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Common Tai and Archaic Chinese

Tatsuo NISHIDA

1. A number of scholars have discussed the problem of whether there is any relationship between the Thai and Chinese languages. Among them, K. Wulff has carried out the most comprehensive research. In his *Chinesisch und Tai*, Wulff first made detailed comparative studies of Tai dialects, and then comparing them with Karlgren's reconstructed form of Ancient Chinese. This work, while an excellent and enduring one, fails to establish regularities of phonemic correspondence between the two languages. The Thai and Chinese languages are very close to each other not only in phonemic inventory and syllabic pattern, but also in syntax, and show one-to-one correlations. Nevertheless it is not easy to find systematic correspondences between individual phonemes and morphemes of the two languages. Therefore, it is quite natural to pose the question of which family the Thai language should be said to belong to.

2. It was previously proposed that the Sino-Tibetan language family, including Thai, should be brought into the Indonesian language family, and the whole incorporated into a larger group of languages. In his *Über das Verhältnis des Malayo-Polynesischen zum Indochinesischen*, Wulff again took up the question of the relationship between these two families. But this attempt, which proposed the existence of formal similarity between Thai and Indonesian, and the probability of certain co-relationships between them, can be endorsed only when further concrete comparisons have been made. In the same year, Paul Benedict suggested a new language family, "Kadai", which would consist of the following languages: Laqua and Lati in the Tonkin plateau, Kelao in southern China and Li in Hainan, whose proper placement in language families was so far unknown. By using Kadai, he tried to relate Thai to Proto-Indonesian. Benedict has summarized his assertion under the following headings:

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2. K. Wulff 1934.
3. Among the articles treating this subject are: Hsing Kung-wan 1955a 1955b, Chang Kung-chin 1958.
6. Haudricourt, independently of Benedict's research, compared the fourteen words of Lati, Laqua, Kelao and Dai (=Li) with the Common Tai which he himself had deduced, concluding that these languages had primitive forms before the Thai language suffered changes under the influence of Chinese and Khmer. Haudricourt 1948.
1. The true Indonesian substratum on the Asiatic mainland is represented by four scattered languages in southern China, northern Tonkin, and Hainan, all of which constitute a single linguistic stock (Kadai).

2. The recognition of the Kadai stock, which shows numerous points of contact with Thai, opens the way to a new interpretation of the latter as a more distant member of an archaic Thai-Kadai-Indonesian linguistic complex.

Despite his valuable research and its originality, which has drawn many anthropologists and linguists to accept his theory, Benedict fails to prove adequately the existence of his Kadai linguistic family.7

Besides larger linguistic groups with individual characteristics, such as Thai, Chinese, Burmese and Tibetan, there exist in Asia many languages which exhibit intermediary traits of several language groups but which cannot clearly be assigned to one. Most of these languages have not been investigated in detail. Benedict, using the restricted documents so far published, gave the name “Kadai” collectively to the four languages sharing Thai and Indonesian characteristics. Before recognizing these languages as one language family, however, further investigation should be made of languages which have similar traits. At the same time, their relationships to the Mak-Sui-Kam and Chuang language groups should be borne in mind. Also calling for further thorough study is the basis of Wulff and Benedict's argument that an Indonesian lexical layer should exist in the Thai language, whether their common elements be genealogical or borrowed. In any case, this possibility cannot be discarded prior to investigation.

3. On the relationship between the Thai and Chinese languages, A.-G. Haudricourt states as follows:8

On voit, d'après cette reconstitution des phonèmes de la langue commune, combien le thai est éloigné du chinois. Seul coïncide le système des consonnes finales et des tons; les voyelles et les initiales sont profondément différentes. Les mots de la langue commune incontestablement proches de mots chinois sont les noms de nombres, des techniques militaires (cheval, selle, éléphant, jouguet) et des techniques artisanales (métier à tisser, ouvrier, papier), bref un vocabulaire de civilisation susceptible d'emprunt. Au contraire le nom des parties du corps et le vocabulaire agricole ont peu d'affinité avec le vocabulaire chinois correspondant.

Now, is it proper to infer from this that these two languages belong to completely different families, or that, though belonging to the same family, they are both in rather remote kinship and that words showing structural similarity are Chinese loan words in Thai? Though I cannot present a definite answer to such a broad problem, I should like to discuss an aspect of this problem.

4. To begin with, the question to be proposed is whether it can be concluded, as

7. For example, J. H. Greenberg, Historical Linguistics and unwritten Languages (Kroeber, Anthropology Today, Chicago 1953).
Haudricourt does, that Thai vocabulary indicating parts of the body is derived from stems or roots other than Chinese. Choosing thirty words at random, let us examine the word forms of the two languages.9

<table>
<thead>
<tr>
<th>Common Tai</th>
<th>Archaic Chinese</th>
<th>Ancient Chinese</th>
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<tbody>
<tr>
<td>'head'</td>
<td>hrau HI</td>
<td>šjog</td>
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<tr>
<td>'hair'</td>
<td>phrom H1</td>
<td>pijwāt</td>
</tr>
<tr>
<td>'ear'</td>
<td>hruu H1</td>
<td>njāog</td>
</tr>
<tr>
<td>'nose'</td>
<td>dang H1</td>
<td>bhjād</td>
</tr>
<tr>
<td>'eye'</td>
<td>taa M1</td>
<td>mjök</td>
</tr>
<tr>
<td>'mouth'</td>
<td>paak, suup</td>
<td>khu</td>
</tr>
<tr>
<td>'tooth'</td>
<td>qhiāu H3, van L1</td>
<td>ćhjog</td>
</tr>
<tr>
<td>'tongue'</td>
<td>lin L3</td>
<td>dhjat</td>
</tr>
<tr>
<td>'face'</td>
<td>hnaa H3</td>
<td>ngan</td>
</tr>
<tr>
<td>'neck'</td>
<td>Goo L1</td>
<td>kjiang</td>
</tr>
<tr>
<td>'chin'</td>
<td>gaang L1</td>
<td>gjāg</td>
</tr>
<tr>
<td>'cheek'</td>
<td>kėm M3</td>
<td>kiaj</td>
</tr>
<tr>
<td>'hand'</td>
<td>mī L1</td>
<td>šjog</td>
</tr>
<tr>
<td>'finger'</td>
<td>niu L3</td>
<td>ĵar</td>
</tr>
<tr>
<td>'elbow'</td>
<td>sook</td>
<td>źīog</td>
</tr>
<tr>
<td>'leg'</td>
<td>qha H1</td>
<td>kiaj</td>
</tr>
<tr>
<td>'knee'</td>
<td>khēng H3</td>
<td>ghieng</td>
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<tr>
<td>'body'</td>
<td>ton M1</td>
<td>šjēn</td>
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<tr>
<td>'waist'</td>
<td>'ew M1</td>
<td>'jog</td>
</tr>
<tr>
<td>'shoulder'</td>
<td>Baa M2</td>
<td>kian</td>
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<tr>
<td>'belly'</td>
<td>puum M1</td>
<td>pijōk</td>
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<tr>
<td>'liver'</td>
<td>tap</td>
<td>kān</td>
</tr>
<tr>
<td>'heart'</td>
<td>caï M1</td>
<td>sjām</td>
</tr>
<tr>
<td>'lungs'</td>
<td>poot</td>
<td>phijwād</td>
</tr>
<tr>
<td>'stomach'</td>
<td>dōng L3</td>
<td>ghwād</td>
</tr>
<tr>
<td>'flesh'</td>
<td>niā L3</td>
<td>njōk</td>
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<tr>
<td>'blood'</td>
<td>liat</td>
<td>xīwēt</td>
</tr>
<tr>
<td>'muscle'</td>
<td>Fën M1</td>
<td>kjōn</td>
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<tr>
<td>'skin'</td>
<td>phiū H1</td>
<td>pijō</td>
</tr>
<tr>
<td>'navel'</td>
<td>sai-Brii M1</td>
<td>dzhiār</td>
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Clearly, the words 'eye', 'nose', 'mouth', 'shoulder', and 'liver' are very different in form, while some of the other words show striking formal similarities, among which are 'waist', 'knee', 'lungs', 'muscle', 'skin' and 'navel'. These words

9. Below I will use Karlgren's reconstructed forms for Archaic and Ancient Chinese as in his Grammata Serica Recensa, Stockholm 1957, with the exception of the aspiration which will be denoted by 'h' instead of '. The Common Tai forms cited here are quoted from my own personal notes and other unpublished papers. Cf. T. Nishida 1954, 1955.
may possibly be loan words as well as cognate words derived from the same stem. We must inquire, therefore, whether there are other words which show formal similarity of the type illustrated by the above examples. What concerns us in particular is the correspondence between vowels and finals, such as: the correspondence of ‘waist’—Common Tai -ew: Chinese -iog> -iâu (hence abbreviated C. T. and Ch. respectively) is paralleled by ‘cat’—C. T. mew L1: Ch. 猫 mjog>mjâu, and ‘to finish’—C. T. lew L3: Ch. 了 liog>liâu. Similarly, ‘knee’—C. T. -eeng: Ch. -iêng>iêng is paralleled by ‘hard’—C. T. kheeng H1: Ch. 勁 kjêng>kêng, and ‘powder’—C. T. pêeng M1: Ch. 醋 pjêng>pjâng: ‘navel’—C. T. -ai: Ch. -iêg>iei, -iêr>iei by ‘fowl’—C. T. kai M2: Ch. 雞 kieig>kiei, ‘ladder’—C. T. ’dài M1: Ch. 梯 thiar>thiei, and ‘to till’—C. T. thai H1: Ch. 畢 iar>iei. On the contrary we cannot find examples which parallel ‘lungs’—C. T. -iwad: Ch. 狀 iwad>iwvi; ‘muscle’—C. T. -en: Ch. -ian>ian, and ‘skin’ C. T. -iu: Ch. -iwo>iu. As a result of this we cannot but hesitate to treat these three words as loan words from Chinese. Besides the above-cited seven words, the five words: ‘hair,’ ‘cheek,’ ‘belly,’ ‘leg’ and ‘flesh’ bear formal resemblances between the two languages and, therefore, may possibly be cognate words. Out of these five examples, in the first three and the last two respectively there are similar correspondences. In ‘hair,’ ‘cheek’ and ‘belly’, the Tai final nasal consonants correlate with Chinese stops, i.e. -m: -t, -m: -p, -m: -k. Other examples of this correspondence can be found: -n: -t ‘to eat’—C. T. kin M1 (T.M.C. *krin): Ch. 吃 kiat>kiat; -n: -k ‘stone’—C. T. hrin H1: Ch. 石 dijak>jjak; and -ng: -k ‘force’—C. T. reeng L1: Ch. 力 ljôk>ljôk. On the contrary, a Tai final stop sometimes corresponds to a Chinese final nasal; i.e. ‘scale (fish)’—C. T. klet: Ch. 鰭 ljên>ljên, and ‘whip’—C. T. vaat: Ch. 竊 pjân>pjân. These final consonants, whose function cannot be clarified, may be regarded as a sort of suffix. We can explain that ‘hair’ has *phrwa~prwa (?) as its common form, suffix -m being suffixed in Tai and suffix -t in Chinese. Similarly it can be inferred that ‘cheek’ consists of the common root *kee- and suffix -m (Tai) or -t (Chinese); ‘belly’ of root *pu- or *pju- and suffix -m (Tai) or -k (Chinese); ‘to eat’ of root *ki- and suffix -n (Tai) or -t (Chinese); ‘scale’ of root *kle- and suffix -t (Tai) or -n (Chinese) and ‘whip’ of root baa- and suffix -t (Tai) or -n (Chinese).

On the other hand, the last two examples ‘leg’ and ‘flesh’ have this kind of suffix only in Chinese, and not in Tai. As for ‘leg,’ the Tai form qha H1 is identical with the common root, the Chinese form kjak being suffixed by -k. Likewise, ‘flesh’, whose root is almost equal to Tai nîa L3, is suffixed by -k, forming Chinese njôk. On the contrary, in the following examples, only the Tai words retain suffixes -m, -ng and the Chinese forms have no suffix.

10. ‘To take off’ Ch. 脫 thwat—thuat: C. T. thôat is close to this.
11. For the other Tai forms corresponding to Ancient Chinese 虛 jü rhyme, see p. 8 and footnote 18 of this paper.
In addition to the examples cited thus far, we can show more examples in which Tai words denoting parts of the body, in spite of the apparent lack of formal resemblance to the Chinese equivalents, may probably have common stems or roots. Let us take ‘blood’ as an example. The Tai $lidt$ and the Chinese $xiwet$ have apparently no formal relation. But here we cannot completely deny the probability that these two forms are derived from the same *qWhl. Just as we cannot deny that Tai $khem$ HI (‘needle’) and Chinese 針 $ijam>tjsam$ have a common stem, we cannot assert that $qhidu$ H3 (‘tooth’) has no relation at all with Chinese 齒 $ihdag>tshi$. Again, Tai $mi$ LI (‘hand’) is formally very remote from Chinese 手 $sijg>sjau$, but we may safely assume a correlation between m- (Tai) and ｚ- (Chinese) in these two words.

These paralleled correspondences cannot be entirely accidental. We must try to detect regular or systematic correspondences underlying the apparent irregularities between the two languages. In my opinion, out of the above-cited thirty words for body parts, some sixty percent may share common stems or roots.

5. In some cases the Tai form $abc$ corresponds to the Chinese form $a'b'c'$ when aligned with the Ancient Chinese rhyme divisions. For instance, Common Tai $aa$ corresponds to the Ancient Chinese 果 择 $kuo$ group Div. II 麻韻 $ma$ 湛.  

-ien and -een correspond to 山揔 $shan$ group Div. III 仙韻 (sien rhyme) and Div. IV 先韻 (hien rhyme) respectively:

<table>
<thead>
<tr>
<th>Div. III</th>
<th>‘to be connected’</th>
<th>連 $lian$ &gt; $lian$ : lien L1</th>
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<tbody>
<tr>
<td>‘to change’</td>
<td>蜻 $plian$ &gt; $pjan$ : plien M2</td>
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</tr>
<tr>
<td>‘to cut’</td>
<td>剪 $tsian$ &gt; $tsjan$ : cien M1</td>
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12. To this correspond Mak phjaat and Sui phjaat, so I infer Labio-Velaire *qWh- as a common initial phoneme. See T. Nishida 1955: 34.

13. Apart from this mth- can be supposed for ‘hand.’ From the common forms *md-, *mth-, the shift into Tai and Chinese resembles that of *mth-, *md- in Tibeto-Burmese. *mdugs ‘time’, *mdong ‘tree.’

14. To ‘horse’ correlate ‘to ride’ Ch. 騎 $ghia>ghjie$ C. T. $khi$ H1, kh’ii H1 and ‘saddle’ Ch. 鞍 $an>>an$: C. T. ‘aan, and to ‘tusk’ correlates ‘elephant’ Ch. 象 $djjang>xjang$: C. T. $jaang$ L3.
In comparison with the vocabulary for parts of the body these examples have definite similarity and most of the Tai words coincide with the Ancient Chinese forms. Hence the strong possibility that these words were borrowed from Chinese into Tai, especially about the time when Ancient Chinese was current. Nevertheless there are no firm grounds to maintain this.

6. I have so far cited several examples which share the same roots or stems, but I do not think that examples of this kind can be increased so as to enable us to prove the relationship between the two languages. Intervention of various factors makes it hard to prove their kinship. At the same time, however, it should be emphasized that this research contains another significance. That is to say, firstly, as a result of comparing the two languages, the Tai form, be it a loan word or not, gives grounds to revise and modify the reconstructed form of Archaic Chinese, and then, Archaic Chinese forms present a foundation on which to construct the earlier stage of Common Tai.

7. To begin with, let us discuss the first matter. Under Div. I 歌韵 ko rhyme corresponding to the above-mentioned 果抿 kuo group Div. II 麻韵 ma rhyme come the following examples

- 'left' Ch. 左 tsâ $\rightarrow$ tsâ $: \quad$ zaai L3 $< \quad$ draai
- 'song' Ch. 歌 kâ $\rightarrow$ kâ $: \quad$ gaaai L1
- 'that' Ch. 那 nâr $\rightarrow$ nâ $: \quad$ naai L3
- 'fire' Ch. 火 xwâr $\rightarrow$ xwaï15 $: \quad$ vai L1 $< \quad$ vaaï?

The vowels of the four words, all belonging to ko rhyme in the Ancient Chinese, can be supposed to be $\hat{a}$, but in the Archaic Chinese 'left' and 'song' belong to Class 35 (according to Karlgren's classification), while 'fire' and 'that' to Class 8. We take the former to be $\hat{a}$ and the latter $\hat{ar}$. The assumption of $\hat{ar}$ in the latter is based upon the fact that in Shî king rhyme and Hie shêng characters the words of this group come into contact with the words of -n class and -r class. xwâr rhymes with ‘jar (Shiking 154) and dhjær (212), and ‘that’ rhymes with gân, xjian and niân (215). As opposed to this, Class 35 has no relation with the class which has a final consonant. The assumed -ar in ‘fire’ and ‘that’ can be well supported by the fact that Tai aai corresponds to it. But also for the words in Class 35, at least, for ‘left’ and ‘song’, we may properly assume *-âr as a result of the comparison with the Tai equivalents, though we have no direct support for this in Archaic Chinese documents. From the viewpoint of comparative linguistics, we would like to make up for the defect that the reconstruction of Archaic Chinese is only based upon Shî king and Hie shêng characters.

15. This Archaic Chinese form can be traced back to *xvar or *xbar<sbar(?). And Kachin wân ‘fire’ corresponds to this *xvar or *xbar.
Now, to discuss the second problem, let us begin with the following three words:

1. 'nine'  
   Ch. 九 家都知道 > 九 I : T. C. kau M3
2. 'old'  
   Ch. 老 九知道自己 > 九 I : T. C. kau M2
3. 'to scratch'  
   Ch. 撺 九知道自己 > 九 I : T. C. kau M1

These three basic words are, almost without doubt, derived from the same stems. We can give several examples which fall under the correspondences of Ancient Chinese k- (見母 kien): Common Tai k-; An. Ch. gh- (群母 kūn): C. T. k-; and An. Ch. s- (心母 sin): C. T. k-. They are 'wide'—Ch. 廣 kwang: C. T. kwaang M3, 'to grow old'—Ch. 藉 ghji: C. T. kē M2, 'before'—Ch. 先 sien > sian: C. T. kōn M2, etc. The vowel correspondence of Ancient Chinese jau (尤韻 you rhyme): C. T. au can be perceived not only in 'nine' and 'old', but also in 'pigeon'—Ch. 鸟 k Hawth: C. T. khau H1 and 'mountain'—Ch. 山 k Hawth: C. T. khau H1. Besides 'to scratch', there are 'early'—Ch. 早 tsau: C. T. jau L3 and 'liquor'—Ch. 酒 lōu: C. T. hlau H3 > *khlau, which are in the correspondence of Ancient Chinese ao (豪韻 hao rhyme): Common Tai -au.

We may safely suppose that the above-mentioned correspondences of the three words show firstly that Common Tai k- has three origins, and secondly that Common Tai -au has two origins.

In my paper treating the comparative study of the Common Tai and the Mak and Sui languages, I assumed that Common Tai k- is derived from *k- and *kr-16. The *k- and *kr- show the following correspondences:

1. *k-  
   (a) C. T. k- : Mak k- : Sui q-
   e.g. 'fowl'—*kai, 'old'—*kau, 'before'—*kōn
   (b) C. T. k- : Mak t- : Sui tś-
   e.g. 'nine'—*kau, 'to grow old'—*kee, 'to collect'—*kēp
2. *kr-  
   C. T. k- : Mak s- : Sui ts-
   e.g. 'to eat'—*krin, 'straw sandals'—*krīak

Further comparison of these words with Chinese permit us to infer *k- in 'nine' and 'fowl', *g- in 'old' and 'to grow old', *kj- in 'before' and *kr- in 'to eat'. As for the correspondence Ch. s- : C. T. k-, we infer the transitions 'before' *kōn > kjan > sian 先, and 'each other' *kjāng > sjiang 相 (C. T. kan). Here we cannot explain under what conditions the *g- of 'old' and 'to grow old', which was deduced from the comparison of Common Tai *g- (a phoneme presumed to exist in the Mak and Sui languages) with Chinese, later split up into g- and k-. In the paper already referred to, I inferred three kinds of *-au from Common Tai -au and the corresponding Mak and Sui forms, representing them by -au1, -au2 and -au3.

1. -au1  
   C. T. -au : Mak -au : Sui -āu

e.g. ‘to howl’—*hau, ‘light (not heavy)’—*hau, ‘master’—*cau

2. -au

C. T. -aau: Mak -aau: Sui -au

e.g. ‘to take’—*au, ‘horns’—*ghau, ‘pillar’—*sau, ‘old’, ‘liquor’

3. -au

C. T. -aau: Mak -u: Sui -u

e.g. ‘nine’

When these words are compared with Archaic Chinese three kinds of correspondence in Common Tai -au can be found, regardless of the related Mak -au, -aau, -au.

1. a) C. T. -au: Archaic Chinese -uk, -uk

C. T. khau ‘rice’ : Ch. 糭 kuk > kuk

khau ‘horns’: Ch. 角 kūk > kāk

‘au ‘to hold’: Ch. 握 ‘uk > āk

b) C. T. -au: Archaic Chinese -jūg


2. C. T. -au: Archaic Chinese -ōg

above-cited ‘early’, ‘to scratch’, ‘liquor’,

‘to howl’ C. T. hau < khrau (?): Ch. 叫 kiōg > kieu


C. T. sau ‘pillar’ : Ch. 柱 dējū > dējū

C. T. cau master’ : Ch. 主 ījū > tsījū

The final stem form of the words belonging to the correspondence 1. a) was -uk or -uk in Archaic Chinese, while in Proto-Tai it was -ug, e.g. Proto-Tai ‘rice’ *kug, ‘horns’ *khug, ‘to hold’ *ug. From this we can infer that there was no difference between the final form of Proto-Tai in 1. a) and that in 1. b).

Ancient Chinese 山歌 yu rhyme (-ju) is divided into two Archaic Chinese forms -jug (Class 31) and -jū (Class 34) according to whether it comes into contact with -uk, -ok or not in Shī King rhymes and Hie Shēng characters. The ‘master’ and ‘pillar’ which fit under 3 above have no contact with the rhymes of -uk or -ōg class; hence we can infer that they are Archaic Chinese ījū and dējū. Taking into consideration the result of the comparison with Common Tai, however, it seems more suitable to put the two words under -jug class (Class 31), in parallel with the above-stated 1.a) and 1.b). At least *cjug and *sjug must be accepted as their Proto-Tai equivalents. In other words, as in 1.b), opposed to 1.a), these forms are the stem belongs to Div. III rhyme.

What is of greater interest is the vocabulary with correspondence in 2) above.

17. On the development of final stops, the forms of Tushan and Sek dialects are very suggestive. Li 1971, Gedney 1970, Haudricourt 1963.

18. Besides this, for 山 yu rhyme, there are examples which correspond to Common Tai -cū. ‘Father’—Ch. 父 bhjwò>bhjū: C. T. bòc L2; ‘magician’—Ch. 仏 mjwò>mju: C. T. hmòc H1. Hence it can be said that this dichotomy in Archaic Chinese is correct in view of the corresponding of Thai. These two examples agree with the Archaic Chinese forms, while the above example ‘skin’ coincides with Ancient Chinese form.
These words appear to possess the stem form of Div. I rhyme, but in fact, in parallel with ‘to cry’ linkplain{kiōg}, they were the forms which should be classified under Div. III rhyme with medials -1-, -r- of -iators, -r-og. ‘Liquor’ was originally *khlôg, as compared with its Tai equivalent *khlau. ‘to cry’ linkplain{kiōg} was derived from *krôg, and ‘to scratch’ linkplain{sôg} from *khjôg. ‘Early’ tsôg is assumed to have been originally *drôg or *trôg by the analogy of ‘left’ linkplain{tsâ}: Tai zaai<dzaai<draai. Karlgren invested the main vowel 0 of ediator in those words with the force of closed 0 near ù. Therefore it can be assumed that the main vowel of the Ancient Chinese forms corresponding to the Tai -au was ù. But this main vowel -u- does not correspond to -u of the Tai -au. The latter -u can be regarded as the form derived from final -g. It can be assumed that the main vowel ù was changed through a into a. This shift is paralleled with the transition from Archaic to Ancient Chinese.

- ‘rice’ *khug > khâu > khaul
- ‘master’ *ciug > ciau > cau
- ‘to scratch’ *khjûg > khjâu > kau
- ‘liquor’ *khlug > khlau > khaul

8. These words correspond to the Archaic Chinese forms rather than the Ancient Chinese ones. Hence there is less probability that these words were borrowed into Tai from Chinese. Nevertheless, even words with these conditions may have been borrowed Chinese words. It can thus be inferred from the following fact. It is almost certain that the series of words indicating terms of the twelve-year cycle were borrowed from Chinese, among which are:20

<table>
<thead>
<tr>
<th>Archaic Chinese</th>
<th>Ancient Chinese</th>
<th>Pa-po</th>
<th>Ahom</th>
<th>Tai-lû</th>
</tr>
</thead>
<tbody>
<tr>
<td>‘ox’ ㄆ thnjôg &gt; thiau</td>
<td>pao</td>
<td>piau&lt;plau&lt;štla(?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>‘hen’ 雞 zjôg &gt; jiau</td>
<td>rao</td>
<td>rão</td>
<td>hrau&lt;hrau</td>
<td></td>
</tr>
<tr>
<td>‘hare’ @index mlôg &gt; mau</td>
<td>mao</td>
<td>mão</td>
<td>mau&lt;mau</td>
<td></td>
</tr>
</tbody>
</table>

We cannot determine when these Chinese words were first introduced into the Tai language, but since their process of change is very close to that of the words treated under 1.b) and 2, there is the possibility that, if these are clearly Chinese loan words, the latter were also borrowed from Chinese. But I should like to refute this hypothesis. I think it more appropriate to suppose that a series of cyclic terms was borrowed and then incorporated into Tai, and suffered the same change, because they were equal in their syllabic patterns to words with original Tai stems. Tai and Chinese are quite alike in their syllabic patterns, so that words borrowed from one language into the other followed the same process of shift as the native words did. This fact complicates the work of comparison of these two languages.

Concerning the history of the Tai language, there exist no documents which

date back earlier than the thirteenth century. However if, from the argument so far advanced, the correspondence between Tai forms after the thirteenth century and Chinese ones can be qualified and the parallelism of changes thereafter can be perceived, then it is not impossible to deduce pre-thirteenth century Tai (or Proto-Tai) forms from the Archaic Chinese ones. Loan words too, at that stage, can offer grounds to support these hypotheses.

9. In comparing languages, the parallelism perceived in semantic opposites such as ‘near’ and ‘far’, ‘left’ and ‘right’ makes by far a greater contribution to the proof of kinship between two given languages than the fact that both of them possess a certain type of phonemic combination such as gl-, gr-, pl-.

\[
\begin{align*}
\text{‘near’} & \quad \text{Ch. 近} \, ghjān > ghjān : \text{C. T. kłaï M3} < ^g*\text{hla-} \\
\text{‘far’} & \quad \text{Ch. 遠} \, giwàn > jjijwn : \text{C. T. kłaï M1} < ^g\text{la-}\,^21 \\
\text{‘left’} & \quad \text{Ch. 左} \, tsā(r) > tsā : \text{C. T. zaai L3} < \text{draai} < ^*\text{draar} \\
\text{‘right’} & \quad \text{Ch. 右} \, giūg > jiµu : \text{C. T. khwaa H1} < ^q\text{hua} < ^g*\text{u-}
\end{align*}
\]

Both members of each pair are seldom borrowed at the same time, which fact can be regarded as one of the stronger bases on which to prove the relationship between the two languages. We should search for examples to demonstrate that they consist of the same root plus different suffixes, rather than seek mere formal coincidence between the two languages. For this reason, words such as ‘hair’, ‘cheek’, ‘belly’, ‘leg’, ‘flesh’, ‘to eat’, ‘force’, ‘scale’ and ‘ship’ can prove the relationship between the Tai and Chinese languages because these words need the above-mentioned corresponding conditions. To cite another example, apparently there is no formal relation between 米 lái (Ancient Chinese) and maa 1.1 (Common Tai) ‘to come’, but it cannot be determined for this reason alone that lái and maa derive from different roots. If the Archaic Chinese form of lái was *mlag\,^22, then for the Tai maa there is a strong probability that it was *mlaa in Proto-Tai. To this corresponds Lolo-Burmese *laa.

In my opinion, the problem of whether the Tai languages belong to the Sino-Tibetan family allows room for further discussion by additional compilation of words of this kind. I do not think that Tai belongs to a different language family from that of Chinese, nor can I determine that Tai words structurally similar to Chinese are all borrowings from it, though a considerable number of words are in fact borrowed from Chinese. As to whether the two languages are remotely related or not, questions still exist and will not be easily resolved.\,^23

21. Both ‘near’ and ‘far’ have suffix -n in Chinese. Common Tai -ai and -ai can be supposed to have been derived from -ar, etc.

22. It is possible to set up *mlag to ‘to come’ based on an assumption that 米 *lag and 穀 *mwek ‘wheat’ were cognate words.

23. We can find other linguistic phenomena in Tai parallel with Chinese, as, for instance, the production of labio-dental consonants from the bilabials, but on the correlation between the change of initial consonants and tonal development, we cannot say Tai and Northern Chinese evolved in the same direction. These problems I shall discuss in another paper.
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