

A PUZZLE IN COMPARATIVE TAI PHONOLOGY

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The comparative study of Tai vocalism has made considerably less progress than has been achieved in the areas of consonants and tones, where it seems fair to claim that the main outlines of the structure of the parent language and the changes involved in the various daughter languages and dialects are now fairly clear.

Typologically the vowel systems of the various languages of the Tai family are rather similar, as shown in the following charts of the vowels of Siamese (the Standard Thai of Bangkok), White Tai (spoken in parts of western North Vietnam), and Yay (spoken on the border between North Vietnam and China, near Lao Kay):

Siamese		
i, ii, ia	ɨ, ɨɨ, ɨa,	u, uu, ua
e, ee	ə, əə	o, oo
ɛ, ɛɛ	a, aa	ɔ, ɔɔ

White Tai			Yay		
i	ɨ	u	i, ia	ɨ, ɨa	u, ua
e	ə	o		ə	
ɛ	a, aa	ɔ	e	a, aa	o

But when one attempts to work out correspondences among the modern vowel systems based upon actual cognate forms, so many problems arise that one comes to feel that when we once have a reconstruction of the vowel system of Proto-Tai that accounts for everything found in the daughter languages, this will turn out to be markedly different from the vowel system of any of the modern languages. Only some very different pattern seems likely to provide the numbers and kinds of distinctions required to account for all the different correspondences found among the modern cognate forms.

It is not the purpose of this paper to attack the larger problem of comparative Tai vocalism as a whole, but to point out a curious phenomenon involving the high vowels in certain items of the vocabulary, and specifically a curious sporadic alternation of these high vowels with diphthongs.

Every language or dialect of the family seems to contain traces of this phenomenon, but for present purposes forms from only six languages will be cited, two from each of the three main branches of the Tai family which F.K. Li has defined. These are Siamese and White Tai from Li's Southwestern branch, Lei Ping and Lung Ming (both in Kwangsi) from the Central branch, and Yay and Saek (the latter spoken in a few villages in Nakhon Phanom province in Northeastern Thailand and across the Mekhong River in Laos) from the Northern branch. All the data are from the author's fieldnotes.

Virtually all, if not all, Tai languages have three high vowels, high front ii, high back unrounded ɨɨ, and high back rounded uu. When not followed by a consonant, they never show distinction in length, and in some languages have come to be analyzed and transcribed in this syllable-final position as single vowels (i ɨ u) and in others as long or double vowels (i: ɨ: u: or ii ɨɨ uu). This accident of transcription is irrelevant to our problem, and forms will be transcribed in each language according to the conventions that happen to have been followed in previous publications.

These three high vowels are, for a considerable portion of the inherited vocabulary, fairly stable, suggesting that Proto-Tai had all three and that they have remained essentially unchanged in the daughter languages. Among the six languages cited here, only the two Central ones show any deviation. At Lei Ping ɨɨ has been lowered to əə; ɨɨ has been reintroduced in a few loanwords. At Lung Ming something more drastic has happened; this dialect shows secondary (i.e. local and presumably relatively late) diphthongization of ii to ey, ɨɨ to əy, and uu to ow. Lung Ming has the high vowels ii ɨɨ uu from a different source; Lung Ming ii corresponds to Siamese ia, ɨɨ to ia, and uu to ua.

With these easily explained exceptions, then, the relatively stable high vowels ii ɨɨ uu may be illustrated by the following sets of cognates:

	<u>Siamese</u>	<u>White Tai</u>	<u>Lei Ping</u>	<u>Lung Ming</u>	<u>Yay</u>	<u>Saek</u>
'gall bladder'	dii ¹	bi ¹	dii ²	ney ⁴	di ¹	blii ¹
'older sibling'	phii ³	pi ⁵	phii ⁵	pey ⁵	pi ⁶	phii ⁵
'to have'	mii ¹	mi ⁴	mii ⁴	mey ⁴	mi ⁴	mii ⁴
'year'	pii ¹	pi ¹	pii ²	pey ¹	pi ¹	pii ¹
'to beat'	tii ¹	ti ¹	—	tey ¹	ti ⁴	—
'writing, book'	-sɨɨ ⁵	sɨ ¹	ləə ¹	səy ¹	θi ¹	sɨɨ ²
'day after tomorrow'	-rɨɨn ¹	hɨ ⁴	ləə ⁴	ləy ⁴	ri ⁴	rɨɨ ¹

(Siamese final -n in this word has a special explanation, not relevant here.)

'door'	-tuu ¹	tu ¹	tuu ²	tow ¹	tu ¹	tuu ¹
'pig'	muu ⁵	mu ¹	muu ¹	mow ¹	mu ¹	muu ²
'rat, mouse'	nuu ⁵	nu ¹	nuu ¹	now ¹	nu ¹	nuu ²
'person'	phuu ³	phu ³	phuu ³	phow ³	pu ⁶	phuu ⁶
'to float'	fuu ¹	fu ⁴	fuu ⁴	fow ⁴	fu ⁴	vuu ¹

In almost all Tai languages and dialects there is also a set of diphthongs here transcribed ay aỵ aw, each consisting of a short low vowel followed by a semivowel, the three final semivowels corresponding neatly to the three high vowels. Only aỵ occasionally shows instability; in Siamese aỵ has fallen together with ay, but is still written with a special symbol, showing that the distinction between ay and aỵ lasted down into the history of written Siamese. In Saek aỵ has changed to the monophthong əə. Although Saek is known to belong to the Northern branch of Tai, otherwise spoken far to the north in China and adjacent parts of North Vietnam, it shares this change of aỵ to əə with some other Southwestern Tai languages with which it has presumably been in contact in recent centuries, the Phu Thai dialects of Northeastern Thailand and the Red Tai of Sam Nuea province of Laos and adjacent parts of western North Vietnam.

For each of the diphthongs ay and aw there is usually a contrasting long diphthong aȳ aaw̄, not involved in the problem under study here. aȳ never shows such a length contrast, and indeed the diphthong aȳ, if the particular language has it at all, is usually the only environment in which the semivowel ȳ occurs, with only rare exceptions as in the case of the special Lung Ming development of ɨɨ to əȳ, which in this dialect contrasts with aȳ.

Aside from the special vicissitudes to which aȳ is sometimes subjected, these three diphthongs ay aỵ aw show, like the three high vowels, fairly stable correspondences among the various daughter languages, suggesting, as in the case of the three high vowels ii ɨɨ uu that we have here elements which must be reconstructed for the parent language. Regular correspondences of ay aỵ aw occur in a great many items of the vocabulary, for example:

	<u>Siamese</u>	<u>White Tai</u>	<u>Lei Ping</u>	<u>Lung Ming</u>	<u>Yay</u>	<u>Saek</u>
'stairs, ladder'	-day ¹	day ¹	day ²	nay ⁴	lay ¹	ray ¹
'to plow, a plow'	thay ⁵	thay ¹	thay ¹	thay ¹	say ¹	thay ²
'leaf'	bay ¹	bay ¹	bay ²	may ⁴	bay ¹	bəə ¹
'clear, transparent'	say ⁵	say ¹	lay ¹	say ¹	θay ¹	—

'to enter'	khaw ³	xaw ³	khaw ³	khaw ³	haw ³	haw ³
'headlouse'	haw ⁵	haw ¹	haw ¹	thaw ¹	raw ¹	raw ²
'horn'	khaw ⁵	xaw ¹	—	—	kaw ¹	kaw ¹

Some prefer to analyze and transcribe these three diphthongs as sequences of vowels: ai aɪ au. This kind of transcription makes even clearer the parallelism with the three high vowels ii ɪi uu, but regardless of accidents of analysis and transcription, the three diphthongs bear a symmetrical relationship to the high vowels: ay ends like ii, ay like ɪi, and aw like uu.

But besides the many items showing regular correspondences for the high vowels ii ɪi uu and for the three diphthongs ay aɪ aw, each language (or sometimes a group of languages) has some items which have the diphthong where other languages have the monophthong, or vice versa, and all this apparently entirely random and sporadic and unpredictable.

This random alternation between ii and ay is shown in the following items; forms with the diphthong are underlined:

	<u>Siamese</u>	<u>White Tai</u>	<u>Lei Ping</u>	<u>Lung Ming</u>	<u>Yay</u>	<u>Saek</u>
'good'	dii ¹	di ¹	<u>day</u> ²	<u>nay</u> ⁴	di ¹	dii ¹
'closely spaced'	thii ²	thi ²	thii ²	<u>thay</u> ²	ti ⁵	thii ⁵
'long'	rii ¹	hi ⁴	ɭii ⁴	ley ⁴	<u>ray</u> ⁴	<u>ray</u> ⁴
'excrement'	khii ³	khi ³	khii ³	khii ³	<u>hay</u> ⁶	ɣay ⁶
'fire'	<u>fay</u> ¹	<u>fay</u> ⁴	<u>fay</u> ⁴	<u>fay</u> ⁴	fi ⁴	vii ⁴
'dirt'	<u>khlay</u> ¹	—	—	<u>lay</u> ⁴	hi ⁴	ɣii ⁴
'thread'	<u>may</u> ⁵	<u>may</u> ¹	<u>may</u> ¹	<u>may</u> ¹	<u>may</u> ¹	mii ²
'dry field'	<u>ray</u> ³	<u>hay</u> ⁵	ɭay ⁵	<u>lay</u> ⁵	ri ⁵	rii ⁵
'chicken louse'	<u>ray</u> ¹	—	ɭay ⁴	<u>lay</u> ⁴	ri ⁴	rii ⁴

(Lung Ming khii³ 'excrement' is aberrant; one would expect *khey³. Lung Ming khii³ ought to correspond to Siamese *khia³, White Tai *khe³. This aberration, whatever its explanation, presumably has nothing to do with the phenomenon under study here.)

This ii:ay alternation undoubtedly accounts for such bizarre vowel correspondences as those found in the following sets of cognates, where some of the reflexes seem to have been distorted by an original post-initial semivowel preceeding the original diphthong ay:

'mountain stream'	<u>huay</u> ³	<u>hoy</u> ³	<u>khooy</u> ³	luy ³	vi ³	rii ³
'to ride'	khii ²	khi ²	khwii ²	khwey ²	<u>k+ay</u> ⁵	<u>khoy</u> ⁵
'bear'	mii ⁵	mi ¹	mii ¹	mey ¹	<u>m+ay</u> ¹	mii ²
and perhaps also in						
'track, footprint'	<u>rooy</u> ¹	<u>hoy</u> ⁴	<u>looy</u> ⁴	<u>looy</u> ⁴	ri ⁴	rii ⁴

Sporadic alternation between the monophthong ɨ and the diphthong ay, parallel to the alternation between ii and ay, is found in these examples :

	<u>Siamese</u>	<u>White Tai</u>	<u>Lei Ping</u>	<u>Lung Ming</u>	<u>Yay</u>	<u>Saek</u>
'heart'	<u>cay</u> ¹	<u>cay</u> ¹	—	—	sɨ ¹	cɨɨ ¹
'correct'	<u>chay</u> ³	—	chəə ⁵	cəy ⁵	sɨ ⁵	—

Finally, uu alternating with aw is found in such items as these :

'nine'	<u>kaaw</u> ³	<u>kaw</u> ³	<u>kaw</u> ³	<u>kaw</u> ³	ku ³	kuu ³
'paternal grandfather'	puu ²	pu ²	—	—	<u>paw</u> ²	—
'crab'	puu ¹	pu ¹	puu ²	pow ¹	<u>paw</u> ¹	<u>paw</u> ¹
'empty'	<u>plaaw</u> ²	<u>paw</u> ²	<u>pyaw</u> ⁵	<u>pyaw</u> ²	pyu ²	pluu ⁶

(Long aaw in the Siamese forms for 'nine' and 'empty' is a late development; these words are spelled with the symbol for aw except in very recently reformed orthography, and they rhyme with other —aw words in poetry down through the 19th century.)

Any scholar working on any Tai language can readily find at least a few more examples of this phenomenon. For example, students of any of a number of Tai dialects in northern Thailand and the Shan States of Burma will be familiar with the form hɨɨ (with the appropriate tone) 'to give,' corresponding to Siamese hay³ (from earlier hay³), White Tai and Yay hay³, Saek həə³. This dialect form hɨɨ can now be easily recognized as another instance of our alternation.

What is the meaning of all this? We seem to have here a kind of vowel gradation (apophony, Ablaut), in some ways reminiscent of the familiar Indo-European process. We can hardly assume that the parent language had both the monophthongal and the diphthongal forms for each of these words, since no language is known to have inherited both, as surely would have occasionally happened. Rather it is as if each daughter language had had the option of choosing at random between using the simple or "reduced

grade" monophthongal form or the "strengthened grade" diphthongal form, and each did so haphazardly, making the one choice for some words and the other choice for others, without rule or conditioning factors so far as we can see. In some cases the choice seems to have been made early, so that all languages and dialects of a whole branch of the family agree. In other cases it looks as if a single language must have made a choice relatively late that caused it to end up disagreeing with even closely related dialects as to which form is used. Thus formulated, of course, this explanation is quite incredible, but it may be that as we gain more light we will one day be able to arrive at a more rational and plausible explanation.

Beclouded as this alternation is with puzzling questions as to its origin and the ways in which it has operated in the various languages, can its discovery be regarded as helpful at all in advancing comparative Tai studies?

At the present stage of our knowledge, this discovery would seem to have three possible benefits:

(1) We may now be led to seek and perhaps find other related or parallel phenomena in other parts of the vowel pattern.

(2) For the investigator working on a particular Tai language, this discovery may enable him to identify cognates that he might otherwise have overlooked or have regarded as doubtful. For example, in Saek we would now have no hesitation in regarding Saek muu³ as cognate with Siamese maw³ in the Saek expression ɣaw⁶ muu³ referring to young rice grains roasted and pounded flat, called in Siamese khaw³ maw³.

(3) Perhaps most important, this discovery simplifies the task of reconstructing the Proto-Tai vowel system by simply removing from consideration all instances of this alternation, which otherwise would greatly increase the number and variety of correspondences which one might previously have regarded as each requiring a special reconstruction.

(This paper was originally prepared by Professor Gedney for the Conference on Sino-Tibetan Reconstruction at Indiana University in October, 1971. It was not read at the Bangkok conference.)

