG. However, this may simply reflect the remoteness of Namau to any group, even within the ENG. Brown's study (Chapter 8) is on the basis of an extensive lexical inventory and yet of the forty cognates (out of 1000 words) which he outlines between Namau and Eleman, none of Greenberg's three (*blood, to come, to eat*) are discussed. As Brown does indicate, however, the Namau have had considerable influence on the Elema and there are certain structural similarities between the two. To go beyond this and declare that Namau is in the IP Family along with Timor-Alor, Bougainville or the Highlands group of languages is based completely, and somewhat precariously, upon evidence of the sort given in Table 11.

9.5. The CNG Subfamily

What Wurm now calls the Trans-New Guinea Phylum (1972:49) includes some forty-four stock, 100 families and 422 languages. Earlier (1971: 547ff) Wurm referred to most of this as "the Central New Guinea Macro-Phylum", including the ENG Highlands Phylum, the Huon (Peninsula) Phylum,

the SENG Phylum, the WNG Highlands Phylum, potentially the Middle Sepik Phylum and Upper Sepik Phylum, as well as other assorted language families.

With one stroke Greenberg (p.835) combines many of these (and other) extremely distant groups into three branches of the CNG subfamily (or subgroup): the Kapauku-Babem, Highlands, and Huon. It should be noted, however, that the Sepik area is included instead in his NENG subfamily.

It is not surprising that out of 422 languages in one subfamily some of them would have words which are apparent cognates with languages of the other subfamilies. Even if Greenberg had access to but a fraction of this number, it is noteworthy that 48/84 of his common IP words are found in the CNG subgroup.

Rather than examine each of these in detail, we shall discuss members of his CNG that are also members of Wurm's West Central Family: Tsage (=Enga), Augu (=Mendi), Kewa, Sau and Samberigi (=Sau), in that we are most familiar with this area.

Greenberg lists eleven words that he considers cognate between the above WCF languages and the rest of his IP Family. We shall now discuss each of these:

(a) 5. *arrow*: telya (Tsaga). Usually the form elicited is *bow and arrow* and cognates within the WCF are forms such as yandaté (Enga), sendal ne (Mendi) or endali (E. Kewa). None of these correspond to other IP etyma.

(b) 9. *beautiful*: epe *good* (Tsaga); eve (Augu). The medial consonant is a bilabial fricative. The form always occurs with a *to be* verb, for example epe *ta it is good* (Kewa), where *ta* is derived from *la to speak*. This grammatical characteristic may be typologically of more importance than the form, but only the first form is given in other IP etyma. Wiru, probably of the WCF, uses epe teko.

(c) 20. *to dance*: mali *dancing, singing*, (Tsaga) is a cognate with the maali *festival* (Kewa) and mat (Mendi). *To dance* is mata pamba in W. Kewa, but often the expression includes a form cognate with Greenberg's etymon: mali lia (Huli), mali ni (Ipili).

(d) 25. *to eat*: ne (Tsaga), na (Kewa), nee *food* (Sau). The Sau form for *to eat* is also na, Enga is negé, Wiru is nakò. The -gé suffix in Enga marks a habitual aspect that is not conjugated for person in the singular (Lang 1970:124). The -ko in Wiru may represent a similar fossilized suffix (see also Chapter 4 of this book).

(e) 30. *fire*: te (*burn* (intransitive), Tsaga). The forms for *fire*/

tree/wood are identical in the WCF, but unrelated to the etyma proposed by Greenberg, unless *rila* (Mendi), *ira* (Huli), *itáte* (Enga), *itane* (Ipili), or *ti* (Sau), are cognates for *tree*, rather than *burn*. These forms are all also related to *ira lufi* in Fasu (also in Greenberg's CNG subfamily). On the other hand, there may be two series of cognates that Greenberg is combining: the forms *toe* (Wiru) and *tipe* (Medlpa, of Wurm's CF) have also been recorded by the present author. The Tsaga form which Greenberg cites is a verbal one and cognates in the WCF are *raa* (Kewa), *ta* (Sau), etc.

(f) 36. *hair*: *iri* (Samberigi, Angu, Kewa), *iri(gi)* (Sau). This form, meaning *hair/feather* is found in all members of the WCF. In Ipili, as well as Sau, the suffix reflecting a historical suffix in the Family, is found: *iriki* (Sau), *irini* (Ipili). This ending (probably * -ŋV) is also reflected in (j) below. I have commented upon it elsewhere (1968:20,41).

(g) 47. *louse*: *rema* (Tsaga, Samberigi). A cognate form is found also in most other members of WCF: *lema* (E. Kewa), *em* (Mendi), *emo* (Huli), *lemo* (Ipili), *læmæ* (Sau), and probably Wiru: *namo*. The forms Greenberg cites for languages in the Huon area appear to have some sort of fossilized suffix, generally * -ŋ

(h) 50. *meat*: *minc* (Tsaga), may at first be suspected as a loan from the Pidgin English: *mit* (*meat, flesh*, Mihalic 1971:36). It is also suspect as a borrowing, in that the Medlpa form is identical to the Kewa and Mendi ones, namely *mindî*. However, the Ipili: *mijuni* and Huli: *mbirini* forms with the probable * -ŋV reflected as -ni may indicate that this is not a borrowed form. Other probable cognates are: *mæenæ* (Sau), *melepu* (Wiru), and *maiya* (Fasu).

(i) 51. *moon*: *Kana* (Tsaga). The word is often tabooed in the WCF and this form has the cognate *ana* in Ipili (but also the unrelated word *kuate*). The more relevant cognates are *eke* (Kewa, Sau), *ek* (Mendi), *ege* (Huli), all related to the Fasu: *heke*. The Wiru form is *tokene*. The form *kana* means *stone* in Kewa and many of their languages of the family.

(j) 55. *nose*: *nine(gi)* (Sau). Similar forms are found in S. Kewa (*wili*) and S. Mendi (*wil*), but again this word has been a tabooed in many areas. The Wiru form is *timini*.

(k) 71. *star*: *bui* (Tsaga). More often the word is represented by a dual form such as *kumba kendo* (E. Kewa), *so sakumb* (Mendi), or *hombu lakæ* (Sau). The Medlpa form is *kombu kandue*. The Tsaga form may be due to word taboo.

Of the eleven words that Greenberg lists which represent the WCF only one (No.25. *to eat*) is a verb and, as mentioned previously, the cognates of this form are very widespread. Two words are body parts (No.35. *hair* and 55. *nose*), one is probably specific rather than generic (No.5. *arrow*), two represent cultural artifacts (No.20. *dance* and 30. *fire*), one is an adjective (No.9. *beautiful*), two are objects of nature (51. *moon* and 71. *star*), one may be a loan (51. *meat*) and the final word is No. 47. *louse*. Concerning these words, the author has found (Franklin 1968, 1972, forthcoming) that body parts and natural objects which are associated with special ceremonies are most often tabooed and have many variant forms among the Kewa. Nevertheless, the few such forms given by Greenberg compare well across the WCF. This, however, is not too surprising in that Greenberg's CNG subfamily displays so many cognates with CNG or other subfamilies, situated as it is with a vast geographical spread and represented by a large number of languages.

Greenberg's CNG subgroup again implied a genetic closeness that at present cannot be verified. The initial comparative studies done at different ends of the Highlands (Bee 1965, Kerr 1973, Healey 1964) do not demonstrate any such unity at present, although there are of course typological similarities between Highlands languages and NAN languages generally (Wurm 1971:587-8). It may be, however, that many of these are also present in Africa, or some other area. Typological features are surface features and as such reflect the deeper universal features with an infinite variety of forms. Consequently, they cannot be statistically correlated with any genetic closeness of language groups. Further, if 'mixed languages' are a reality (cf. Wurm 1972:23-6), between AN and NAN, the same phenomena must exist between the various groups of NAN.

Despite Greenberg's claims for an IP Family of languages, his postulated subfamily is by itself so diverse that its constituency cannot at present be considered genetically linked.

9.6. The UNG Subgroup

There are several languages which Greenberg comments upon (p.841) which he calls unclassified. These include, in the Gulf and adjacent areas, the following: Ondoro, Aurama, Huaruha, Mumeng I, Mumeng II, Gogodala, Williams River, and Tate.

Mumeng I and Mumeng II, as pointed out some time ago by Hooley (1964: 24 n., 247), are Austronesian languages. Greenberg has failed to

isolate these on the basis of the criteria proposed in his article (p.808-9). Rather he has followed Capell (1962, et sequa) in including these as NAN languages. Capell lists the Mumeng and Watut dialects of the Buang Family (Hooley 1970, forthcoming) as NAN languages. Greenberg thus cites several Austronesian forms in his common IP etyma.

Ondoro is a village in the Northern District (Dutton 1973:50, 57) where Managalasi is spoken. By virtue of his other groupings Greenberg should have placed Ondoro within the 'Koita' group of the ENG subfamily.

Aurama and Huaruha are closely related dialects of the Pawaian Family. MacDonald (Chapter 3 of this volume) has commented upon this apparent family level isolate.

Gogodala has been found by Voorhoeve (1970) to be related to Suki of the Lake Murray area. This would be within Greenberg's SWNG subfamily, in that Lake Murray is included in his 'Marind' group.

Williams River apparently refers to the area where the Gailalan Family of languages is spoken (Steinkraus and Pence 1964; see also Tauade in Dutton 1973). If so, it belongs, by virtue of Greenberg's other placements, in either his 'Afoa or Fuyuge' groups of his ENG subfamily. Note, however, the reference by Loukotka (1957:44) to a group he calls 'Kukukuku' on the Williams Creek.

This leaves only Tate of the Gulf District area. H. Brown has commented on its relationship to surrounding languages such as Toaripi and Austronesian languages to the east (Chapter 8 of this volume). In Table 12 the Tate words which Greenberg includes in his common IP etyma are compared with assumed cognates in other IP subfamilies.

Table 12

Common IP Etyma Found in Tate

Ref. of Gloss	18	25	29	62	74	= 5
AN	-	-	+	-	-	= 1
TA	+	+	-	+	-	= 3
HA	-	+	-	-	+	= 2
BB	-	-	+	-	-	= 1
BO	+	-	-	-	+	= 2
CM	-	-	-	-	-	= 0
TS	-	-	-	-	-	= 0
WNG	-	+	+	+	+	= 4
NNG	-	+	+	+	+	= 4
SWNG	+	+	-	-	-	= 2
SNG	+	+	-	-	+	= 3
CNG	+	+	-	+	+	= 4
NENG	+	-	-	+	+	= 3
ENG	+	+	+	+	+	= 5
UNG	-	+	-	-	+	= 2
No. of Groups Exhibiting IP Etymon	7	9	5	6	9	

Table 12 implies what is already known: Tate has borrowed from ENG, in particular from the Eleman language. For further proof of this note comments by Brown (Chapter 8) and Ray (in Strong 1911).

Table 13 examines those words which Greenberg lists as cognate with Tate in ENG, CNG, SNG, and SENG - the areas which are closest geographically.

Table 13

Cognates of Tate and Surrounding Groups

Gloss	Tate (UNG)	SWNG	SNG	CNG	ENG
18. <i>to come</i>	mane	man, mend	umon, muinane, mane	nem, mena, mindí	mana, mina
25. <i>to eat</i>	nove	ane, unin, en	noku, nina	na, nega	nai, nana
29. <i>finger nail</i>	faha	-	--	-	foka
62. <i>to see</i>	ini (<i>eye</i>)	-	--	ini, one	ini, ni
74. <i>stone</i>	mena (<i>hill</i>)	-	mene	Amuni, maar meneng, man	muni, umari

In summary, Tate, one of the languages which we suggest is unclassified elsewhere in this book (Chapters 7 and 8, but see also the language called Porome in Chapter 7) remains equally unclassifiable on the basis of any common IP etyma.

9.7. General Comments and Conclusions

Greenberg states (p.850) that 'a major point of agreement linking a whole series of groups both in and out of New Guinea is the expression of sex gender'. This is documented for the CNG group (basically the Highlands) by citing the forms wanengk *son* and wanangk *daughter* in Enga (his Tsaga), where the vowel differences of -e- versus -a- are said to reflect gender. The correct form for *daughter* is wanegé in Enga, and wáné is the correct form for *boy*. Greenberg's citation for *daughter* was probably a recording of wanaku *girl*. Although all of the forms show some sort of phonetic similarity there is no gender marker in the forms, nor in other languages of the same Family. In fact Wurm (1964:82) comments upon the complete absence of such a gender system in the Highlands Stock.

Greenberg did not have access, apparently, to materials which have been published dealing with broad syntactic patterns. His strong reliance upon the pronominal forms leads to conclusions which other grammatical evidence does not suggest. He does not, for example, comment upon such typological features as benefactive stems or affixes, the historical relationship of such affixes to Indirect Object markers, the variation

in imperative suffixes, the presence of aspect markers, nor other features which are crucial in the comparison of Highland languages in particular. He also omits any reference to Wurm's (1964) typological features of the Highland area, nor to specific studies which have compared Highland and non-Highland languages, such as that by Trefry (1969).

One aspect of Greenberg's hypothesis which we have not mentioned is his contention that languages of the 'Kukukuku' group (the Angan Family, see Lloyd's Chapter 2 of this volume) belong in the SWNG subgroup, specifically within the 'Marind-Ok' group. If this is the case then Maiheari (p.836) of his 'Binandere group' of the ENG should also be placed within the same group, as it is also definitely a 'Kukukuku' group language. In all fairness, however, it should be noted that Lloyd (personal communication) upon examining Greenberg's evidence notes some apparent lexical similarities between the Angan Family and languages of the SWNG subgroup. This may prove to be one of Greenberg's original, main contributions. Many of the words which are listed are body parts.

Greenberg's comparison of the Kukukuku and other Southwestern groups consists of Kapau (see Lloyd's Chapter 2) on the one hand and Metomka of the Ok group and Jaqai of the Marind group on the other hand. Lloyd has taken the ninety-eight words given by Voorhoeve (1971) on Yagay (=Jaqai) and the 128 words by Drabbe (1954) on Metomka and compared these carefully with his own Kapau materials. The possible cognates which he identified are listed on Table 14. In comparing Kapau and Jaqai for instance, he has note 6 apparently good cognates (marked as 1), 6 quite possible cognates (marked as 2), and 4 which are poor but not impossible (marked as 3).

Table 14

Possible Cognates Found in Kapau and SNG

English Gloss	Value	Kapau	Ja'ai	Metomka
<i>black</i>	2	tifa'a	otop	
<i>bone</i>	1(?)	yanga	ia	
<i>earth</i>	3(?)	goä	mokon	
<i>egg</i>	2	mnga	moka	
<i>eye</i>	3(?)	hingo	kind	
<i>fire</i>	1(?)	ta	reka	
<i>hair</i>	2	mta	taker	
<i>head</i>	2	mnga	muku	
<i>I</i>	3(?)	ni	anok	
<i>moon</i>	1	gämnga	nokok	
<i>nose</i>	1	hima	tamank	
<i>sago</i>	2	ipa	baj	
<i>stand</i>	1	tau	ira	
<i>sun</i>	2	mapa	tapak	
<i>tooth(mouth)</i>	1	mänga	manger	mongot
<i>lips</i>	2	me'a		meja
<i>ear</i>	1(?)	gata		kende
<i>breast</i>	2	ämnga		muk
<i>hand</i>	3	fe'a		mben
<i>eat</i>	2	n		anje
<i>shoulder</i>	1	hängó		kang(gondo)
<i>father</i>	2	äpo		ambe
<i>mother</i>	2	(ga)nä(i)		enang

This summary of Greenberg's classification as it relates to the Gulf area has been in general fairly negative. This is not intended to detract in any way from the magnitude of the task which Greenberg has undertaken. Most of the criticisms are directed toward the assumption which is implicit throughout the hypothesis: that the NAN languages found on the New Guinea mainland are all of a genetically common parentage, and their parentage is similar to that of the AN languages of the New Guinea mainland. The problem of pursuing such a thesis is

evident in the tangle of subclassifications and terms which Greenberg proposes. Thus he speaks of a major linguistic 'stock' (p.854), a 'super-group' (p.833), a 'single family' (p.807), a 'distinct subgroup' (p.816), 'large groupings' (p.819), and so on.

Finally, the problem of assessing the work is compounded by the paucity of the data cited. Out of the eighty-four words (= eighty, due to doublets) listed in the common IP etyma, thirty-three (or 39%) of them are found in Gulf languages. Of these words, however, eighteen of them (54%) are found in only one language or language family, so that it is impossible to cross compare them. Nine of the words are found in at least two languages or families, four are found in three families and so on at a diminishing rate, so the possibility of genuine cross-comparison is slight within the Gulf area as a whole. Greenberg may, of course, be correct and there may be an Indo-Pacific Family of languages which includes all the languages in the Gulf (and elsewhere). However, at present, we are still left with the practical problem of trying to determine if the linguistic label of Papuan means anything more than Non-Austronesian.

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CTL8 = *Current Trends in Linguistics*, Volume 8 (Oceania)
OL = *Oceanic Linguistics*
PL = *Pacific Linguistics* (including Linguistic Circle of Canberra publications)
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