THE RELATIONSHIP BETWEEN TONES AND INITIALS IN TAI*

by

FANG-KUEI LI

As early as 1911-1912, Henri Maspero expressed the opinion that the fundamental difference between Chinese and Tai in the phonological system lay in the fact that the Chinese tones had two registers, determined by the voiceless and the voiced nature of the initial consonants, while the Tai languages had three registers, determined also by the initial consonants. This theory is, of course, suggested by the native Siamese grammarians' classification of the initial consonants into three classes: high, middle, and low. The date of formulation of the Siamese system is not known, but Maspero believes that it must go back to the original Tai system because Vietnamese shows traces also of a threefold division of the initials.¹ He also points out there are other languages in the Far East, beside Chinese and Tai, where the registers of the tones are also determined by the initial consonants.

Recently we know more about the tonal system of the Tai dialects particularly through the works of Mary Haas, Søren Egerod, E. J. A. Henderson, J. Marvin Brown, and others.² It may be, therefore, profitable to reexamine the problem and pose a few questions.

* This is a slightly different version of an article by the author published in Chinese in BIHP (Bulletin of the Institute of History and Philology, Academia Sinica), 34 (1962), 31-36.

¹ Cf. Maspero, “ Contribution à l'étude du système phonétique des langues Thai”, BEFEO, 11 (1911); and especially his “Etudes sur la phonétique historique de la langue annamite”, BEFEO, 12 (1912), 88-103, 117-118.

1) To what extent do the Tai languages agree in the threefold classification of the consonants?
2) Can we determine that this system belongs to the Proto-Tai period?
3) Do the three classes of consonants determine the registers of the tones?

We shall select a few dialects to represent the different classifications of the consonants and treat briefly their influence on the development of tones.

The Proto-Tai tone classes are represented here by A, B, C, and D, the last class being a special syllabic type ending in a stop consonant -p, -t, or -k. In Siamese and its closely related dialects there are words ending in a glottal stop which are counted as belonging to the same D type (known as dead syllables in Siamese), but such words do not go through all dialects, and their existence in the Proto-Tai system is doubtful.

The registers of the modern dialects are designated by numerals whenever possible, 5-high, 4-mid high, 3-mid, 2-mid low, and 1-low. Rising, falling, level tones etc. are indicated by two or three numerals, thus 35-high rising, 53-high falling, 24-mid rising, 42-mid falling, 13-low rising, 31-low falling, 55-high level, 33-mid level, 11-low level, 453-high rise-fall, etc.

1. The two-fold division of the initial consonants is represented here by the Lungchow dialect. Many dialects in the northern part of Vietnam, in the southwestern part of Kwangsi, and in the southern part of Yunnan, as well as the Shan dialects show this type. The initials are classified according to whether they come from the Proto-Tai voiceless or voiced consonants. The four Proto-Tai tones are then theoretically split into eight tones. However, in some dialects there is a coalescence of some tones, and the tones developed from class D can usually be assigned to other tones.

<table>
<thead>
<tr>
<th></th>
<th>1. Voiceless</th>
<th>2. Voiced</th>
</tr>
</thead>
<tbody>
<tr>
<td>A.</td>
<td>33-mid-level</td>
<td>31-low falling</td>
</tr>
<tr>
<td>B.</td>
<td>55-high level</td>
<td>11-low level</td>
</tr>
<tr>
<td>C.</td>
<td>24-mid rising</td>
<td>21-low falling, followed by glottal stop</td>
</tr>
<tr>
<td>D.</td>
<td>55-high level</td>
<td>31-low falling</td>
</tr>
</tbody>
</table>


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3 See my monograph, The Tai dialect of Lungchow (1940).
“to fall”, *phjaak* “to expose to the sun”, D2 *nuk* “bird”, *nook* “outside”. If we follow the traditional way of classifying the D class as separate tones, we have here exactly eight tones developed from the original four. This is extremely similar to the development of Chinese tones such as in Cantonese.

2. Three-fold division of the initials is well-known on account of the Siamese system. However in Thailand itself, different dialects classify the consonants differently. It would be interesting to observe the different types of the three-fold division.

   a) Standard Siamese, as spoken around the Bangkok region, divides the consonants into three classes: 1. the high consonants consisting of the Proto-Tai voiceless aspirated stops and the voiceless nasals, liquids, and fricatives, 2. the middle class consisting of the Proto-Tai voiceless unaspirated stops and the pre-glottalized consonants as well as the glottal stop, and 3. the low consonants, consisting of all Proto-Tai voiced consonants. The influence of these three types of consonants on the development of tones is as follows,

<table>
<thead>
<tr>
<th>A</th>
<th>24-rising</th>
<th>33-mid level</th>
<th>33-mid level</th>
</tr>
</thead>
<tbody>
<tr>
<td>B</td>
<td>22-low level</td>
<td>22-low level</td>
<td>41-falling</td>
</tr>
<tr>
<td>C</td>
<td>41-falling</td>
<td>41-falling</td>
<td>453-high rise-fall</td>
</tr>
<tr>
<td>Ds</td>
<td>22-low level</td>
<td>22-low level</td>
<td>55-high level</td>
</tr>
<tr>
<td>Dl</td>
<td>22-low level</td>
<td>22-low level</td>
<td>41-falling</td>
</tr>
</tbody>
</table>


The three-fold division of the initials actually divides the tones into two groups. The middle consonants normally agree with the high consonants, except in A class where they agree with the low consonants.

The system as devised by the native grammarians must have used

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4 For the pre-glottalized consonants, see my article, “The hypothesis of a pre-glottalized series of consonants in Primitive Tai”, *BIHP*, 9 (1947), 147-187.
the terms “high”, “middle”, and “low” to indicate pitch levels, but it
does not agree with the modern standard Siamese system. Two possible
explanations can be offered, either the old Siamese had a system of pitch
levels as represented by these terms or the system was designed for some
other dialect and later adapted to the standard Siamese. There is at
present a group of southern dialects which seems to agree better with this
three-fold system.

b) The dialect of Nakhonsithammarat, as described by Mary Haas,
may be taken as an illustration of another type of three-fold division of
consonants. Henderson’s description of the Songkhla dialect agrees
essentially with Haas’ system, cf. also Brown’s description of these
dialects in his unpublished doctor’s dissertation. The division of consonants
into three classes is essentially the same as in standard Siamese, but the
influence on the development of tones is different.

<table>
<thead>
<tr>
<th>1. High</th>
<th>2. Middle</th>
<th>3. Low</th>
</tr>
</thead>
<tbody>
<tr>
<td>A.</td>
<td>high falling</td>
<td>mid gliding</td>
</tr>
<tr>
<td>B.</td>
<td>high falling</td>
<td>mid gliding</td>
</tr>
<tr>
<td>C.</td>
<td>high</td>
<td>mid</td>
</tr>
<tr>
<td>Ds</td>
<td>high</td>
<td>rising</td>
</tr>
<tr>
<td>Dl</td>
<td>high</td>
<td>mid</td>
</tr>
</tbody>
</table>

Examples: A1 maa “dog”, A2 kin “to eat”, A3 maa “to come”, B1 sii
“four”, B2 kai “chicken”, B3 phoo “father”, C1 haa “five”, C2 kaau
“nine”, C3 maa “horse”, Ds 1 sip “ten”, Ds 2 cet “seven”, Ds 3 nok
“bird”, Dl 1 chiik “to tear”, Dl 2 peet “eight”, Dl 3 luuk “child”.

The three-fold development of tones according to the consonant classes
would give us theoretically twelve tones. As A and B coalesce in the high
and the middle groups, and the tones developed from D can be assigned
to other tone classes, we have now only seven tones. The native system
of high, middle and low consonants agrees extremely well with the pitch
levels of this group of dialects. This enhances the view that the terms
high, middle, and low, though applied to the consonants, refer actually
to pitch levels of the tones and it is a language like this that serves as the
basis for the formulation of the Siamese system, but it would not necessarily
be true of the Proto-Tai system which is presumably much earlier.

c) In Thailand there is another dialect, that of Chiengmai, which also
divides the consonants into three classes, but in a different way from that
of the standard Siamese. The three classes are: 1. the surd class, con-
sisting all the Proto-Tai voiceless consonants, aspirated or unaspirated,
2. the glottal class, consisting of the Proto-Tai pre-glottalized consonants