

THE PLACE OF ALAK, TAMPUAN, AND WEST BAHNARIC¹

David THOMAS

Mahidol University and
Summer Institute of Linguistics

1. *Lexicostatistic evidence*
2. *Distinctive vocabulary evidence*
3. *Phonological evidence*
4. *Methodological remarks*
5. *Conclusions*

This paper is intended as a companion piece to the paper on Bahnar presented at the first Austroasiatic Congress (Gregerson, Smith, and Thomas 1976). The former paper showed phonology and vocabulary giving opposite indications, and we concluded that Bahnar was neither North nor South Bahnaric but was by itself a different entity which we labelled Central Bahnaric.

Some Alak information was given in the former article, and Alak was tentatively suggested as a second member of Central Bahnaric. I present here more information on Alak, Tampuan,

¹I am indebted to many people. Chinda Kommala, Beulah Johnstone, Dorothy Thomas, Janice Saul, and David Andrianoff helped to collect the Alak and West Bahnaric data. Jacqueline Maier provided Cua data. Other data comes from the cited published sources and from mimeographed SIL word lists. An earlier draft was presented to the Second Austroasiatic Congress, and the paper has profited from comments by the conferees, especially Kenneth Smith.

and West Bahnaric, and discuss the issues further. Alak is a language in the Boloven area of southern Laos, Tampuan is a language in northeastern Cambodia, and the West Bahnaric languages are spoken in the Boloven area and on down into Cambodia. (Note the southern Laos language map in Mon-Khmer Studies IV.)

1. LEXICOSTATISTIC EVIDENCE

Lexicostatistical figures have been obtained for Bahnaric languages by different investigators and using different lists (see Smith 1974, 1978, forthcoming; Thomas 1960, 1966). These sets of figures cannot be compared directly, as they are derived from different data bases, but the general pictures that they give can be compared (see especially the discussion in Smith 1974). And it needs to be kept in mind that all lexicostatistical figures are subject to an error of 5% (Thomas and Headley 1970:411). Table 1 shows some representative figures I obtained using a 137-word list. Smith (forthcoming) will give more extensive comparisons.

The various sets of figures all tend to give the same picture: a southern clustering composed of Kôho, Chrau, Stiêng, and Mnong; a northern clustering composed of Bahnar, Sedang, Rengao, Jeh, Halăng, and Hrê; and a western clustering composed (presumably) of Nyaheun, Laven, Cheng, Oi, Laveh, and Brao. Alak, Tampuan, and Cua stand apart, not closely linked with each other or with any of the three major clusterings, though with percentages slightly higher with each other than with the clusters. Lexicostatistical data on Takua is not available, but I expect it would cluster fairly closely with Cua.

Individual figures occasionally disagree with this picture, but taken as a whole this seems to be the general picture.

	Cheng	Laveh	Sedang	Jeh	Bahnar	Alak	Tampuan	Chrau	Kôho
Kôho	41	37	40	47	46	46	52	60	
Chrau	46	42	44	45	49	51	53		
Tampuan	49	45	45	52	54	53			
Alak	55	51	47	47	51				
Bahnar	45	44	58	59					
Jeh	48	45	54						
Sedang	42	42							
Laveh	77								
Cheng									

Table 1. Sample cognate percentages

2. DISTINCTIVE VOCABULARY EVIDENCE

The data presented below is an amplification of the data presented in our 1976 article. It attempts to give vocabulary items which are distinctively northern, southern, or western, and then to show how Alak, Tampuan, Cua, and Bahnar fit. The abbreviations for northern and southern languages are as in 1976;² the abbreviations for western languages are Cheng Cg, Laveh Lh, Laven Ln, Oi, Nyaheun Ny, Brao Br.

²Northern: Jeh J, Sedang Sd, Rengao R, Halăng H, Hrê Hr.
 Southern: Chrau Ch, Stieng St, Mnong M, Eastern Mnong EM,
 Kôho Chil KC, Kôho Sre KS, Kôho Lach KL.

1. 'sky' -North (J,Sd,R,H,Hr) pling; Tampuan, Cua, Bahnar
 South (Ch,St,M,KC,KS,KL) trôk
 West (Cg,Lh,Br) kre
 West (Ln,Oi,Ny) krîm
 (Katuic) prah; Alak

2. 'star' -North (J,Sd,R,H,Hr) halong; Tampuan, Cua, Bahnar
 (Alak plîng)
 South (Ch,St,M,KC,KS,KL) samañ
 West (Cg,Lh,Ln,Oi,Ny) mantuar

3. 'tree' -North, West (J,Sd,R,H,Hr;Cg,Lh,Ln,Oi,Ny,Br) qlong;
 Alak, Tampuan, Bahnar
 South (Ch,St,M,KC,KS,KL) chhî
 Cua ol

4. 'flower' -North (J,Sd,R,H,Hr) rang; Cua, KtBahnar
 South (Ch,St,M,KC,KS,KL) bakao; Alak, Tampuan,
 PlBahnar
 West (Cg,Lh,Ln,Oi,Ny,Br) pîr

5. 'deer' -North, West (J,Sd,R,H,Hr; Cg,Lh,Ln,Oi,Ny,Br) juî;
 Alak, Tampuan, Cua, Bahnar
 South (Ch,St,M,KC,KS,KL) jun

6. 'tooth' -North (J,Sd,R,H,Hr) saneñ; Alak, Tampuan, Cua,
 Bahnar
 South (Ch,St,M,KC,KS,KL) sêk
 West (Cg,Lh,Ln,Oi,Ny,Br) pîng

7. 'want' -North (J,Sd,R,H,Hr) wăq; Bahnar
 South (Ch,KC,KS,KL) koñ
 South (M,St) uch; Tampuan
 West (Cg,Lh,Ln,Br) nguing; Alak
 Cua sung

8. 'give' -North, West (J,Sd,R,H,Hr; Cg,Lh,Ln,Oi,Ny,Br)
am; Alak, Cua
 South (KL,KS,KC) ai
 South (Ch,St,M,EM) an; Tampuan, Bahnar

9. 'launder' -North, West (Sd,R,Hr; Cg,Lh,Ln,Oi,Ny) roh;
 Alak, Cua
 South (Ch,St,M,KC,KS,KL) pîh; Tampuan, Bahnar

10. 'woman' -North, West (J,Sd,R,H,Hr; Cg,Lh,Oi,Ny,Br) kadri;
Cua
South (Ch,St,M,KC,KS,KL) ur
(Katuic) akan Alak, Tampuan, Bahnar
11. 'cook' -North (J,Sd,R,H,Hr) pay; Tampuan, Bahnar
South (Ch,St,M,KC,KS,KL) gâm
West (Cg,Lh,Oi,Ny,Br) bəm
Cua bak
12. 'green' -North (J,Sd,R) adrih; KtBahnar, Mnong
South (KS,KL) talir
West (Oi,Ny,Ln) kajak; Alak, Tampuan, PlBahnar
Cua sen (Vn)
13. 'yellow' -North (J,Sd,R,H) dreng; Bahnar
South, West (Ch,St,M,KC,KS,KL; Ln,Ny,Br) ramit;
Tampuan
Cua vyang (Vn), Alak rak
14. 'new' -North, West (J,Sd,R,H,Hr; Ln,Ny) qnaw; Tampuan,
Bahnar
South (Ch,St,M,KC,KS,KL) mhe; Alak
West (Lh,Br) təm
Cua qdəu
15. 'crowded' -North (J,Sd,R,H,Hr) kram; Bahnar
South (Ch,St,M,EM,KC,KS) hat; Cua
16. 'bathe' -North, West (J,Sd,H,Hr; Br) hum; Bahnar, Cua
South (Ch,St,M,EM,KC,KS) um
17. 'neck' -North, West (J,Sd,R,Hr; Cg,Lh,Ln,Oi,Ny,Br)
hranong; Cua
South (Ch,St,M,EM,KC,KS) ngko; Alak, Tampuan,
Bahnar
18. 'egg' -North (J,Sd,H,Hr) katăp; Alak, Tampuan, Cua,
Bahnar
South (Ch,St,M,EM,KC,KS) tăp
West (Cg,Lh,Ln,Oi,Ny,Br) kle
19. 'sour' -North (J,Sd,R,H,Hr) qjuq; Bahnar, Cua
South (Ch,St,M,EM,KC,KS) srat

20. 'carry on back' -North (J,Sd,H,Hr) pòq; Bahnar, Jarai, Cua
South (Ch,St,M,EM,KC,KS) bǎq
21. 'hot' -North, West (J,Sd,R,H,Hr; Cg,Ln,Ny,Oi,Br)
tuq; Alak, Tampuan, Cua, Bahnar
South (Ch,St,M,EM,KC,KS) dũh; Laveh
22. 'skin' -North (Sd,R,Hr) akar; Alak, Tampuan, Bahnar
North (J,H) pǎl
South (Ch,M,EM,KC,KS) galto
West (Lh,Br) mpak
West (Cg,Oi,Ny,Ln) sruat
Cua kaqduh
23. 'tail' -North, South (Sd,Hr,H,J; Ch,St,M,EM,KC) ting;
Alak, Tampuan, Bahnar
West (Cg,Lh,Ln,Oi,Ny,Br) suay
Cua hloi
24. 'swim' -North (J,Sd,R,H,Hr) glai; Bahnar
South, West (Ch,St,M,EM,KC; Cg,Lh,Ln,Oi,Br) re;
Tampuan
West (Ny) juh; Alak
(Katuic) loi; Cua
25. 'five' -North, South (J,Sd,R,Hr,H; Ch,St,M,EM,KC,KS)
pram; Alak, Tampuan, Cua, Bahnar
West (Cg,Lh,Ln,Oi,Ny,Br) song
26. 'year' -North, South (J,Sd,H,Hr; St,M,EM,KC,KS) hanam;
Alak, Tampuan, Bahnar, Cua
West (Cg,Lh,Ln,Oi,Ny,Br) kamo
27. 'sand' -North, South (Sd,Hr; KL,KS) braih
North, South (J,R,H; Ch,M,KC) chuayh; Cua, Bahnar
West (Cg,Lh,Ln,Oi,Ny,Br) phaic; Alak
Tampuan ksaic
28. 'grass' -North, South (Sd,R,H,Hr; KC,KL,KS) ñat; Bahnar
West (Cg,Lh,Ln,Ny,Br) bat; EM, Alak
Tampuan samaung, Cua rech
29. 'horn' -North, South (Sd,R,Hr,H; Ch,St,M,EM,KC,KL,KS)
ke; Alak, Tampuan, Bahnar, Cua
West (Lh,Ln,Ny,Oi) takuy; Jeh
West (Cg,Br) haneng

30. 'fish' -North, South (J,Sd,R,H,Hr; Ch,St,M,EM,KC,KL,KS)
ka; Laven, Alak, Tampuan, Bahnar, Cua
 West (Cg,Lh,Oi,Br) trɛ
31. 'monkey' -North, South (J,Sd,R,H,Hr; Ch,St,M,EM,KL,KS)
dok; Tampuan, Bahnar
 West (Cg,Lh,Ny,Br) niw
 Alak amaw, Cua talok
32. 'ear' -North (Sd,R,Hr) don; Bahnar
 South (Ch,St,M,EM,KC,KL,KS) tor; Tampuan,
 Cua, Alak (?)
 West, (Cg,Lh,Ln,Ny,Oi,Br) pit
 North (J,H) pat
33. 'head' -North (J,Sd,R,H,Hr) kǎl; Alak, Tampuan,
 Bahnar, Kǎho Chil
 South (Ch,St,M,EM,KL,KS) bok
 West (Cg,Lh,Ln,Ny,Oi,Br) tuyh
 Cua koq
34. 'shoulder' -North (Sd,R) kasah
 South (Ch,St,M,EM,KC,KL,KS) panlik
 West (Cg,Lh,Ln,Ny,Oi,Br) paw
 North (J,H,R), Alak, Tampuan, Bahnar, and
 Cua are all idiosyncratic

These words show the western cluster agreeing fairly often with the northern cluster (9 times) but seldom with the southern cluster (2 times). The agreement between Alak, Tampuan, and Bahnar is striking: 18/31 times they all agree, and once (No.10) they agree with nothing else in Bahnaric supporting them. In contrast, Bahnar and Tampuan agree against Alak only 5 times. The Alak-Tampuan-Bahnar group agree fairly often with the northern and western clusters but seldom with the southern cluster.

Cua shows itself more isolated, frequently having idiosyncratic words. Cua agrees fairly often with the northern

and Alak-Tampuan-Bahnar groups, but seldom with the southern and western groups.

The numeral sets again show Alak, Tampuan, and Bahnar having nasalized forms in 6-9, a feature unique to these three languages. Tampuan and Bahnar also have a nasalized form for 3. And Cua stands by itself with k- forms in 6-7 and kɪl for '10'. (But note Jeh kujăt '10'.)

3. PHONOLOGICAL EVIDENCE

For many of the details on the phonological evidence see 1976:388-398. Information is, unfortunately, not as plentiful on the languages we are concentrating on here.

High tense vowels in North Bahnaric often correspond with mid or low vowels in the other groups:³

NB	SB	WB	Alak	Tampuan	Bahnar	Cua	
khlum	khloṃ	khloṃ	--	xloṃ	hloṃ	klop	'blow'
ting	tyǎŋ	--	teng	tšang	teng	--	'tail'
phi	pɕe	pɕe	pahay	pɕe	pɕe	pɕe	'rice'

Mid-low lax vowels in North Bahnaric (their mid and low are not contrastive) may correspond with mid vowels in South

³The relation between Northern registers and Bahnar vowel heights is not as clear as it might seem. It is said (Smith 1972:18) that PNB lax vowels tend to match Bahnar high vowels, and PNB tense vowels tend to match Bahnar low vowels. But in fact Chart 13 shows PNB and Bahnar vowels largely agreeing in their height. So it seems rather that PNB lax vowels tend to be PNB and Bahnar high vowels, and PNB tense vowels tend to be PNB and Bahnar low vowels, and Chart 9 further bears this out.

Bahnaric and sometimes Bahnar, and with high vowels in Alak, Tampuan, West Bahnaric and sometimes Bahnar.

NB	SB	WB	Alak	Tampuan	Bahnar	Cua	
jăt	jmět	cit	cit	tsit	jýt	--	'ten'
*-găr	sagěr	sagır	sikır	skūr	hagěr	gǒl	'drum'
kapò	rapu	kapı̄	karpı̄u	kapəu	kapo	kapiu	'buffalo'

Distinctive voice registers are present and phonemically contrastive in all North Bahnaric languages. In South Bahnaric they are subphonemically present in Mnong and Kǒho (Phillips 1973, Manley 1972). Bahnar does not have register, Alak and Tampuan appear to have it. West Bahnaric appears to have at least subphonemic register. Cua does not have contrastive register, though there may be some subphonemic effects. So only in North Bahnaric is register strongly contrastive.

North Bahnaric has front lax è where others have central ə or back ǒ.

NB	SB	WB	Alak	Tampuan	Bahnar	Cua	
plèm	pləm	--	--	--	pləm	pləp	'leech'
klèm	kləm	kləm	kləm	kləim	kləm	kləp	'liver'
basèm	təm	təm	təm	təm	təm	--	'trunk'
tapèh	pǒh	pǎh	tampǒh	pǎh	tapǎh	kapǎh	'seven'
jèng	jǎng	jı̄ng	cı̄ng	tǔng	jǎng	jok	'leg'

North and West Bahnaric and Cua have an uh/oh or ôh/oh contrast which is merged in South Bahnaric, Alak, Tampuan and Bahnar.

NB	SB	WB	Alak	Tampuan	Bahnar	Cua	
kacuh	chh ^h h	kyoh	kacoh	kasoh	kasoh	kasoh	'spit'
qboh	b ^h h	b ^h h	p ^h oh	poh	qb ^h h	b ^h h	'salt'

North and West Bahnaric and Alak have č where South Bahnaric, Tampuan, Bahnar and Cua have s.

NB	SB	WB	Alak	Tampuan	Bahnar	Cua	
č ^h ong	song	--	--	--	s ^h ong	--	'eat'
č ^h em	s ^h im	cem	cem	tsem/sem	s ^h em	sep	'bird'
tač ^h in	s ^h in	cin	-ciin	ns ^h in	tas ^h in	sit	'nine'
ča	sa	ca	ca	sa	sa	sa	'eat'
č ^h ir	sir	--	ciir	seir	sir	sil	'dig'
či	si	cay	ncai	say	si	s ^h ay	'louse'

North Bahnaric has an s where everything else has t or kl/y.

NB	SB	WB	Alak	Tampuan	Bahnar	Cua	
bas ^h em	t ^h em	t ^h em	t ^h em	t ^h em	t ^h em	--	'trunk'
kas ^h iang	kating	kd ^h iing	kating	n ^h teeng	kating	khiak	'bone'
s ^h uk	t ^h uk	yuuk	--	--	t ^h uk	kl ^h uk	'cloud'

4. METHODOLOGICAL REMARKS

In 1970 (Thomas and Headley 1970:411, quoted with approval

by Huffman 1976:545). I said that lexicostatistics is a useful but imprecise tool, and phonological comparison and reconstruction is a more precise tool. I now have serious questions about the precision and the pride of place of phonology.

Lexicostatistics shows the degree to which vocabulary has changed, whether by borrowing or by semantic shift. For measuring genetic distance the measure must be the degree of semantic shift; for measuring synchronic distance (intelligibility) the measure must include both borrowing and semantic shift. So for our genetic subgrouping purposes loanwords are held to a minimum by using basic vocabulary and by discarding obvious loans. As Huffman commented (1976:552), absolute percentages are meaningless but the relative percentages give a fair picture of relationships.

Phonological comparison yields no quantification of genetic distance, but yields subgroupings by virtue of shared innovations. Lexicostatistics has been called imprecise, but my own attempt at the subgrouping of South Bahnaric by phonological means left me very skeptical as to the precision of comparative phonology. The various sound shifts did not yield the same subgroupings, and some of the clearest innovations, e.g. $-k > -q$, were clearly area shifts, not inherited genetics, as the same shifts are found in neighboring Chamic languages. Area phonology (phonological loans) can easily distort the picture.

And further, identical phonological innovations are not at all unlikely. The possible range of sound shifts is very small, so duplicate innovations should be expected. A subgrouping of Philippine languages based solely on shared innovations produced genetic nonsense (disproved by obvious geography, vocabulary, and grammar).

So phonological evidence must be carefully hedged against contradictory results, outside influences, and duplicate innovations. (Lexicostatistics shares the first two weaknesses, but is less susceptible to the third.)

A third line of evidence, which I feel is not generally given its due weight, is that of semantic innovation, or distinctive vocabulary. Semantic studies have been much less common than phonological studies because semantic areas are very fluid and are difficult to describe precisely. But this very difficulty is at the same time the strength of semantic evidence: the possible range of semantic shifts is great, so duplicate innovation is less likely. Similar semantic shifts indicate genetic or loan relationship.

Area phonological trends can sweep over huge areas, such as the monosyllabic-tonal trend in eastern and southeastern Asia, or the register phenomenon in southeastern Asia (found in Cham, Javanese, and Moken (?) as well as Mon-Khmer languages). But semantic shifts would seem not to spread so widely, thus making them better indicators of genetic relationship in general.

Grammar would seem to provide a somewhat limited basis for judgment because the possible tactic choices are so few. But possibly deeper comparisons on all levels of grammar might change this view. (I had hoped to include some grammatical comparisons in this paper, but didn't get the needed data.)

5. CONCLUSIONS

The lexicostatistical evidence shows tight northern, southern, and western groupings, with Bahnar in the northern group, and

Alak, Tampuan and Cua as isolates slightly more closely related to each other than to the northern, southern and western groups.

The phonological evidence shows the northern group most often standing by itself, sometimes joined by the western group, in contrast to all the others. Alak, Tampuan, and Bahnar usually, but not always, stand together. Cua has some idiosyncracies.

The distinctive vocabulary evidence shows a striking convergence of Alak, Tampuan and Bahnar as a unified group contrasting with the northern, southern and western groups. They tend to agree most often with the northern group, slightly less with the western, and least with the southern. Cua stands by itself.

It thus appears that Bahnaric should be divided into five subgroups: tightly knit southern and western groups, a slightly less tightly knit northern group, a very loose central group, and a small eastern group.

North Bahnaric:	Sedang, Hrê, Halăng, Jeh, Rengao
South Bahnaric:	Kôho, Chrau, Mnong, Stieng
West Bahnaric:	Laven, Nyaheun, Cheng, Oi, Laveh, Brao
Central Bahnaric:	Bahnar, Tampuan, Alak
Eastern Bahnaric:	Cua, Takua (?)

This leads us to a possible scenario in which the original Bahnaric homeland may have been near the present Bahnar or Jarai area. Groups then went off to the northwest, north, and south, eventually splitting into those three clusters. In the meantime the central dialects were continuing to diversify. The Chamic

seacoast invasion then took place and pushed up into the plateau area, perhaps submerging some of the central and southern Bahnaric people, and driving others out. Among those driven out some took refuge among their northwestern cousins and became the Alak, and others got pushed before the westward-driving Chamic Radê and became the Tampuan in Cambodia. The defeat and disarray of the central Bahnaric peoples may have left the northern group as a strong prestige center to which the Bahnar assimilated lexically (at the same time borrowing from their new Jarai neighbors to the south). And the Alak similarly did some borrowing from their new northwestern neighbors. Meanwhile the Cua continued to diverge in their isolated position, doing a little borrowing from their Katuic neighbors. The Bahnar later recovered and became dominant in the north. This could bring us to the language picture as it is today.

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