

THE PROTO-BAHNNARIC VOWEL SYSTEM

A NEW THEORY

Paul Sidwell

1. Introduction

The traditional view of Bahnaric historical phonology is that Proto-Bahnaric was a register language with three vowel heights and both rounded and unrounded back vowels (Smith 1972, 1979). In this brief paper it is argued that Proto-Bahnaric had a relatively simple vowel system without register and only five long and five short vowels. This lends support to the notion that Proto-Mon-Khmer did not have contrastive register either

2. Background

There are about thirty Bahnaric languages distributed over an area that is centred in eastern Cambodia and spills southward into Vietnam and northward into Laos and across again into Vietnam.. Bahnaric is a Mon-Khmer grouping, perhaps comparable in age and internal diversity to the Romance languages of Europe.

Until now all reconstructions of Bahnaric historical phonology have assumed that Proto-Bahnaric had a register contrast, as is attested in a number of contemporary North Bahnaric tongues. The mind-set is well illustrated by Smith (1972) who argues that as register systems are found among various (although far from all) Mon-Khmer languages, these probably represent reflexes of a Proto-Mon-Khmer register system. This logic forces one to reconstruct register in the proto-language regardless of the nature of its present distribution within the family. Various low level reconstructions have also clouded the picture somewhat by suggesting rather complicated vowel correspondences (Blood 1966, Yefimov 1988). On the other hand, there has been for some time a growing suspicion that there was no register on Proto-Mon-Khmer (Diffloth 1974) but reconstruction has not proceeded to the point of being able to establish a consensus view of the likely shape of the Proto-Mon-Khmer vowel system.

This author has recently suggested a new reconstruction of Proto-Bahnaric in which it is suggested that register is merely a secondary development within the North Bahnaric subgrouping (Sidwell 1993). This reconstruction was based on the systematic comparison of the core vocabularies of five Bahnaric languages: *Sedang*, *Jeh*, *Bahnar*, *Srieng* and *Chrau*. These were chosen for comparison because they represent North, Central and South Bahnaric subgroupings. The data and analysis presented in Sidwell (1993) is the basis for this paper.

3. Register

Many contemporary MK languages have a two way phonation contrast in their vowels, often involving breathy voice or laryngealisation. This compares with the pitch contour systems of the many tone languages of South East Asia. There have been different notions among Mon-Khmerists about exactly what is represented by the various register contrasts in MK languages, and I refer readers to Smith (1976:32) for a table comparing various treatments of the phenomenon. A contentious issue is that the various register contrasts may have quite different phonetic character in each language. For example: in *Jeh* the contrast is between breathy and non-breathy phonation, whereas in *Sedang* the contrast is of laryngealisation. Conventionally both languages are said to have tense versus lax vowels, in the former breathy vowels are 'lax' while in the latter laryngealised vowels are 'tense'.

The fact that there are register systems throughout MK suggests that these represent reflexes of a common system. This is the view taken by Smith (1972) who argued that a register contrast should be reconstructed for Proto-Mon-Khmer. Immediately to the north of the

Bahnaric area is another MK grouping, the Katuic languages. Ilija Pejros (pers.com.) suggests that register in Katuic languages was conditioned by the presence or absence of presyllables. (In Bahnaric and Katuic languages the phonological word consists of a stressed main syllable and an unstressed, optional presyllable whose vowel has no phonological value.) This conditioning contrasts markedly with the situation in Vietnamese (also genetically MK, but words tend to consist of single syllables), where the development of tone was conditioned by the initial and final consonants (Haudricourt 1954). This suggests that register in MK languages may be secondary throughout the group, with unique conditioning in each case.

4. The Bahnaric vowel systems

The vowel systems of the five languages used in the reconstruction are presented below:

Sedang (based on Smith 1967, 1972, 1976):

i	u	iə	uə	io	uo	ie
e	o	eə	oə	eo		oe
ɛ	a	ɔ				

In addition *Sedang* vowels are tense (T) or lax (L) and either nasalised or not nasalised. There is no length contrast as Proto-Bahnaric long vowels became diphthongs in *Sedang*.

Jeh (based on Gradin & Gradin 1979):

i	u	i:	u:	ia	ua
ɛ	a	ɔ	ɛ:	a:	ɔ

jeh vowels are tense (T) or lax (L).

Bahnar (based on Banker et al. 1979, Guilleminet & Albery 1959-63):

i	u	i:	i:	u:
	ə	e:	ə:	o:
ɛ	a	ɔ		

Stieng (based on Haupers 1977):

i	i	u	ie	iə:	uo
e	ə	o	e:	ə:	o:
(ɛ)	a	ɔ	ɛ:	a:	ɔ:

Short /ɛ/ and /a/ do not contrast.

Chrau (based on Thomas & Thomas 1961, Thomas 1972):

i	I	u	i:	(i:)	u:	iə	(i:ə) uə
	Λ		e:	ə:	o:		
ɛ	a	c	ɛ:	a:	ɔ:		

Both *Stieng* and *Chrau*, along with other South Bahnaric languages, are acquiring tonal contrasts from contact with *Vietnamese*. *Chrau* *IW* and /i:/ are also from *Vietnamese*.

5. The Cognate sets

The key to solving the question of whether the modern register languages of the Bahnaric group represent yet another independent development lies in reconstructing the phonological system of Proto-Bahnaric. Bahnaric syllable structure permits both open and closed syllables. Cognate sets of core vocabulary representing reflexes of Proto-Bahnaric open syllables are presented below (from Sidwell 1993). Note that T indicates tense register, L lax register.

	<i>Sedang</i>	<i>Jeh</i>	<i>Bahnar</i>	<i>Stieng</i>	<i>Chrau</i>	Reconstn.
	a	a:	a:	a	a:	*a:
<i>different</i>	pha T	phat T	pha:	pha		*pha:
<i>fig</i>	həra T				ra:	*həra:
<i>eat</i>		ca: T	sa:	sa	sa:	*ca.
<i>mouth, open</i>	ha T	ha:	ha:		ha:ʔ	*ha:
<i>fish</i>	ka T	kat: T	ka:	ka	ka:	*ka:
<i>ivory</i>	pəla T	blat T			bla:	*bəla
<i>leaf</i>	hla	la: T	hla	la	la:	*hla:
<i>knife blade</i>	pla T	pla: T	pla:	pla		*pla:
<i>porcupine</i>	ima T	jəma: T	jəma:	sma	səma	*jəma
<i>right side</i>	hʔwā T	ʔma: T	ʔma:	ma	ma:	*həʔma:
<i>turtle</i>		təpa: T	təpa:		dəpa:	*dəpa:
<i>ape</i>	hwa T	wa: T	hwa:		hwa:	*hwa:
<i>ginger</i>		kəya: T	rəya:	ca	ca:	*[k/r]əya
<i>sm. bamboo</i>	kəla T	kla: T			kəla:	*kəla:
	ɔ/ɔw	ɔw	ɔʔ/ɔ:	ow/aw/o	ɔ:/o:	*ɔ:
<i>dog</i>	cɔ T	cɔw T	kɔʔ	sow/so	sɔ:	*cɔ
<i>man</i>		klɔw T	klɔ:	slaw/klaw	səklo:	*səklo:
<i>stone</i>	hmɔw T	təmɔw T	təmɔ:	təmaw	təmo:	*təmɔ
<i>neck/throat</i>		(təkɔ:y L)	ʔakɔ:	kow	nkɔ:	*təkɔ:
	aw/ow	u:/o/aw	u:/uʔ	u/ɨ	u:	*u:
<i>deep</i>	traw L	dru:	jruʔ	jru	jru:	*dru:
<i>coconut</i>	rəʔaw L	rəʔu: L			laʔu:	*rəʔu:
<i>thigh</i>	plaw L	blu: L	blu:	blu	blu:	*blu:
<i>kindle fire</i>			cu:h		jhu:	*cu:
<i>who</i>		naw L	bu:		kəbu:	*kəbu:
<i>buffalo</i>	kəpow L	kəpɔ: L	kəpɔ:	kəpɨ	gəpu:	*[k/g]əpu:
<i>hour</i>	cow L	jo L			yə:	*ju:
	ay	ɛ:y	ɛ:	ɛ/ɛ:/ʔ/ey	ɛ:	*ɛ:
<i>goat</i>	pəpay T	bəbɛ:y T	bəbɛ:	bəbɛ:ʔ	bəbɛ:	*bəbɛ:
<i>rat</i>	kənay T	kənɛ:y T	kənɛ:		kənɛ:	*kənɛ:
<i>rice, husked</i>	phay T	phe: T	phe:	phe		*phe:
<i>three</i>	pay T	pɛ:y T	(pɛ:ŋ)	pey	pɛ:	*pɛ:
<i>rope</i>	kəsay T	kəsɛ:y T		chey	chɛ:	*kəsɛ:
<i>boar</i>	rəkay T		həkɛ:	rkey		*[r/k]əkɛ:
<i>red</i>	khey L		(ʔbre)	pərhe	(prhɔ)	*[ʔb/k]ərhe:
	ay/ey	i:/iʔ	i:/iʔ	i	i:	*i:
<i>hand/arm</i>	tay L	ti: L	ti:	ti	ti:	*ti:
<i>banyan tree</i>		dri: T		jri	jri:	*dri:
<i>forest</i>	pray T	bri:	bri	bri:	*bri:	
<i>rain</i>	,ey L	(ʔmriah L)	ʔmi:	mi	mi:	*ʔmi:
<i>sick</i>	cay L	jiʔ T	jiʔ	ji	ji:	*ji:
<i>louse</i>	sɔ/cay L	kəcay T	si:	si	si:	*kəci:
<i>house</i>	hŋey L	ñiah L		ñi:	ñi:	*ñi:

6. Discussion of the reconstruction

From the above data it is clear that Proto-Bahnaric open syllables had only five long vowels. Did these syllables show contrastive register in Proto-Bahnaric? It seems not. Rhymes with low vowels show tense register in their *Sedang* and *Jeh* reflexes, almost without exception. Reflexes of u: all show lax register. Rhymes reflecting i: have a less consistent pattern in *Jeh*, but are all lax in *Sedang*. Assuming that the tense *Jeh* forms reflecting i: are secondary, there is a near perfect correlation between register and vowel height. One of these distinctions, either height or register, is therefore redundant. Logically this presents two alternative hypotheses: (1) That there were five long vowels in Proto-Bahnaric open syllables without a contrastive register, or (2) that there

were only three long vowels, and two of these took contrastive register. The most plausible model is the first. Register and tone are demonstrably secondary in many South East Asian languages, and positing five vowels requires less innovation in the Proto-Bahnaric vowel system to derive the systems we see today. In fact most Bahnaric languages do not have register, it being restricted to a small pocket in the north of the group.

The contemporary Bahnaric languages most frequently show three vowel heights, having systems very typical of South East Asian languages. There has been such extensive language contact and language mixing in this area that phonological systems have been converging on a pattern showing three degrees of height, and both rounded and unrounded back vowels. Most Bahnaric languages show such vowel systems (see 4. for examples), but with a couple of important exceptions: *Jeh* and *Halang* (so close they are virtually dialects). These languages have only five long and five short vowels in their closed syllables (presyllables have a noncontrastive schwa only). Smith (1972) suggests that Proto-Bahnaric had five long and three short vowels, all with a tense/lax contrast. According to this view *Jeh* and *Halang* have merely acquired two more short vowels and preserve Proto-Bahnaric register.

The cognate sets (section 5) show that there were only two vowel heights and no register contrast among the open syllables. Among the cognate sets reflecting Proto-Bahnaric closed syllables (see Sidwell 1993) mid height vowels (*Je*/, /*o*/ and /*z*/) are far less frequent than the five vowels at the extremes of articulation. This is strongly suggestive of these mid height vowels being secondary, and this is consistent with the strong evidence that they did not exist at all in Proto-Bahnaric open syllables. It is therefore feasible to reconstruct Proto-Bahnaric with only five long and five short vowels in closed syllables, and five long vowels in the open syllables. This is the reconstruction offered in Sidwell (1993). The Proto-Bahnaric vowels are reconstructed as follows:

*i	*u	*i:	*u:	*iɛ	*uɔ
*ɛ	*a	*ɔ	*ɛ:	*a:	*ɔ:

Note that the two diphthongs, they occur in Proto-Bahnaric closed syllables and their reconstruction is considered to be tentative by this writer.

7. Conclusion

On internal distributional grounds it is apparent that there was no contrastive register in Proto-Bahnaric, and this is supportive of the notion that at an earlier stage Proto-Mon-Khmer was not a register language. The Proto-Bahnaric vowel system was probably like that of *jeh*, but without the register contrast. The register system of North Bahnaric tongues, and the mid-height vowels of the rest of the group were most likely acquired through the effects of contact with neighbouring languages.

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