

THE RELATIONSHIP BETWEEN TONES AND INITIALS IN TAI*

by

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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.

² Cf. M. Haas, "The tones of four Tai dialects", *BIHP*, 29 (1958), 817-836; S. Egerod, "Essentials of Shan phonology and script", *BIHP*, 29 (1957), 121-129; "Essentials of Khün phonology and script", *Acta Orientalia*, 24 (1959), 123-146; "Studies in Thai dialectology", *Acta Orientalia*, 26 (1961), 43-91; E. J. A. Henderson, "The tones of the Tai Dialect of Songkhla", *BIHP*, 30 (1959), 233-235; J. M. Brown, "From Ancient Thai to modern dialects (unpubl. thesis), 1962. - For the general discussion of the tone-system in the Tai languages, see K. Wulff, *Chinesisch und Tai* (1934); A. G. Haudricourt, "Les phonèmes et le vocabulaire du Thai commun", *JA*, 236 (1948), 197-238; "De l'origine des tons en vietnamien", *JA*, 242 (1954), 69-82; "Bipartition et tripartition des tons dans quelques langues d'Extrême Orient", *BSLP* 56 (1961), 163-180; and Tatsuo Nishida, "Tonemata Historica", *Gengo Kenkyo*, 25 (1954), 19-46.

- 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.³ 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.

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

Examples: A1 *pīi* "year", *khaai* "to sell", A2 *kīn* "person", *naa* "rice field", B1 *kau* "old", *mai* "new", B2 *taa* "river", *mee* "mother", C1 *naa* "face", *khaa* "to kill", C2 *toonp* "stomach", *luu?* "to know", D1 *tuk*

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,⁴ 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,

	1. <i>High</i>	2. <i>Middle</i>	3. <i>Low</i>
A.	24-rising	33-mid level	33-mid level
B.	22-low level	22-low level	41-falling
C.	41-falling	41-falling	453-high rise-fall
Ds	22-low level	22-low level	55-high level
Dl	22-low level	22-low level	41-falling

Examples: A1 *khaau* "white", *maa* "dog", A2 *pīi* "year", *Pau* "to get", A3 *naa* "rice field," *khon* "person", B1 *mai* "new", *thaa* "charcoal", B2 *kau* "old", *Pim* "satisfied", B3 *thaa* "dock", *mee* "mother", C1 *khaa* "to kill", *naa* "face", C2 *kau* "nine", *dai* "to get", C3 *maa* "horse", *thooj* "stomach". The D class words develop differently according to vocalic lengths. They are divided into two subclasses: Ds with a short vowel, and Dl with a long vowel or diphthong. Ds 1 *phak* "vegetable", Ds 2 *tok* "to fall", Ds 3 *nok* "bird", Dl 1 *maak* "betel nut", Dl 2 *taak* "to expose to the sun", D3 *nook* "out side".

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

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 Nakhonsithamarat, 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.

	1. <i>High</i>	2. <i>Middle</i>	3. <i>Low</i>
A.	high falling	mid gliding	mid falling
B.	high falling	mid gliding	rising
C.	high	mid	low
Ds	high	rising	low
Dl	high	mid	rising

Examples: A1 *maa* “dog”, A2 *kin* “to eat”, A3 *maa* “to come”, B1 *sii* “four”, B2 *kai* “chicken”, B3 *phəw* “father”, C1 *haa* “five”, C2 *kaau* “nine”, C3 *maa* “horse”, Ds 1 *sip* “ten”, Ds 2 *cet* “seven”, Ds 3 *nək* “bird”, Dl 1 *chiik* “to tear”, Dl 2 *pɛet* “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 Chiangmai, 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, consisting all the Proto-Tai voiceless consonants, aspirated or unaspirated, 2. the glottal class, consisting of the Proto-Tai pre-glottalized consonants