TONE IN TAI: A NEW PERSPECTIVE

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During the Great Tone Split[1] (GTS) the tones in Tai dialects were made more numerous through splitting conditioned by certain phonetic features of C_i, usually considered to be the voiced-voiceless opposition. Unfortunately, these splits did not always behave in phonetically predictable ways, so, merely stating that voicing of C_i causes lower pitch and voicelessness of C_i causes higher pitch is not a satisfactory explanation of the situation in Tai dialects. Nor did splitting affect in identical ways the three original tones which are usually labelled A, B, and C . There is also a D tone conditioned by a final stop. The origin of these tones remains a mystery. It is possible they represented registers, loss of older final consonants, or even older initial consonant groupings of the kind discussed in this paper. So far scholars have arrived at no final solution.

This paper treats the question, vital to a complete understanding of tonal development in Tai languages: Why did the various phonetic features of C_i not split all original tones of Proto-Tai (PT) in identical ways? In addition, we would like to discuss a statement by Matisoff (1973) concerning the use of tonal criteria in determining genetic relationships among languages and dialects.

It has long been recognised by Tai scholars that more than the simple voiced-voiceless contrast suitable for other language groups is necessary for the description of Tai tonal systems. In the Lao and Siamese orthographies it is necessary to maintain a three-way C_i distinction. When

[1]This term was first used by J. Marvin Brown at the Symposium on Tai Linguistics in a paper entitled: 'The great tone split: did it work in two opposite ways?'; to appear in the symposium proceedings.

other Tai languages are taken into consideration at least four and sometimes five categories must be recognised. This question has been discussed by the dedicatee of this Festschrift, Professor Gedney (forthcoming), who suggests that even more distinctions will be discovered in the future. An unexplained A1 split has already been described in the Saek language (Gedney 1970).

For most purposes it is convenient to maintain a four-way division of C_is (Gedney 1972) based on the original categories of PT. These categories have been summed up as:

1. voiceless friction sounds
2. voiceless unaspirated stops
3. glottal stop and preglottalised stops[1]
4. voiced sounds.

But in certain dialects, namely Nung of Bac Va (Gedney forthcoming), Nung of Lang Vo (Saul 1965) and T'ien Pao (Li 1966b), it is necessary to further divide C_i type 1 into (a) aspirated stops and h, (b) voiceless nasals, liquids and fricatives.

The most common split conditioned by C_is is between 3 and 4. This is found in virtually every Tai language and in most if not all of the original tone categories ABCD, depending on the dialect. Splits between 1 and 2 are not uncommon but are statistically rarer than the former. Occasionally one happens on a split between 2 and 3 such as the C column of Yay (Gedney 1965), the A column of T'ien Pao (Li 1966b) or the Yuan dialects of Northern Thailand (Brown 1965). With practically no exceptions, wherever two splits occur in one ancient tone category, they are always between 1-2 and 3-4, never 1-2 and 2-3 or 2-3 and 3-4.[2] A more general discussion of tonal system variety in the South-Central branch of Tai may be found in Chamberlain (1975). However, the question still remains, why shouldn't splits conditioned by C_is obtain identically in all of the original tone categories of PT. What, for instance, caused Yay A.B. and D tones to split between 3 and 4, while the C tone was split between 2 and 3? Or, what caused the A tone in some Lue dialects to split between 2 and 3 when BCD all have 3-4 splits?

Splitting seems to be weighted towards the bottom of the chart. We find many dialects with only 3-4 splitting in every tone category, but no languages with only 1-2 splits. The C_i features conditioning tone

[1] For a discussion of the possibility that these stops were *prevoiced* see Chamberlain (1975).

[2] The only exception known to the author is the Nua dialect of Szu Mao in Yunnan where the DS column is apparently split between 2 and 3 as well as between 3 and 4 (J.G. Harris, personal communication).

splits form a hierarchy, roughly: I - 3-4 between preglottalised and voiced; II - 1-2 between voiceless friction sounds and voiceless unaspirated stops; III - 2-3 voiceless unaspirated stops and preglottalised stops; IV - 1a-1b aspirated stops and h and voiceless nasals, liquids, and fricatives. Gedney (forthcoming) has noted that the A column is subject to more splitting than B and C, and is therefore more likely to have more than one split. Li (1947a) claims that the 3-4 split is really voiced v. voiceless, the preglottalised stops behaving like glottal stops which are voiceless. This appears sound in spite of recently expressed doubts as to what *preglottalised* actually means.

Stated briefly, the argument on preglottalisation is that in other languages of South-east Asia one hears *prevoiced* stops such as in Wa; *prenasalised* stops, such as in Hmong; *clusters* of glottal stop + nasal, such as in Khmu?; and in rare cases, such as Vietnamese and some Cambodian dialects, *imploded* stops. The only actual occurrence of a stop which might be labelled "preglottalised" is the Hmong [ʔtʰ], a voiceless aspirated stop preceded by glottal closure with open velic (J.G. Harris, personal communication). If the PT initials of row three were prevoiced, prenasalised or nasals preceded by glottal stop, a plausible historical and/or areal hypothesis, we would expect these voiced initials to fall together more frequently with the voiced initials of row 4.

Accounting for these problems greatly complicates the heretofore straightforward picture of the phonetic processes involved in Tai tone splitting. Are we (1) to assume that a statistical difference in the number of lexical items found in each of the four tone categories caused such divergent splitting within them? For example, Gedney (personal communication) observes that the lexical items in the A column far outnumber those in B or C, as if A tone were somehow normal and B and C were variations of that tone. If this is so it must have been a pre-PT phenomenon, the nature of which is not fully understood. Yet another mystery is the curious coalescence of DL and B in so many Tai languages. If, on the other hand, numbers of lexical items are not the causal factor, can we (2) say there must have been separate phonetic interplay between the original nature of C_i and the original tone features of ABCD? If this can be demonstrated we should be able to make some generalisations about that interplay, and to date no linguist has done so.

One final possibility might be (3) that immediately following GTS the languages made all possible tonal distinctions. If we use Brown's chart (1965) of fifteen boxes this would mean fifteen tones, or if Gedney's chart (1972) is used it would mean twenty tones. Tones could subsequently have been lost until present-day patterns were established with no more than seven and no less than four distinctive tones on smooth

syllables. This possibility remains highly suspect as no modern language has that many tones, but this alone would not rule out reconstructing such a non-existent earlier stage in Tai.

The author opts for (2), that we would expect the phonetic features of C_is to influence the four original tones in dissimilar ways.[1] For instance, C_i types and 2 and 3 might cause an original falling tone to become level (or more level than before), whereas C_i type 1 might raise the pitch before the fall, thereby causing a 1-234 in the original tone. On the other hand, C_i type 3 and 4 might have a pitch raising effect, causing a 12-34 split in an original rising tone. Quite obviously the phonetics of such generalisations have not been worked out yet, but if someday we could write rules of the sort

$$\text{ORIGINAL TONE A} \text{ ----------> POST GTS TONE } \left\{ \begin{array}{l} \alpha \ / \ C_i \ X \\ \beta \ / \ C_i \ Y \\ \gamma \ / \ C_i \ Z \end{array} \right\}$$

we might begin to explain why tone systems have developed their present-day patterns. Although this does not answer the original question, perhaps a means to an answer has been suggested, an area of phonetic study which may prove vital in the solving of the problem.

The tone splits of the extant Tai dialects do not reflect the contemporary features of C_is, rather, we assume they reflect historical features. It may be noted that, in a f_o analysis of syllables beginning with bilabial stops in Siamese, b had the lowest f_o, ?p the second lowest, and p^h the highest (Erickson 1975). The modern Siamese tone system does not differentiate tones along these lines. Obviously the tone system gives us a picture of an earlier stage in the language when the C_is had different values. Furthermore, tone split patterns in Tai have been shown to be the most stable part of the phonology (Brown 1965, Chamberlain 1973), and they provide a wealth of evidence for determining genetic relationships. Why, then, does Matisoff (1973) conclude that "...tonal criteria are not even sufficient to establish genetic subgroupings for languages which are already known to be genetically related."? One cannot help but feel this statement was based on evidence only from Tibeto-Burman.

In Tibeto-Burman, as Matisoff informs us, tone is extremely fickle. Dialects of the same language may or may not be tonal, and tones are lost or acquired through language contact. On the other hand, to the author's knowledge, there are no Tai dialects which did not develop

[1] If this is true, at least some of the major subgroups would have to have separated at the time of GTS, with different tonal contours for ABCD.