

THE PLACE OF BAHNAR WITHIN BAHNARIC

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0. *Introduction*

Research on Mon-Khmer languages of Vietnam in the last dozen or so years has brought the entire linguistic picture there into much sharper focus. A great deal is known about the grammar and phonology of most of these languages. Historical reconstructions firmly founded on a sound descriptive base and beginning with groups of more closely related languages have now become a reality. While comparative studies have unequivocally established the genetic relationships of many of the languages, they have not yet resolved all such questions. The position of Bahnar within Bahnaric is one such problem.

Bahnar is a major ethnic minority language of the central highlands of South Vietnam. As for its linguistic affinities, it was early cited, along with Mon, Khmer, and Stieng, by Wilhelm Schmidt (1905) as one of the comparative bases for establishing the Mon-Khmer grouping. While these wider connections have been known for some time, Bahnar's more immediate position within Mon-Khmer subgroupings has only relatively recently been stated. Thomas (1966), distinguishing a Katuic group from a Bahnaric group of Mon-Khmer languages in Vietnam, identified Bahnar as a member of the latter subgrouping. Even more specifically, Bahnar was classed with the Bahnaran (North Bahnaric) rather than with the Stiengan (Sou

naric) languages.² The relevant groupings were follows:

- | | |
|-------------------------------------|-------------------|
| I. <i>Bahnaric</i> | II. <i>Katuic</i> |
| A. <i>Bahnaran = North Bahnaric</i> | Katu |
| Bahnar | Kantu |
| Rengao | Phuong |
| Sedang | Bru |
| Halang | Pacoh |
| Jeh | Taoih |
| Monom | etc. |
| B. <i>Stiengan = South Bahnaric</i> | |
| Stieng | |
| Central Mnong | |
| Southern Mnong | |
| Eastern Mnong | |
| Koho | |
| Chrau | |

mas and Headley (1970) in an expanded subclassification of Mon-Khmer, again on a primarily lexicostistical basis, repeat the listing of Bahnar as a South Bahnaric language.

In a phonological reconstruction of Proto-North-Bahnaric, Smith (1972), while tentatively retaining Bahnar within Proto-North-Bahnaric, points out, even though that phonologically it forms an independent branch distinct from all other clearly North Bahnaric languages that he reconstructs. One of the most striking differences is that Bahnar lacks a register system, which the other languages have. He then poses the question whether Bahnar might better be grouped with the South Bahnaric languages, in which register is likewise generally absent (except subnominally in Mnong and Sre).

In an unpublished reconstruction of South Bahnaric, Phillips (n.d.) reportedly includes Bahnar, as a branch independent of all other South

Bahnaric languages.

To summarize, Bahnar, it has been agreed, is a Bahnaric language, but lexical evidence has seemed to indicate a North Bahnaric placement for it, while phonological evidence has favored a South Bahnaric one. The present discussion aims at outlining the various strains of evidence in order to clarify the issues involved in arriving at a decision. It also suggests a broader classificatory frame of reference as a possible alternative realignment of Bahnar. From a theoretical point of view the problem of Bahnar raises questions concerning the general nature of interacting forces involved in linguistic evolution and the methods available for evaluating them.

1. *Historical and geographical evidence*

The ethnolinguistic distributions in South Vietnam is such that the Mon-Khmer groups are generally located in the highlands while Austronesian (Chamic) groups and (in recent centuries) the Vietnamese inhabit the lowland coastal regions (see map). This statement, however, must be qualified; for in addition to Coastal Chamic groups such as Cham, Chru, Roglai and Hroy, there is a major highland Chamic enclave formed by the intrusion of the Jarai and Rade groups in a broad swath from Banmethuot to Pleiku. This block, known as Plateau Chamic, separates Mon-Khmer groups in the North from those in the South. Smith (1972:11) taking note of these factors, says:

Thomas' lexico-statistical studies (1966) have indicated a clear break of the Bahnaric languages in Vietnam into North Bahnaric (those north of the Austronesian group) and South Bahnaric (those south of the Austronesian group). Bahnar, the principal non-register language of North Bahnaric, interestingly is the southernmost language of this group. Inasmuch as the languages of South Bahnaric are all

-register languages, the possibility occurs that Proto-Bahnaric may have split into a group the north retaining register and a non-register up in the south, and (2) that subsequent to this Austronesian group forced its wedge into the northern non-register Bahnaric group such that Bahnaric languages placed north but Mnong, Koho, etc., were placed south of the wedge. Thus the phonological shape of Bahnaric may have South Bahnaric similarities, but due to the subsequent geographical proximity to the non-register languages its vocabulary closely resembles that of Bahnaric.

Lexicostatistically, Chamic appears to have separated from other (non-Vietnam) Austronesian languages at a fairly remote period if we translate 30-40% (Thomas and Healey, 1962:26, 27; Dyen, 1963:19) of shared cognates into chronological distance. North and South Bahnaric on the same basis separated somewhat later with a shared cognate range in the neighborhood of 45-50% (Thomas, 1966). If the time of the arrival of the Chamic peoples on the coasts of mainland Southeast Asia roughly coincided with the time of linguistic separation from other Austronesian groups, it would have occurred at the time of Bahnaric linguistic unity. To follow this line of reasoning further one must determine the linguistic distance between Coastal and Plateau (highland) Chamic. This is a key question in view of the assumption implicit in Smith's suggestion that the Chamic intrusion into the highlands postdated the differentiation of North and South Bahnaric. This would imply that while the Austronesians inhabited coastal Vietnam for a long period, their 'second wave' of inland expansion did not occur until much later. From a lexicostatistical point of view this assumption would be supported by finding a very high percentage of shared cognates between Plateau Chamic and Coastal Chamic. Conversely, it would be weakened by a lower percentage of

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such cognates. Furthermore, the question also arise whether a hypothetical 'second wave' of Chamic expansion into the highlands may itself have been the occasion for the separation of North and South Bahnaric. If this were established, Smith's proposal would be weakened again.

Cultural interaction between Mon-Khmer and Austronesian groups has been considerable. In the South Bahnaric areas bordering matrilineal Chamic groups, the Mon-Khmer speaking societies have matrilineal kinship systems (*e.g.* Chil, Sre, Eastern Chrau Mngong), whereas those less influenced by Chamic groups have partilineal systems (*e.g.* Ma, Stieng, Western Chrau). In the North Bahnaric area (Kontum and Pleiku provinces) the Mon-Khmer groups have bilateral descent systems, but in this case those Jarai villages bordering them have a bilateral, rather than the usual matrilineal kinship reckoning characteristic of the Jarai majority and Chamic in general (M. Gregerson 1972). From a linguistic point of view, lexical borrowing from Chamic into North Bahnaric languages is very common; unfortunately, there has been less research to determine whether the reverse is equally true in this region (however, see Headley, Some sources of Chamic vocabulary, in this volume). In any case, the possibility does exist that Bahnar's differentiation from the indisputable North Bahnaric languages (Sedang, Rengao, Jeh, Halang, Hre), if such an alignment is accepted, could be a partial effect of the significant interaction between Bahnar, as the major Mon-Khmer power in the region, with the Chamic kingdom.

2. *Lexicostatistical evidence*

Semantic shifting is a language universal, and

shifting seems to take place at a fairly constant rate, though some sectors of vocabulary shift at a higher rate than other sectors.³ Thus the retained cognate percentages on a controlled set of basic vocabulary (*i.e.* lexicostatistics) can be an indicator of genetic relationships, and can also give some suggestive hints on language dating.

Charts 1 and 2 show cognate percentages that were obtained with a 207-word list (the same list used in Greenham and Headley 1970). A sampling of South Bahnaric languages shows them ranging from 62% to 66% cognate with each other (average 64%). A comparison of all the North Bahnaric lists at my disposal shows them ranging widely from 59% to 74% cognate with each other (average 67%). Thus the internal comparisons within North Bahnaric and within South Bahnaric both date in the mid 60's. Then taking Jeh and Sedang as representative of North Bahnaric, and comparing them with South Bahnaric, we get percentages ranging between 44% and 50% (average 47%).

Turning now to Bahnar: in theory if Bahnar is genetically North Bahnaric it should be 45-50% cognate with the South Bahnaric languages and 60-70% cognate with the North Bahnaric languages; and vice versa if Bahnar is South Bahnaric. The results show Bahnar 50-53% (average 51%) cognate with South Bahnaric, and 57-67% cognate with North Bahnaric. This is close to what would be expected if Bahnar is a North Bahnaric language.

A comparison of Bahnar with Alak⁴ does not show any appreciable affinity (55%), but the Alak word list is both short and of uncertain reliability, so these figures are probably slightly skewed, though likely within 10% of being right. Bahnar stands

	Mnong Chrau		Bahnar	Jeh	Sedang
Stieng			50	49	46
Mnong			53	50	45
Chrau	66		51	49	44
Koho	64	62	50	47	45

Chart 1. South Bahnaric Cognate Percentages

	Jeh Halang Sedang Hre				Bahnar	Alak	Cua
Jeh					57	53	51
Halang	77				60	50	54
Sedang	63	65			57	52	51
Hre	59	61	68		62	53	49
Rengao	63	74	72	72	67	53	53
Bahnar						55	48
Alak							49

Chart 2. North Bahnaric Cognate Percentages

somewhat closer relationship to North Bahnaric than Alak does.

A comparison with Cua, which has often been considered North Bahnaric, showed Cua only 48% cognate with Bahnar, and averaging only 51% with North Bahnaric.

Thus the lexicostatistical evidence would indicate Bahnar to be very close to North Bahnaric (Jeh, Riang, Sedang, Hre, Rengao), further from Alak and Bahnar, and still further from South Bahnaric. (It should be noted that the Bahnar list used is from the Kiku dialect rather than the Kontum dialect, thus showing maximal differentiation from the North Bahnaric languages in Kontum. If Kontum Bahnar had been used cognate percentages with North Bahnaric would have been slightly higher.)

Turning now to the Chamic languages, which are situated in a large wedge in the central highlands along the coast, we find that comparisons between Plateau Chamic (Rade and Jorai) and Coastal Chamic (Cham, Roglai, Chru) show 70-73% cognateness. This would give a very recent date for the split between Plateau and Coastal Chamic. According to the geochronologic time depth chart in Gleason 1964, this would indicate the separation between the two language groups as having taken place 700-1,000 years ago, or 1000-1300 A.D. It seems reasonable to assume that the Plateau Chamic wedge represents a migration from the coast; if language differentiation started immediately, then the migration could be dated at 1000-1300 A.D., but if there was a period of continuing language unity with the Cham seats of empire on the coast then the date for the migration could be

pushed back as much as a few hundred years if necessary.

Corresponding glottochronologic dates for the split-up of Proto-Mon-Khmer into Proto-Bahnaric, Proto-Katuic, Proto-Khmer, etc., would be around 1000-2000 B.C., the split between North and South Bahnaric around 0-500 A.D., and the splitting within North Bahnaric and within South Bahnaric from 500 to 1500 A.D. The time depth of the Chamic split from Malay is 30-40% (0-1000 B.C.).

The tree diagram in Chart 3 indicates the genetic relationships of the languages concerned, as shown by the lexicostatistical evidence presented above. The only figure it does not adequately handle is the Halang-Rengao 74%, but this can probably be explained as there is a good deal of interaction between the Halang and the Rengao, sometimes living together in the same villages.

The position of Alak and of the West Bahnaric languages in this tree is tentative pending more reliable data from these languages and data from Br

3. *Distinctive vocabulary evidence*

Vocabulary systems and vocabulary shifts can provide evidence for genetic relationship in much the same manner as evidence from sound systems and sound shifts, and with the same need to discriminate between genetic inheritance and area trends (loans). Identical innovation of vocabulary is highly unlikely, so similarity of vocabulary must be explained either by inheritance or by plausible loan routes.

Words are form-meaning composites, so a word may be shifted either by adopting a new form (not just a regular sound shift) or by shifting to a new meaning.

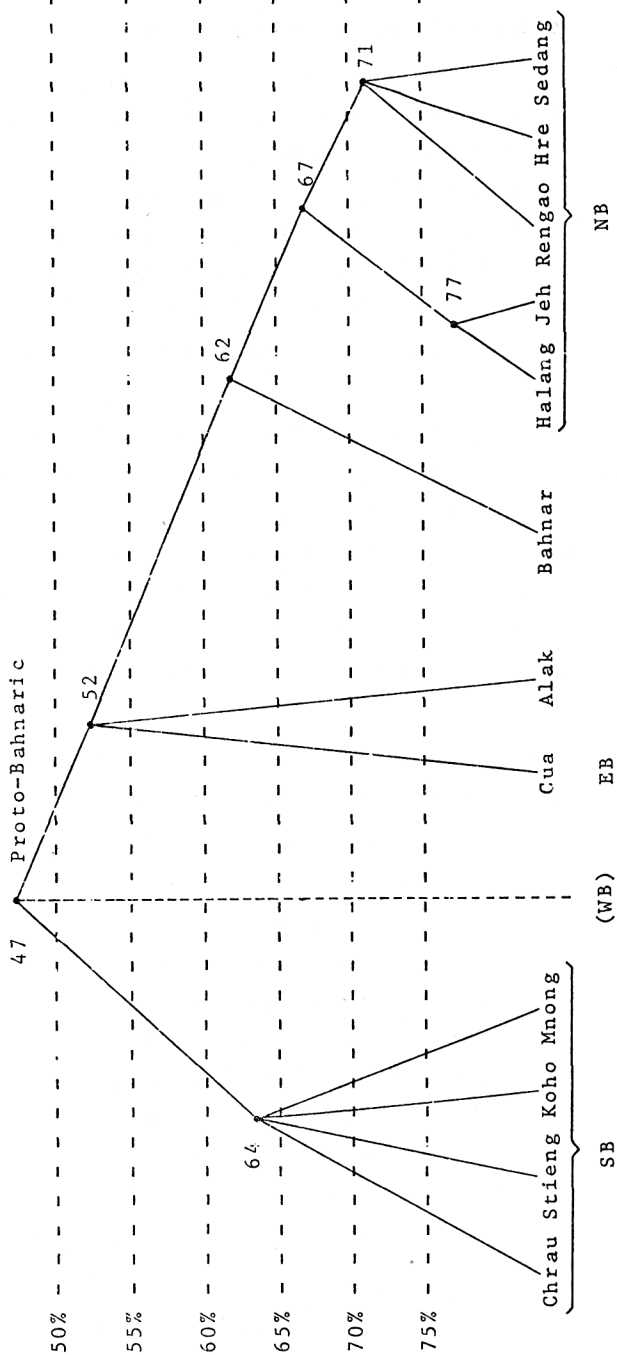


Chart 3. Genetic Tree from Lexicostatistical Evidence

(For abbreviations see footnote 5.)

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Presenting vocabulary evidence is of necessity a word-by-word presentation, since large-scale parallel shifting of forms would thereby come into the category of regular sound shifts, and since systematic restructuring of semantic systems is a rare phenomenon but when present it is very weighty evidence. (Note the importance placed in Indo-European studies on the semantic restructuring of modal systems or case systems.)

The goal of this study is to reconstruct Proto-North-Bahnaric vocabulary items and parallel Proto-South-Bahnaric vocabulary items, then see which vocabulary set, if either, was inherited by Bahnar. Thus we have looked for vocabulary items which are widespread or universal in one group and completely absent from the other as constituting clearly differential PNB or PSB vocabulary. Additional evidence is adduced from Cua or Alak where relevant or available.

The question of vocabulary borrowing comes up. As in comparative phonology, where area trends can sweep over and obscure genetic relations and boundaries, so in comparative vocabulary studies local or area-wide loans can obscure the picture of inherited vocabulary. Sometimes unusual phonological features can help to identify loan vocabulary.

Bahnar is situated geographically between Jorai (Chamic) and the North Bahnaric languages (Halang, Rengao, Todrah, Hre). It is separated by more than 100 miles from Mnong, the nearest South Bahnaric language. So the theory is that any sizeable amount of distinctively South Bahnaric vocabulary in Bahnar would clearly point to South Bahnaric genetic status for Bahnar. A moderate amount of distinctively

h Bahnaric vocabulary, especially in northern
as of Bahnar, and a low amount of South Bahnaric
abulary, would point tentatively toward independent
tus for Bahnar. And an overwhelming proportion of
tinctively North Bahnaric vocabulary throughout
whole Bahnar area, with absence of South Bahnaric
abulary, would tend to indicate North Bahnaric
tus for Bahnar.

Loans can take place under several conditions:
Loan words from a prestige language into a non-
stige language can be numerous (as French loans in
lish and Chinese loans in Vietnamese), and they
ld tend to spread evenly through the language area.
Loan vocabulary from a non-prestige language into
eighboring prestige language would tend to affect
nly the area adjoining the border and would not be
ensive. (c) Loan vocabulary from a conquered
stratum people, if the symbiosis is long continued,
assume fairly large proportions. In all cases,
ic vocabulary can be expected to be the last to be
rowed, except possibly in case (c).

In the situation under study, Bahnar is at
sent the prestige language of Kontum province,
ing considerably higher prestige than the North
naric languages. To the south, Bahnar has about
al prestige with its Chamic neighbor Jorai. And
torical indications are that Bahnar, Jorai, and
e were previously the highland language groups
ing the most political and commercial contact with
neighboring Cham and Khmer empires. Thus loans
m North Bahnaric into Bahnar would be presumed to
of the (b) variety above, though the possibility
(c) cannot be ruled out.

The following data consist of words which are found throughout South Bahnaric and are unknown in North Bahnaric, or vice versa. These are items that were observed in looking through a 280-word test list so they would tend to be representative of basic vocabulary in these languages. These are presented in pairs, for rapid comprehension, but a more thorough study would present them morpheme by morpheme. Bahnaric is indicated following either the NB or SB form, depending on which it resembles, plus occasional Alak or Cua indications. The forms cited are generalized forms, not reconstructions.⁵

A. Form differences:

1. 'sky' - North (J,Sd,R,H,Hr) pling;
Bahnar, Cua
South (Ch,St,M,KC,KS,KL) trôk
2. 'star' - North (J,Sd,R,H,Hr) h'long;
Bahnar, Alak, Cua
South (Ch,St,M,KC,KS,KL) sômañ
3. 'tree' - North (J,Sd,R,H,Hr) qlong;
Bahnar, Alak
South (Ch,St,M,KC,KS,KL) chhu'
4. 'flower' - North (J,Sd,R,H,Hr) rang;
KtBahnar, Cua
South (Ch,St,M,KC,KS,KL) b'kao
PlBahnar, Alak
5. 'deer' - North (J,Sd,R,H,Hr) jui; Bahnar
Cua
South (Ch,St,M,KC,KS,KL) jun
6. 'tooth' - North (J,Sd,R,H,Hr) saneñ;
Bahnar, Alak, Cua
South (Ch,St,M,KC,KS,KL) sêk
7. 'want' - North (J,Sd,R,H,Hr) wăq; Bahnar
South (Ch,KC,KS,KL) koñ
South (M,St) uch
8. 'give' - North (J,Sd,R,H,Hr) am; Alak,
Cua
South (KL,KC,KS) ai

South (Ch,St,M) an; Bahnar

9. 'launder' - North (Sd,R,Hr) roh; Cua
South (Ch,St,M,KS,KC,KL) pih;
Bahnar
10. 'woman' - North (J,Sd,R,H,Hr) kadri; Cua
South (Ch,St,M,KC,KS,KL) ur
Bahnar, Alak akan
11. 'cook' - North (J,Sd,R,H,Hr) pay; Bahnar
South (Ch,St,M,KC,KS,KL) gâm
12. 'green' - North (J,Sd,R) adrih; KtBahnar,
Mnong
South (KS,KL) tɔ̄lir
PlBahnar, Alak kajak
13. 'yellow' - North (J,Sd,R,H) dreng; Bahnar
South (Ch,St,M,KC,KS,KL) romit
14. 'new' - North (J,Sd,R,H,Hr) qnaw; Bahnar
South (Ch,St,M,KC,KS,KL) mhe;
Alak?
15. 'crowded' - North (J,Sd,R,H,Hr) kram; Bahnar
South (Ch,St,M,EM,KC,KS) hat
16. 'bathe' - North (J,Sd,H,Hr) hum; Bahnar
South (Ch,St,M,EM,KC,KS) um
17. 'neck' - North (J,Sd,R,Hr) ranong; Cua
South (Ch,St,M,EM,KC,KS) ngko;
Bahnar, Alak
18. 'egg' - North (J,Sd,H,Hr) kɔ̄tăp; Bahnar,
Alak, Cua
South (Ch,St,M,EM,KC,KS) tăp
19. 'sour' - North (J,Sd,R,H,Hr) qjuq; Bahnar
South (Ch,St,M,EM,KC,KS) srat
20. 'carry
on
back' - North (J,Sd,H,Hr) pòq; Bahnar
(cf. Jorai puq)
South (Ch,St,M,EM,KC,KS) băq
21. 'hot' - North (J,Sd,R,H,Hr) tuq; Bahnar,
Cua, Alak
South (Ch,St,M,EM,KC,KS) dũh
22. 'skin' - North (Sd,R,Hr) akar; Bahnar,
Alak

North (J,H) pāl
South (Ch,M,EM,KC,KS) gōltô

B. Meaning differences:

23. takuoi - North (J,R,H) 'neck'; Bahnar
South (Ch,St,M,KC,KS,KL) 'back'
24. long - North (J,Sd,R,H,Hr) 'tree';
Bahnar, Alak, Loven
South (Ch,St,M,KC,KS,KL) 'fire-
wood'

Of this 24-word sample, Bahnar shares 18 words with North Bahnaric (and others), shares 4 words with South Bahnaric (and others), and 2 words (nos. 10, 11) it shares only with Alak. In only one case (no. 8) does Bahnar have a uniquely SB word, but it shares many uniquely NB words.

Two semantic systems have been found where NB and SB have a different structure: the numerals and the pronouns. The numerals are:

North - moi, bar, pe, puon, pōqdām, tadrau, tapeh,
taham, tachen, jāt; Bahnar, Alak

South - mwoi/dul, bar, pe, puon, prām, prau, pōh,
pham, sīn, jāt

Cua - mul, bar, pe, pon, pōqdam, kōdrōu, kapoh,
thom, sīn, ku!

(Bahnar and Alak uniquely have tahngam forms for '8')

The North Bahnaric pronoun sets are well-structured sets of first, second, third persons, and singular, dual, plural numbers. The South Bahnaric pronoun sets are relatively unstructured and with no systematic dual. The Bahnar pronoun system is similar to the North Bahnaric systems.

Thus distinctive vocabulary shows Bahnar as having striking similarities with NB but very little similarity with SB in individual words, pronoun sets and numeral sets. The frequent similarities with

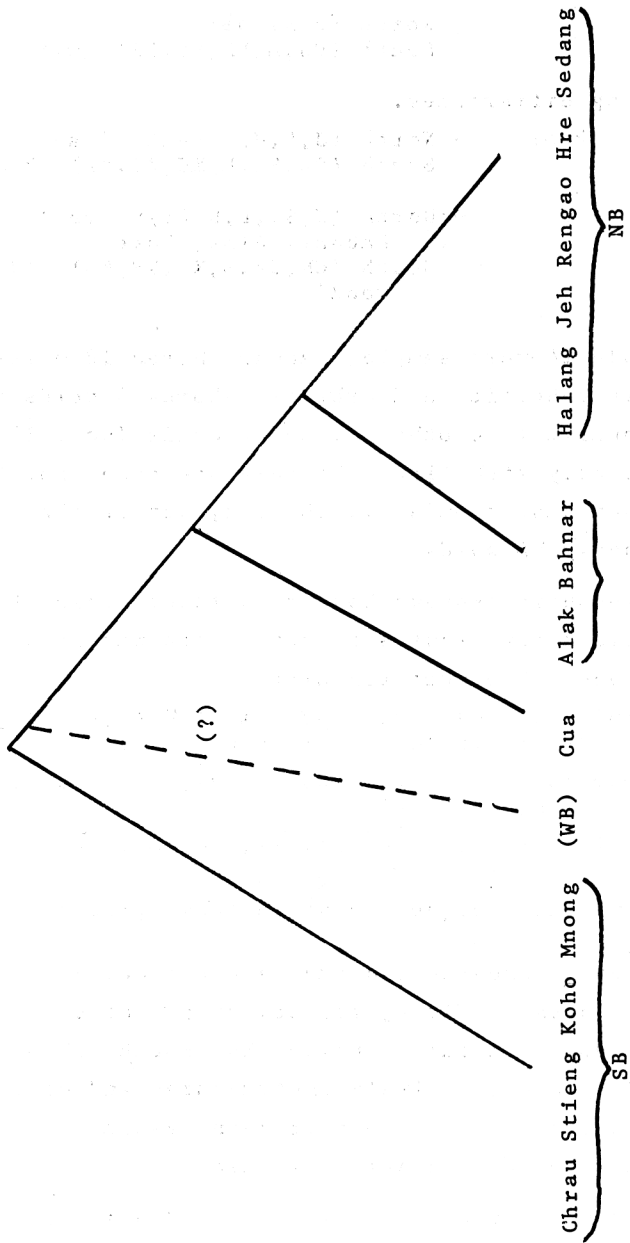


Chart 4 Genetic Tree from Distinctive Vocabulary Evidence

Alak, however, are interesting. These results could be seen as tending to put Bahnar and Alak in a Great North Bahnaric group, contrasting slightly with central North Bahnaric. Cua also shows a strong affinity with NB, though with many idiosyncratic words, but none of the cited items is it like SB. Chart 4 shows a genetic tree constructed from distinctive vocabulary evidence.

4. *Phonological evidence*

Noting that Bahnar is the principal non-register language of the northern Bahnaric languages, Smith (1972:11) suggests that 'the phonological shape of Bahnar may have South Bahnaric similarities, but due to the subsequent geographical proximity to the register languages its vocabulary closely resembles North Bahnaric.' It is the purpose of this section to describe those phonological features which make Bahnar appear to be more closely related to SB or other branches of Bahnaric. The similarities and dissimilarities of B to the NB languages are already noted in the Proto-North-Bahnaric study.

What is needed to show a closer phonological relationship of B with either NB or SB? Shared phonological innovation would give most conclusive proof. Innovation, however, cannot be demonstrated without first positing Proto-Bahnaric--which is beyond the scope of this study or any published materials. What we can observe, however, are phonological differences between NB and SB and then note to which B is aligned. Of two phonological oppositions, we can only guess at this point whether both are partial retentions or one is a retention while the other is an innovation of the Proto-Bahnaric phoneme. The weight of the argument then lies on the

er of different types of differences which point
the same direction.

The phonological differences described below are
random or occasional differences that inexplicably
ar between related languages. These differences
consistent and evidenced by a body of data.

*Vowel systems: NB register languages versus SB
(including B and Cua) non-register languages*
B and Cua share with SB the characteristic of
g non-register languages, distinct from the
lster languages of NB. Furthermore, B shares with
evidence that their vowel systems are derived from
register vowel system similar to that of NB.

The NB languages (Halang, Jeh, Rengao, Sedang,
rah, Hre) each have two distinct sets of vowels,
tinguished by contrastive vowel register.

The SB languages, including B and Cua, do not
e this vowel register contrast. Muong has sub-
nemic register contrasts in the vowels correspond-
to the voicing of the initial consonants.
erson has detected both breathy and clear vowels
Cua, but no phonemic register contrast has yet
n found. We do not know about register in Alak.

It has been shown that the tense register vowels
the NB register languages correspond to B low
els whereas the lax register vowels of these
lster languages correspond to B high vowels (Smith
2:8-9). Because of the unavailability of Phillips'
d.) Proto-South-Bahnaric study, a comparison of
to-Jeh-Halang (PJH, representing NB) (Thomas and
th 1967), B, and Proto-Muong (PM, representing SB)
ood 1966) vowels from cognate words was made. The
els and final consonants of each cognate set are

shown in Chart 5. From this listing of vowels it can be seen that the PM vowel height, like that of B, corresponds overwhelmingly to NB register; these correspondences are counted and shown in Chart 6.

Because of the clear tendency of tense register words to have low vowels in B and PM as shown in Chart 6, it is significant to note the parallel lowering of high tense register vowels in both B and PM, as shown in the following words.⁶

NB		B		SB	
PJH46	*khium	hiôm	PM6	*khôm	'blow'
R92	tĩng	teng	PM92	*tyǎng	'tail'
R123	kling	kiǎng	PM97	*kliâng	'forehead'
PJH372	*tuh	toh	PM264	*toh	'breast'
R526	phi	phe	PM178	*phe	'husked rice'

Likewise, because of the clear tendency of lax register words to have high vowels in B and PM, it is significant to note the parallel raising of low lax register vowels in both B and PM, as shown in the following words.

NB		B		SB	
PJH11	*plèm	plom	PM416	*plom	'leech'
PJH12	*klèm	klom	PM12	*klom	'liver'
PJH208	*jăt	jĩt	PM118	*jmốt	'ten'
PJH355	*toh	tom	PM30	*tuh	'bean'
PJH402	*-găr	hagõr	PM129	*sõgõr	'drum'
R523	kapò	kapô	PM523	*rõpu	'buffalo'

Non-register languages often reflect original register opposition by vowel height differences in pairs of descriptive words (Smith 1972:103, footnote 49). In register languages, 'diminution' corresponds to the tense register whereas 'augmentation' corresponds to the lax register. For example:

B	PM	PJH	B	PM
ũm	ũm	um	ôm	ôm
ơm	ơm	uan	uân	uân
um	ũm	on	on	on
Ỡn	Ỡn	êng	ễñ	ẫñ
ễñ	êng	eng	ễng	ễng
ũñ	ũñ	eng	iễng	yẫng
ing	ing	an	añ	añ
ing	Ỡng	ung	ông	ũng
ông	ũng	eng	ễng	iâng
ung	ung	ăng	ăng	ăng
ít	Ỡt	ang	ang	ang
ãt	õt	ong	ong	ong
út	út	ăp	ăp	ăp
it	it	ăt	ăt	ăt
ơh	oh	iat	iết	yăt
uh	ũh	uat	ăt	uăt
uh	ũh	ot	ot	ot
ơh	uh	ěk	ěč	ăč
Ỡl	Ỡl	ők	ők	ôk
ỡr	ỡr	ak	ak	ak
ur	ũr	eh	eh	eh
u	u	ah	ah	ah
ih	Ỡs	uh	oh	oh
i	i	oh	oh	oh
ô	u	il	ěl	iâr
		ăr	ăr	ăr
		ar	ar	ar
		ăw	õw	ăw
em	Ỡm	aw	aw	aw
ăm	ăm	ăy	ăy/ěy	ăy
ôm	ôm	ěy	ěy	ăy
am	am	ay	ay	ay
		oy	oy	way
		iayh	iáh	iâh
		e	e	e
		a	a	a

Sd-R-Hr
lax reg.)

B Tense Register

t 5. Vowel correspondences between PJH (NB), B, and PM (SB).

	NB lax register		NB tense register	
	B	PM	B	PM
High vowels	18	20	0	1
Mid vowels	6	4	3	3
Low vowels	1	1	32	27
Glides or semi-vowel onset	<u>0</u>	<u>0</u>	<u>4</u>	<u>8</u>
Total	25	25	39	39

Chart 6. Correspondence of NB lax and tense registers to B and PM high and low vowels, respectively.

khêi 'something very small (tense reg.)
but red'

khêi 'red' (lax reg.)

In both B and Chrau this same distinction is sometimes maintained by contrastive vowel height:

tɔ̄jɛr 'cut in small pieces'

tɔ̄jêr 'cut in large pieces'

kalõng 'small puff of smoke'

kalũng 'large cloud of smoke'

cõc 'small piece of something'

cũc 'large piece of something'

krõc 'to swallow a little'

krũc 'to swallow a lot'

Corresponding to the lack of register contrast, there is a similar vowel chart with SB. B has 6 short and 9 long vowels--similar to Chrau, except that the latter has only 8 long vowels and also has ia and ua. This is reconstructed with 5 short and 8 long vowels *iâ and *uâ. The register languages of NB, on the other hand, have only 3-5 short vowels and 5-7 long vowels in each register series.

Initials: NB č versus SB (including B and Cua) s. B shares with SB and Cua the initial s in contrast to the NB č as shown by the following words. This complements another set of words in both NB and SB in which initial s is shared as well as another set in which initial č is shared. PNB *č was reconstructed for B s, PJH-Hr-S č; whereas PNB *čh was reconstructed for B-PJH-Hr-S č.

NB	B	Cua	SB		
PNB145	*čõng	sõng		PM15	*sõng 'eat (ric
PNB10	*čèm	sem	sêêp	PM144	*sĩm 'bird'
PNB50	*tačĩn	tasĩn	siit	PM145	*sĩn 'nine'
PNB431	*čăw	sõ'w	sau	PM197	*săw 'grand- chil
PNB112	*čùng	sung	suak	PM241	*sung 'tribal ax'
PNB552	*ča	sa	sa	PM327	*sa 'eat'
PNB373	*čuh	soh		Ch	soh 'set fi
PNB405	*čĩr	sir	siil	St	sir 'dig'
PNB516	*čì	si	say	Ch	si 'louse'

The following sets have another reflex in SB:

PNB499	*kačěyh	kaseh	kasoh	Ch	katayh	'sneeze
PNB374	*kačuh	kasoh	kasoh	Ch	chhõh	'spit'

Few exceptions to the above listing are found. It is widespread and well established. SB has instances of č in 'bird' and 'grandchild'.

4.3 Initials: NB s versus SB (including B and Alak) t

B shares with SB and Alak the initial t in contrast to the NB s as illustrated in the words listed below. This complements another set of words in both NB and SB in which initial t is shared as well as another set in which initial s is shared. PNB was reconstructed for B t, PJH-Hr-S s.

NB	B	Alak	SB		
Hr13	basêm	tõm	to:m	PM420	*tõm 'begin tri
PJH268	*sũk	tũk		Ch	tũq 'cloud
PJH83	*kasĩang	kating	katéng	PM221	*kotĩng 'bone
R	basũl	patuoł		Ch	ntũl
				St	ttul 'anth

Vowel merger: NB u and o versus SB (including B and Cua?) o before h

B shares with SB the reflex oh, which is a merger influenced by two different sets of vowels in NB and constructed in PNB as *uh and *oh. PNB *uh was constructed for B oh except ôh/*r_, PJH *uh, Hr except oh/*r_, and S ôw; whereas PNB *oh was constructed for B-PJH-Hr oh and S o.

*uh	B	Cua	SB			
372	*tuh	toh	tôh?	PM264	*toh	
				Chr	tõh	'breast'
373	*čuh	soh		Chr	sõh	'set fire'
374	*kačuh	kasoh	kasoh	Chr	chhõh	'spit'
 *oh						
379	*qboh	qboh	boh	PM259	*boh	
				Chr	võh	'salt'
380	*oh	oh	oh	PM258	*oh	
				Chr	õh	'younger sib- ling'
384	*joh	joh		Chr	chõh	'peck'

Vowel shift: NB è versus SB (including Cua ?) o
B shares with SB (and Cua?) the vowel o where other NB languages have è before various final consonants. Note that each of these words, however, is in the register.

	B	Cua	Ch		
381	*plèm	plom		plom	'leech'
382	*klèm	klom	klôp	klom	'liver'
	baxèm	tom		tom	'begin, trunk'
	jêng	jong	jôok	jâng	'leg'
383	*tapèh	tapom	kapom	pâh	'swim'
392	*kaqnèl	kaqnol		ganol	'heel'

4.6 Unique features of B phonology

The following phonological features of B are unique; that is, the other NB and SB languages share some other feature in contrast to B or are themselves different from each other as well as from B.

4.6.1 Preglottalized voiced consonants

B more than all the languages of NB and SB has a propensity for preglottalized consonants. Indeed, in the PNB study there are more cognate sets with B preglottalized voiced stops than the (unpreglottalized) voiced stops.

Preglottalized voiced stops

In the cognate lists of PNB, preglottalized voiced stops occur only in B. That is not to say that the other NB languages do not have preglottalized voiced stops, but that when they do occur they are in borrowed or new words--not the type of words found in cognate lists. Similarly, where preglottalized voiced stops are listed in PM, the word invariably has no known cognate in NB. (Cf. PM51 *ʔbon 'village'; PM141 *ʔduân 'hat'; PM141 *rɔʔbɪn 'congregate'; Chil-143 ʔdũr 'fishtrap'; PM205 *nʔdaʊ 'yesterday'; PM283 *ba-ʔba 'some(times)'; PM289 *ʔdah 'side'; PM311 *kɔnʔdar 'fish hook'; PM358 *tɔʔbāk 'to suspend'; PM385 *ʔboʔ 'dirty'; Rade 387 ʔbruʔ-bruʔ 'slowly'.)

B words with preglottalized voiced stops have cognates in NB and SB, but those words in these latter languages are not preglottalized. Note the following:

NB		B	Cua	SB		
Hr239	dĩč	qdĩč		PM134	*dĩk	'slave'
PJH494	*bǎyh	qbih	volh	PM43	*bĩs	'snake'
PJH80	*bĩng	qběñ	viich	PM33	*běng	'full'
PJH278	*dők	qdők	talôk	PM2	*dôk	'monkey'

		B	Cua	SB		
7	*dĩng	qding	dlik	PM135	*dĩng	'tube'
5	*dùm	qdum	dôôp	PM156	*dũm	'ripe'
79	*boh	qboh	voh	PM259	*boh	'salt'
15	*bar	qbar	vaal	PM279	*bar	'two'
87	*dak	qdak	daak	PM288	*dak	'water'

before the uniqueness of B preglottalized voiced
is not an aid in the present problem.

glottalized nasals

The pattern of preglottalized nasals in the NB and
languages is sufficiently uncommon and inconsistent
it also does not help resolve the present issue,
except that B qm appears to follow NB and not SB here.
the following cognate sets:

	NB		B		Cua
	PJH235	*maqngot	pangot		pangoot
	Sd490	*môy	qmôyq		muy
	PJH	*qmôyq			
	PJH501	*kaqniayh	taqniah		kaniah
	PJH413	*manār	panār		panu'l
	PJH521	*qmia	qmi		
	PHrSd293	*kaqmoak			kamook
	PNB542	*qma	qma		qbo'
	PNB392	*kaqnèl	kaqnôl		anguul

SB

	PSB64	*pơngot	'hungry'
	PM90	*mway	'do first (B); one (S, PM)'
	PM98	*kơniáh	'fingernail'
	PSB362	*pơ?nār	'wing'
	Ch	panār	
	PM216	*mih	'rain'
	Ch	*moq	'bark'
	PM305	*ma	'right side'
	Ch	ganôl	'heel'

4.6.2 B um merger versus NB ùm/òm and SB ũm/um

B alone has a single reflex um for a contrast evidenced by PNB *ùm and *òm and by SB ũm and um. PNB *ùm was reconstructed for B um, PJH-Hr ùm, and uam; whereas PNB *òm was reconstructed for B um, PJH ùam, Hr òm, and S ôm.

NB	*ùm	B	Cua	SB	ũm	
PNB15	*qdùm	qdum	dêêp	Ch	dũm	'ripe'
PNB16	*ùm	um	ôôp	Ch	gũm	'winnow'
NB	*òm			SB	um	
PNB19	*qbòm	qbum	voop	Ch	vum	'tuber'
PNB20	*kasòm			Ch	catum	'large lizard'

4.6.3 Presyllables

The presyllables in most of the Bahnaric languages are unstable. Different presyllable consonants frequently occur for the same word in the same language or its various dialects. Varying from time to time in one speaker or from speaker to speaker, a presyllable may now occur and then be dropped. Consistency from language to language is hard to find. One consistent series, however, is the numerals: numbers 5 through 9 have the presyllable in both B and Cua and other NB languages whereas they do not have the presyllable in SB. This is illustrated above in Section 3. Otherwise the data, where there is a difference between NB and SB, is ambiguous and no conclusion can be drawn.

Various NB forms	B	Cua	
352 dadruh/adrùh/ droh	adruh		'young wo'
343 muh	muh	muh	'nose'
497 kapuyh	hapuyh		'broom'

Various NB forms	B	Cua	
333 rih	arih	riih	'be alive'
76 mon	mon	kamoon	'nephew, niece'
512 kuy	akôyh		'shave'
235 maqngot/pangot/ mangua	pangot	pangoot	'hungry'
175 long	long	luut	'try, test'
480 roy	roy	rooy	'a fly'
511 ruayh/royh/ ruy	rôyh	rooh	'elephant'
560 tamo/hmo	tamo		'stone'

Various SB forms

25 ur druh/drũh/ dŏ-druh			'young woman'
28 tromũh/mũh			'nose'
486 m?mpêh/pŏrnŏs/ mpih/peh/rŏpeh, kŏpeh			'broom'
50 rêh/mumrih			'be alive'
56 kŏmon/mon			'nephew, niece'
58 *kos			'shave'
64 *pŏngot/*ngot/ kŏngot			'hungry'
77 *rŏlong/lông			'try, test'
91 *rŏhuay/huây			'a fly'
92 *rweh/rŏweh			'elephant'
tamou/tamô			'stone'

Conclusion from phonological evidence

Above are described five consistent phonological differences between NB and SB: the vowel systems, initials s versus č, initials t versus s, the vowel lengthening of u and o, and the vowel shift è and ŏ. In case B follows SB and also usually either Alakua or both. The writer knows of no consistent phonological difference between NB and SB wherein B

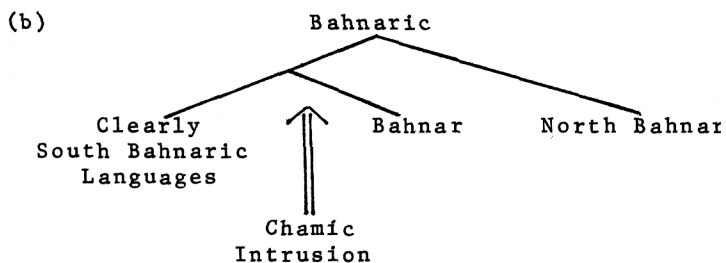
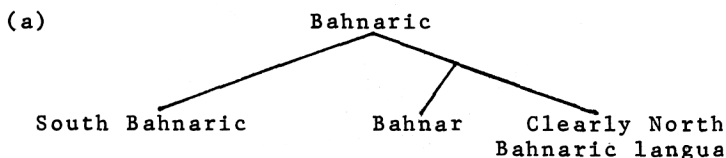
follows NB (except perhaps PNB *qm).

So the phonological evidence shows Bahnar strong South Bahnaric or like Cua or Alak. At the few points that Bahnar differs from South Bahnaric, it also differs from North Bahnaric. These differences with South Bahnaric are no more than one would expect between distinct languages.

Chart 7 shows a genetic tree constructed from the comparative phonological evidence. Distinctions between Rengao, Jeh, Halang, Hre and Sedang are based on Smith's (1972) Proto-North-Bahnaric study. Phonological distinctions among the SB languages must await Phillips' (n.d.) South-Bahnaric study; and further comparative study of Alak and Cua are necessary before they can be more accurately related to these other languages.

5. Conclusion

To summarize the foregoing discussion, we may diagram the possible alignments of Bahnar within Bahnaric as below:



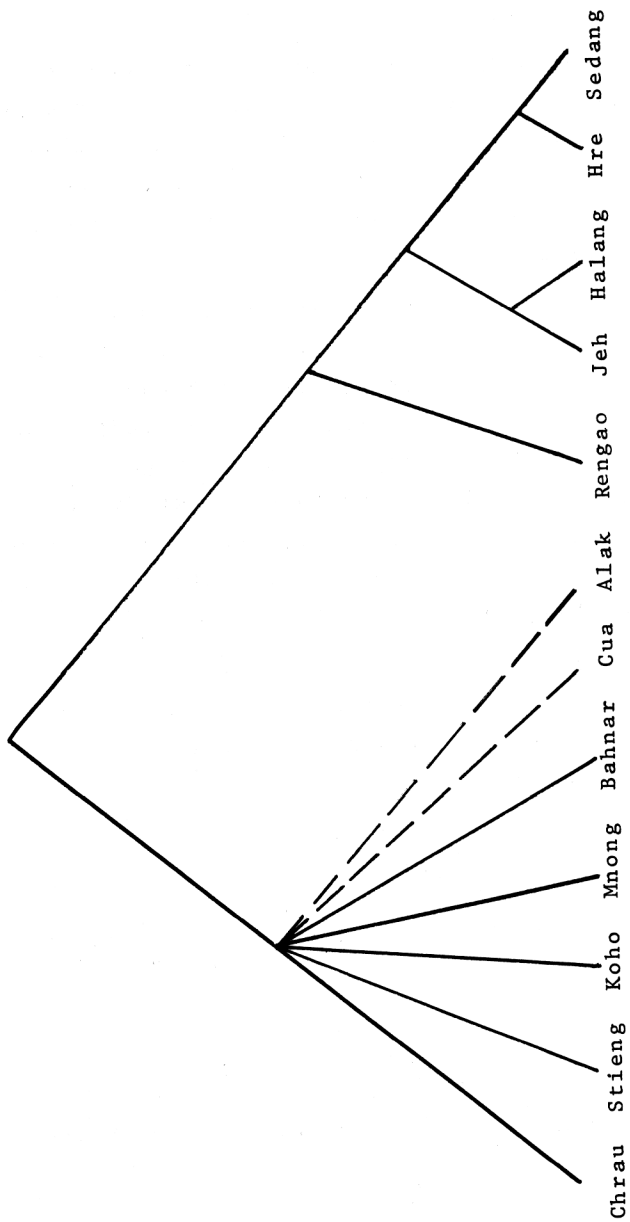


Chart 7. Genetic tree from comparative phonological evidence

(c)

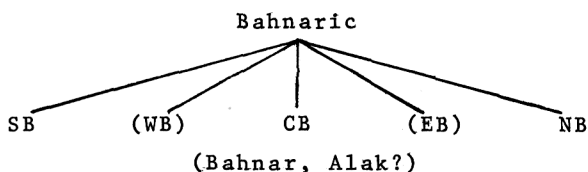


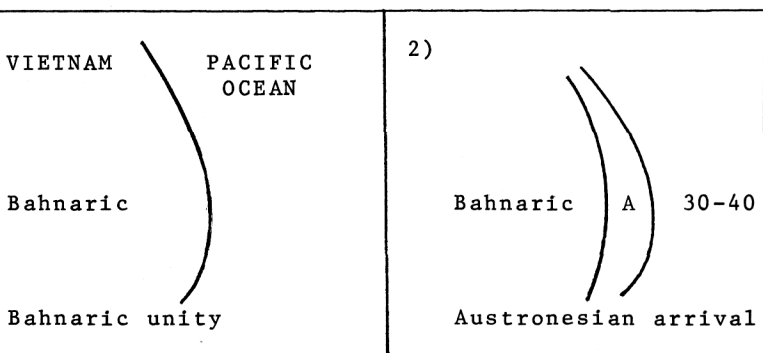
Diagram (a) describes the original grouping by Thomas (1966) and the one accepted by Smith (1972). Here Bahnar is grouped with the clearly North Bahnaric languages to form what Smith called Proto-North-Bahnaric. This configuration is based on and is reflected in the lexical evidence presented by Thomas, *i.e.* Bahnar unarguably shares a significant portion of its lexicon with the clearly North Bahnaric languages.

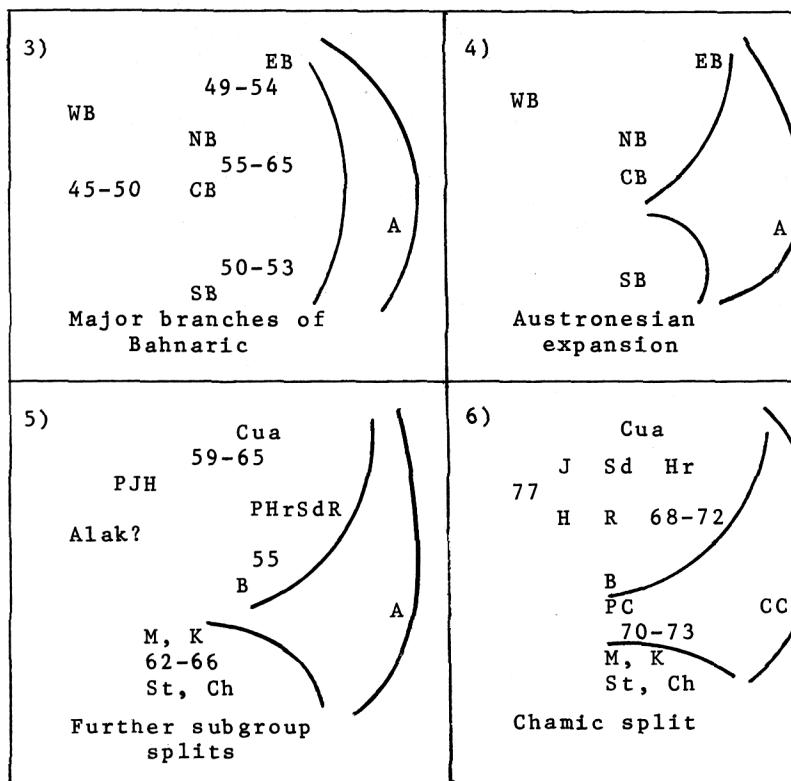
Diagram (b) represents the question raised in Smith (1972) whether Bahnar should not rather be aligned with the South Bahnaric languages on the basis of their decided phonological similarity. In this context the heavy lexical sharing with North Bahnaric languages must be explained by Bahnar's geographical proximity to those languages and its separation from its purported South Bahnaric relatives. In this context the historical migration of the Chamic people into the highlands becomes a significant factor. If their movement across the highlands came late--that is, after North and South Bahnaric differentiation--then it becomes more plausible that that movement could have cut Bahnar off from its southern sibling and thrust it unnaturally into the camp of more distant relatives with whom it later made certain (basically lexical) accommodations.

Diagram (c) represents an alternative to the earlier views on Bahnar placement. Perhaps the reason Bahnar is such an unnatural sub-member of

er South Bahnaric or North Bahnaric is because it
 n fact a member of neither. That is, maybe it
 esents another distinct branch of Bahnaric--
 ral Bahnaric. Though data are limited on it,
 seems to bear certain special affinities with
 ar and may also be groupable with it ultimately.
 ed at in this way, it is less surprising that
 ar shows lexical similarities with North Bahnaric
 simultaneously phonological similarities with
 h Bahnaric. And not only Bahnar, but Alak, East
 aric (Cua), and West Bahnaric also share many of
 phonological features of South Bahnaric and
 cal features of North Bahnaric. It appears that
 may argue for an attachment of Bahnar as Central
 aric at a higher node on a par with the other
 aric branches.

Finally, the stages of Bahnaric differentiation
 have been as in the schematized 'maps' of South
 nam below (numbers represent cognate percentages):





¹Sections 0, 1, and 5 were written by Gregerson whose special area is Rengao (North Bahnaric); Sections 2 and 3 were done by Thomas, whose major research has been done on Chrau (South Bahnaric); Section 4 is by Smith, whose area is Sedang (North Bahnaric).

²Earlier Richard Phillips of the Christian and Missionary Alliance, in an unpublished survey of the languages of Vietnam in 1959, also distinguished a northern (*i.e.* Katic) from a southern (*i.e.* Bahnar) group of Mon-Khmer languages; he placed Bahnar in the latter.

³On differential retention rates see Thomas (1960) and Kroeber (1961, 1963).

⁴Alak is a Bahnaric language on the edge of the Boloven Plateau in southern Laos. It is situated

graphically between the Katuic and the West Bahnaric languages, but the lexical evidence, especially the number system, links it with North Bahnaric rather than West Bahnaric.

⁵ Abbreviations used: A = Austronesian, B = the Bahnaric language, CB = Central Bahnaric, CC = Coastal Bahnaric, EB = Eastern Bahnaric, H = Halang, Hr = Hre, Jch, JC = Koho Chil, KL = Koho Lach, KS = Koho Seng, M = Mnong (Central), NB = North Bahnaric, PC = Proto-Central Bahnaric, PJH = Proto-Jeh-Halang, PM = Proto-Mnong, PNB = Proto-North-Bahnaric, R = Rengao, SB = South Bahnaric, Sd = Sedang, St = Stieng, WB = West Bahnaric.

⁶ Numbers cited in the NB column refer to the numbered cognate sets in Smith (1972); numbers cited in the SB column refer to the numbered cognate sets in Flood (1966).

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