

A PUZZLE IN COMPARATIVE TAI PHONOLOGY

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).

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SIAMESE

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

WHITE TAI

i	ɨ	u
e	ə	o
ɛ	a, aa	ɔ

YAY

i, ia	ɨ, ɨa	u, ua
	ə	
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 Lungming (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 field notes.

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 *ææ*; *ɨɨ* has been reintroduced in a few loanwords. At Lungming something more drastic has happened; this dialect shows secondary (that is, local and presumably relatively late) diphthongization of *ii* to *ey*, *ɨɨ* to *əy*, and *uu* to *ow*. Lungming has the high vowels *ii ɨɨ uu* from a

different source; Lungming *ii* corresponds to Siamese *ia*, *ii* to *ia*, and *uu* to *ua*.

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

	SIAM- ESE	WHITE TAI	LEI PING	LUNG- MING	YAY	SAEK
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	-sii ⁵	si ¹	læ ¹	søy ¹	θi ¹	sii ²
day after tomorrow	-riin ¹	hi ⁴	læ ⁴	løy ⁴	ri ⁴	rii ¹
(Siamese final <i>-n</i> 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	vu ¹

In almost all Tai languages and dialects there is a set of diphthongs, here transcribed *ay ay aw*, each consisting of a short low vowel followed by a semivowel, the three final semivowels corresponding neatly to the three high vowels. Only *ay*

occasionally shows instability; in Siamese *ay* has fallen together with *ay*, but is still written with a special symbol, showing that the distinction between *ay* and *ay* lasted down into the history of written Siamese. In Saek, *ay* has changed to the monophthong *æ*. 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 *ay* to *æ* 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 *aay* *aaw*, not involved in the problem under study here. *ay* never shows such a length contrast, and, indeed, the diphthong *ay*, if the particular language has it at all, is usually the only environment in which the semivowel *y* occurs, with only rare exceptions, as in the case of the special Lungming development of *ii* to *ey*, which in this dialect contrasts with *ay*.

Aside from the special vicissitudes to which *ay* is sometimes subjected, these three diphthongs *ay ay 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 ii uu*, that we have here elements which must be reconstructed for the parent language. Regular correspondences of *ay ay aw* occur in a great many items of the vocabulary, for example:

	SIAM- ESE	WHITE TAI	LEI PING	LUNG- MING	YAY	SAEK
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	bæ ¹
clear, trans- parent	say ⁵	say ¹	lay ¹	say ¹	θay ¹	-
to enter	khaw ³	xaw ³	khaw ³	khaw ³	haw ³	haw ³
head- louse	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 ai au*. This kind of transcription makes even clearer the parallelism with the three high vowels *ii ii 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 *ii*, and *aw* like *uu*.

But, besides the many items showing regular correspondences for the high vowels *ii ii uu* and for three diphthongs *ay ay 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 is 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.

	SIAM- ESE	WHITE TAI	LEI PING	LUNG- MING	YAY	SAEK
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	lii ⁴	ley ⁴	<u>ray</u> ⁴	<u>ray</u> ⁴
excre- ment	khii ³	khi ³	khii ³	khii ³	<u>hay</u> ⁶	<u>ɣay</u> 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	<u>ray</u> ³	<u>hay</u> ⁵	<u>lay</u> ⁵	<u>lay</u> ⁵	ri ⁵	rii ⁵
field						
chicken	<u>ray</u> ¹	-	<u>lay</u> ⁴	<u>lay</u> ⁴	ri ⁴	rii ⁴
louse						

(Lungming *khii*³ 'excrement' is aberrant; one would expect **khey*³. Lungming *khii*³ ought to correspond to Siamese **khia*³ and White Tai **khe*³. 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 preceding the original diphthong *ay*.

mountain	<u>huay</u> ³	<u>hoy</u> ³	<u>khooy</u> ³	luy ³	vi ³	rii ³
stream						
to ride	khii ²	khi ²	khwii ²	khwey ²	<u>kɰay</u> ⁵	<u>khoy</u> ⁵
bear	mii ⁵	mi ¹	mii ¹	mey ¹	<u>miay</u> ¹	mii ²

and perhaps also in

track,	<u>rooy</u> ¹	<u>hoy</u> ⁴	<u>looy</u> ⁴	<u>looy</u> ⁴	ri ⁴	rii ⁴
foot-						
print						

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

	SIAM- ESE	WHITE TAI	LEI PING	LUNG- MING	YAY	SAEK
heart	<u>cay</u> ¹	<u>cay</u> ¹	-	-	si ¹	cii ¹
correct	<u>chay</u> ³	-	chæ ⁵	cæy ⁵	si 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	puu ²	pu ²	-	-	<u>paw</u> ²	-
grand-						
father						
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 nineteenth 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 *hii*

(with the appropriate tone) 'to give', corresponding to Siamese *hay*³ (from earlier *hay*³), White Tai and Yay *hay*³, Saek *hæ*³. This dialect form *hii* 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 graduation (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, which 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 *muu*³ as cognate with Siamese *maw*³ in the Saek expression *ɣaw*⁶ *muu*³, referring to young rice grains roasted and pounded flat, called in Siamese *khaw*³ *maw*³.

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 that one might previously have regarded as each requiring a special reconstruction.