

# TAI SCRIPTS AND PROTO - TAI :

## THE CASE OF PALATAL CONTINUANTS

*Anthony Diller*

In the area of Tai philology, we are indebted to Professor G. Coedès for a lifetime of careful study of early Tai and Khmer written sources. Similarly, for Tai comparative-historical linguistics, Professor Fang Kuei Li has left with us the invaluable results of several decades of studying Tai languages and linguistics. This paper is a modest attempt to assess together some ideas of these great scholars and it is intended as a small tribute to each of them.<sup>1</sup>

Attention below will focus on some features of early writing systems used in both in Sukhothai and in the Lan Na area<sup>2</sup>, and how these features may be interpreted in terms of comparative Tai linguistic evidence. We focus on palatal nasal and semivowel consonants. This consideration follows an important earlier study of how these initials are represented in Sukhothai sources by Duangduen Suwattee and Pranee Kullavanijaya (1976). To their important conclusions we add consideration of Lan Na and Lao sources.

The inventory of fifty Lan Na consonant symbols given by Davis in his *Northern Thai Reader* (1970: 4) includes four separate symbols relating to present-

day Nan palatal continuant sounds [ $\tilde{n}$ ] and [ $y$ ] - one of which has no single corresponding letter in Standard Thai. The latter 'extra Y' symbol (called here for convenience 'lustral Y' - for reasons noted below) is the focus of discussion in later sections. As we see, the appearance of this symbol raises interesting questions and also points to several answers in the history of Southwestern Tai writing systems and in establishing sequences of diachronic sound changes in these languages.

In particular, suggestions made by Coedès (1925) in his *Tamnan nangsū' thāi* ('History of Tai scripts') and by others as to the development of Lan Na, Tai Lü and Sukhothai scripts would appear to require some revision.

In the following sections we take as axiomatic conclusions of Gelb (1952) as to the necessity of distinguishing superficial forms from systematic functions in any analysis of orthographic change or innovation. Discussion below presupposes that an adequate analysis of a single symbol, such as 'lustral Y' as it appears in written sources, must take into account several sets of wider relations. There

<sup>1</sup> The Thai National Research Council facilitated field study relating to this paper, which was funded by the Australian Research Grants Scheme: co-researchers were Drs J.C. Eade and B.J. Terwiel. A number of scholars assisted me in preparing this paper, but none is responsible for its shortcomings or questionable conclusions. Dr. Gehan Wijeyewardene has kindly supplied me with important references, as has Dr. Hans Penth and Mr. Thawee Sawangpanyangkul. My thanks to Mrs. Aroonrut Wichienkeo, who has patiently instructed me in the fundamentals of Lan Na script and has shared with me the findings of her recent research work. She has also been at the forefront of a commendable movement in Northern Thailand to study and preserve the Lan Na orthographic heritage. Lan Na script has faced strong Central Thai opposition. According to Singkha Wannasai (1975:8), from the time of King Chulalongkorn's administrative reforms (after about 1890) there have been repeated efforts to eliminate the Lan Na text tradition - the most vigorous being in 1944, during the Pibun Songkhram government, when abbots were actually ordered to burn Buddhist scriptures written in Lan Na script.

<sup>2</sup> Lan Na script is also referred to as *tua mu'ang* and (*tua*) *tham*; (i.e. 'dharma letters', presumably because the script was first and foremost associated with religious texts). An additional script called *thai nithet* came into use in the 19<sup>th</sup> century and has direct links with Central Thai writing practice. It is not considered here (see Singkha Wannasai 1975:5). Some authorities use the term 'Lan Na' (writing) to refer inclusively to a different script called *fāk khā:m* described below: that inclusive practice is not followed here.

are factors relating both to reconstructed earlier Tai phonology and to systematic orthographic practices and conventions. For example, to note that 'lustral Y' was formed by adding a 'tail' to a 'normal Y' is only a preliminary observation. One must go on to ask: What were the purposes or functions of 'added tails' more generally in the particular orthography? How did the symbol pattern contrastively with respect to others in its articulatory category? How would those contrast relations map onto phonological reconstructions? Finally, historical and cultural factors relating to writing practices need to be taken into account as well. As we see, a reasonable hypothesis can be supported on the basis of all of these factors taken together.

## 1. THE 'TRADITIONAL' VIEW OF SUKHOTHAI WRITING

In what could be called the traditional account of the spread of Thai scripts ( e.g. Coedès 1925; Prasert na Nagara 1985; Chit Phumisak 1983 ), the 14<sup>th</sup> - century Sukhothai writing system holds a key position in the development of several ( but not all ) Tai script traditions. Sukhothai writing, in the traditional view, was based on contemporary late Khmer - Pallava and perhaps also Hariphunchai Mon-Pallava prototypes - many letters of the two scripts being quite similar in form.<sup>3</sup> But Sukhothai script also showed substantial innovations, both in what is traditionally the first example - the Ramkhamhaeng Inscription - and in other writing of the Sukhothai corpus.

To the modern reader, innovations will undoubtedly be most strikingly evident in Inscription 1, dated 1292 A.D. and ascribed to King Ramkhamhaeng himself in the traditional view (Griswold and Prasert na Nagara, 1971). As is well-known, Inscription 1's innovative system of 'on-line' i-and u-vowel signs is

not to be found in subsequently-dated sources.<sup>4</sup> However current impressions of 'relative strangeness' need not lead us to overlook important innovating features shared by Inscription 1 and by most others dated subsequently in the 14<sup>th</sup> - century Sukhothai corpus.

[ 1 ] indicates some innovations (i.e. changes from contemporary Mon and Khmer systems most likely to have been prototypes).<sup>5</sup> These are shared by the majority of the 14<sup>th</sup> - century Sukhothai Tai inscriptions - including Inscription 1.

[1] (i) Compound representation [ glottal-stop + Y ]. This is regularly used to represent a particular set of items, including ( cognates of Modern Thai ) yù: 'stay', yù:n 'stand', yāw 'house', etc. ( Cp. Modern Thai spelling with 'ó': - nam' of yù: 'stay'; yà: 'don't'; yà:ng 'sort, kind'; yà:k 'want'. See discussion below. )

( ii ) Superficial innovations in letter shape: *and a to*

(a) The Sukhothai form for the letter Y is a clear simplification of plausible prototypes: earlier scripts show two connected 'U-like' units; Sukhothai script, only one.

(b) the symbols for the velar nasal [ŋ] and palatal aspirate [ç] represent clear and bold reversals of Khmer (and/or possibly Mon) prototype forms: Sukhothai letters are turned around 180° with respect to all contemporary Khmer and Mon samples presently available to us.

(c) The form of the symbol regularly representing [n] also departs markedly from Mon and Khmer prototype scripts.

(iii) A separate single symbol for the vowel pronounced (now, at least) as [o:] both for Tai items and also for Indic - provenance vocabulary. This symbol was written (as now) preceding its associated con-

<sup>3</sup> Naina Prongthura ( 1984:14 ): Dhawaj Poonotoke ( 1983:21, 24 ).

It is important to note that the essential innovation did not lie in placing these vowel signs on-line *per se*, since Khmer-Pallava as well as other Indic-based scripts had similar on-line symbols for words beginning in vowel-sounds /i:-/and/u:-/. In fact, the latter symbols somewhat resemble those used on Inscription 1. The innovation lay in establishing an interpretive convention: to allow the value of such symbols to represent either a vowel sounding before, or a vowel sounding after, the consonant that orthographically followed. Thus in 'Si Intharathit', both the /i:-/ in *Si* and the first vowel sound in *Intharathit* are treated in the same way: with a preceding on-line /i:-/ symbol. In Khmer-Pallava, only the latter would have been treated in this on-line way. Note however that the way of representing the postconsonantal /-e:-/ sound in Khmer and similar scripts was exactly analogous to the reading allowed for /i:-/, etc., on Inscription 1. So the innovation was not so much the physical invention of on-line symbols as establishing a new (or actually an additional) method of reading.

5 See Naina Prongthura (1984:14).

sonant. ( In Mon and Khmer prototype scripts [ o: ] is routinely a compound vowel, either written as a discontinuous before - and - after configuration somewhat resembling that used to represent [ -aw ] in Modern Thai or else as the sign for [ e: ] along with a superscript loop above the following consonant - the latter arrangement being characteristic of 'late' Khmer Pallava scripts and a plausible basis for innovating the Sukhothai [ o: ] through joining of the two components. )

( iv ) A separate representation for the low vowel [ ae: ], created by doubling the symbol for [ e: ]. This vowel representation is not found in prototype scripts. ( The sound unit was probably either absent or not phonemic in Old Mon and Khmer. )

( v ) A special complex three - component representation created for the diphthong [ u'a ]; in some texts this is simplified to two components in the presence of a final consonant.

( vi ) Creation of three new symbols to complete the full range of Tai labial contrasts - viz, those giving rise to Modern Thai [ p ], [ b ], [ ph ], [ f ]. The latter two are each with paired high - tone - class ( sŭ:ng ) and low - tone - class ( tăm ) counterpart letters. Sukhothai symbols for ( what are now, at least ) [ p ], [ f ]/[ high - class ] and [ f ]/[ low - class ] were clearly created systematically by raising as a looped 'tail' the rightmost vertical sides of preexisting symbols, i.e. those symbols respectively representing ( what are now, at least ) [ b ], [ ph ]/[ high - class ] and [ ph ]/[ low - class ].

( vii ) Similar analogical creation of low - class [ s ] ( sŏ: ) by modification of [ ch ]/[ low - class ] ( chŏ: : chá:ng - again, giving these symbols their modern values ).

( viii ) Minimal use of vertical ligatures ( except occasionally for - r - ), but instead consistent use of horizontal cluster representations, both for Indic and for Tai - provenance vocabulary. ( There is good evidence that items perceived as clusters or functioning so phonologically were regularly represented by an

iconic 'close juxtaposition' of vertical symbols. )

Although the majority of presently known Sukhothai inscriptions are written in the 'Classical Sukhothai' ( henceforth SK ) writing system, characterized in part by the innovations in [ 1 ], nonetheless other scripts were clearly in use in the Sukhothai area. Orthographic variation, pluralism and experimentation appear to have been the tolerated situation in the 14<sup>th</sup> century. The notion of functional differentiation of scripts is also important. As one method for writing Pali, monks at Sukhothai clearly used the Mon alphabet very much as it appeared in Hariphunchai ( Lamphun ) at about the same time. A functional differentiation of writing systems is evident in the Sukhothai 'golden palm - leaf' text of 1376, first brought to general attention by Prince Damrong Rajanubhab.<sup>6</sup> The gold sheet in palm - leaf shape is inscribed with three lines the Tai language in SK, followed by a brief Pali invocation written in the Mon - based system.

Khmer script - presumably an SK prototype - was widely used in the Sukhothai area to write both Pali and Khmer.<sup>7</sup> Interestingly, Khmer letters with specifically Khmer writing practices ( e.g. subscript cluster representation, etc. ) were also used to write Tai, thus in some sense competing with SK. In the Chai-nat area similar examples have been found dating from about 1400 ; a few of innovations of [ 1 ] are introduced into this otherwise Khmer writing - presumably to represent Tai phonemic contrasts.<sup>8</sup>

## 2. THE ' SUKHOTHAI - CENTRIC ' VIEW OF LAN NA ORTHOGRAPHIC HISTORY

In the traditional view, Sukhothai - like writing became established in the Lan Na area in association with Buddhist activity. This is evidenced perhaps in an inscription found in Phrae - up the Yom river from Sukhothai - commemorating a chedi established in 1339 ( Inscription 107 ). More overtly, the Wat

<sup>6</sup> Charu'k samai Sukhothai ( 1983:385 ); the editors of this work characterize the 1376 Pali text in question as the first known example of Lan Na script, but an essentially similar Mon script had been used to write Pali in the Lamphun area for some two centuries ( *Wikho' silacharu'k nai phiphithaphansathan haeng chat Hariphunchai*, 1979 ).

<sup>7</sup> E.g. in the 'Mango - Grove' inscriptions of 1361; *Charu'k samai Sukhothai* ( 1983 : 222-256 ); see also *Charu'k nai Prathet Thai* 5 ( 1986:43-62 ).

<sup>8</sup> viz [ 1 ] i, iv; see *Charu'k nai Prathet Thai* 5 ( 1986:77-83; 201-221 ).

Phra Yu'n inscription of Lamphun ( 1371; Inscription 62, or Lamphun - 38 ) refers to missionary activities of a scholarly monk from the Sukhothai south. The method of writing on these inscriptions, and of some six others in the area, is quite similar to contemporary writing of the Sukhothai area proper.<sup>9</sup>

Starting with an inscription dated 1411 ( Inscription Lamphun - 9, originally from Phayao ) a somewhat divergent type of Sukhothai - like script is documented in the Lan Na area. This is referred to as Fak Kham ( hence forth FK ) script > fāk khǎ:m ' tamarind pod ', probably referring to the script's somewhat tapering letter shapes ).<sup>10</sup> FK was used to write Tai on over a hundred inscriptions in the Lan Na region for the next 150 years and sporadically thereafter.<sup>11</sup> The content of these inscriptions is almost entirely a matter of bearing witness to monastic land grants or to the donation and dedication of Buddhist buildings, images and relics.

In the traditional account of Thai script development, FK writing has been considered a straight forward subsequent development of SK. Indeed, it shares with SK virtually all of the major systematic innovations from plausible Mon or Khmer prototypes, e.g. most in [ 1 ] ( see Naina Prongthura 1984 : 14; Prasert na Nagara 1985 : 87 ). The only real inventory change relates to [ 1 ] ( i ) and its relation to ' lustral Y ', discussed below.

In Lan Na, after 1420 and especially during the reign of King Tilokaracha, there was reportedly a refreshment of the Theravada tradition through direct contact with Lanka. Missionary activity appears to have spread FK writing to Nan by 1427, to Keng Tung by 1451 and to other Northern centres. FK was used to write Tai - language texts on stone, but - save for brief invocations - apparently not to write Pali scriptures.

As noted above for Sukhothai, and as was undoubtedly the case in the Lan Na area as well, a script which is best referred to as ' ( Hariphunchai ) Mon ' from its earlier cultural roots was commonly

used in the 14<sup>th</sup> and 15<sup>th</sup> centuries to write Pali texts, e.g. Buddhist scriptures written on palm leaves.<sup>12</sup> In terms of presently available evidence, the first attested and dated ' innovative ' use of this script to write a text in a language unambiguously Tai ( instead of Pali or Mon ) is from 1465 ( Prasert na Nagara 1985 : 87; Penth 1973 ). This is a full half a century after the first documented appearance of FK in the Lan Na area, and close to a century after the appearance of SK there. The 1465 text is in the bilingual Pali : Tai dedication of a Buddha image of Wat Chiang Man, Chiang Mai; other early uses are similar, with Tai language material quite restricted. As Penth ( 1985a, etc. ) has surmised, there undoubtedly must have been attempts prior to this to write Tai using Mon and/or other Indic scripts; however, for the present at least, conclusively dated examples of earlier Tai texts in such scripts have yet to be found; see below.<sup>13</sup>

As Mon script came to be used to write Tai more regularly - first on bronze images ( and palm leaves? ) and considerably later on stone inscriptions - certain SK innovations were introduced. The obvious immediate provenance for these innovations ( but of course not for other features of Lan Na writing ) would be local FK; i.e. through a progression SK > FK > LN ( i.e. Lan Na, and so henceforth ). These innovations would appear to be just the features required to supplement the Mon - based writing system in order to represent efficiently Lan Na Tai phonemic contrasts, especially the vowel representations indicated in [ 2 ]. Slightly later, other innovations appear to have been introduced into the Mon - based script from local FK ( as one presumes ), e.g. symbols for the ' missing ' Tai labials. The latter addition was done through systematic ' raised-tail ' modifications in a manner exactly analogous to [ 1 ] ( iv ) : in this case it was the FK ( and SK ) method of extra-letter creation - not superficial letter shape - that appears to have been utilized. The SK system of tone marking ( rather erratically applied in Sukhothai, save on Inscription 1 ), was used sporadically in

<sup>9</sup> Kannika Wimonkasem ( 1983:20 ).

<sup>10</sup> *ibid.*, p. 187.

<sup>11</sup> Kannika Wimonkasem ( 1983:37 ) calls attention to an interesting gap in FK sources from about 1600 - 1800.

<sup>12</sup> For other designations, see note 2.

<sup>13</sup> But see *Charu'k nai Prathet Thai* 5 ( 1986:202 ) for an undated Sukhothai - area gold leaf with Tai written in Mon letters. The editors date it the century after 1450. The vowel [ ae: ] is represented in SK.



Mon - based writing of Tai in the Lan Na area from at least 1514.<sup>14</sup>

[ 2 ] **attested FK ( /SK ) innovation in LN** [ 7 ]

1465	vowel [ ae: ]	( iv )
1538	vowel [ o: ]	( iii )
1548	diphthong [ u'a ]	( v )
1591	consonant [ s ] ( low class )	( vi )
1646	full labial series	( vi )

At this point, with the innovations mentioned above, one might refer to 'Classical Lan Na' script: i.e. to the ( Hariphunchai ) Mon writing system somewhat adapted for the writing of Tai through the introduction of several selected modifications from FK ( and thus ultimately, in the traditional view, from SK ). Other FK/SK innovations were not appropriated ( e.g. letter shapes and horizontal clusters; [ 1 ] ( ii ), ( viii ) ).<sup>15</sup> It is interesting that these latter rejected innovations represent relatively superficial features that - unlike the modifications actually appropriated - do not relate directly to any constraints imposed by Tai phonology.<sup>16</sup>

Although LN, the Lue script of Chiang Hung and Khoen script of Keng Tung can be considered close variants of one another, this is not true of all Tai scripts in the area north and west of Chiang Mai. What is now usually called Shan script clearly presupposes a Mon base, but with an intermediate Burmese-like stage intervening. Also, Ahom script would appear to have a provenance from Mon varieties other than the particular form of Hariphunchai Mon giving rise to LN.<sup>17</sup>

### 3. THE 'LAN NA - CENTRIC' VIEW OF LAO ORTHOGRAPHIC HISTORY

As mentioned above, during the reign of King Tilokaracha ( r. 1441 - 1487 ) FK script was carried westward and is documented and dated for Keng Tung by 1451. Probably Mon - based writing, originally for Pali texts, was also emphasised in this missionary activity. This would account for the LN - like Khoen script of Keng Tung. It seems highly likely that both scripts - LN and FK - and their writing practices also travelled eastward at this time to Lan Sang ( or Lan Chang, based in Luang Prabang ), as well as to Lan Sang's dependencies.<sup>18</sup> The latter included the Wiang Chan ( Vientiane ) region and what is now the Thai Northeast, in particular, the Loei - Nongkhai - Nakhon Phanom areas adjacent to the Mae Khong River.

What is now the Thai Northeast had been the previous locus of considerable Khmer inscriptional activity, the latest surviving examples of which are five inscriptions from the reign of Jayavarman VII ( r. 1181 - 1219 ) in the Korat - Buriram - Surin area. Dhawaj Poonotoke ( 1987 : 33 ) calls attention to the substantial hiatus - both in time and in space - from these Khmer inscriptions to the first Tai ones in the central Mae Khong area. It is a matter of some 300 years from Jayavarman VII's reign to the first evidence of Tai writing in the area; inscribed bases of Buddha images ( perhaps originally from elsewhere ) dated 1490 ( Wat Sisaket, Wiang Chan ) and 1503 ( That Phanom,

<sup>14</sup> Naina Prongthura ( 1984: 101 ). Her chart shows that for the earlier sources the form of the marker *mây tho*: is more like FK/SK; later there is evolution away from this. Data in [ 2 ] are from the same source: pp. 37, 53, 78, 85, 89.

<sup>15</sup> A modified symbol answering to the extra SK velar letter *kho*: *khon* is attested in LN from 1548 according to Naina Prongthura ( 1984: 31 ).

<sup>16</sup> It would seem that recently there have been further attempts to bring LN 'into line' with Standard Central Thai as a simple isomorphic code. Thus Chaliao Munchan ( 1983:6 ) arranges Lan Na letters arbitrarily into '44 [ basic ] consonants' with several 'extra added consonants' - as though having a basic inventory of 44 consonants ( in the Standard Thai manner ) were a desirable norm; the full set of MT vowel symbols is also defined for LN. Other authorities give updated respellings to etymologically conservative Lan Na forms as documented from earlier texts, i.e. they translate etymologically spurious or innovating Central Thai spellings into modern LN.

<sup>17</sup> Neither Shan nor Ahom script differentiate consonants specific to the [ High ( + Mid ) ]/[ Low ] orthographic classes, suggesting that these scripts were adopted after important sound changes - which most authorities attribute to [ Low ] devoicing - that led to merger of certain formerly distinct consonants in these groups. SK, FK and LN scripts would appear to predate such changes, although this is not certain. Also, the changes undoubtedly affected different dialects at different times. Ahom, which is materially dated beginning with coins of about 1550, is problematic in showing a rather archaic form of Mon lettering as a plausible prototype for superficial orthographic shapes, but a writing practice more 'modern' and Shan - like in terms of the direct relation of consonant symbols to ( presumably later ) sounds: i.e. Ahom fails to distinguish separate [ High ] and [ Low ] series consonant symbols.

<sup>18</sup> According to Krasri Nimanheminda, LN was also brought to the Tai Lue town of Chiang Hung at this time; see Udom Rungruangsi ( 1984:13 ).

Nakhon Phanom ).<sup>19</sup> Dhawaj interprets the hiatus - as well as numerous formal features of this first North-eastern Tai writing - as a clear indication that there was not any continuity or even tenuous local linkage with the earlier Khmer type of writing (i.e. excluding an indirect provenance through SK/FK ).

The most obvious continuity, in fact, is with Lan Na scripts and writing practice. Both the FK and LN systems appear together in the central Mae Khong region from the earliest documentation of Tai writing in that region. In fact, in one of the earliest brief statutory texts ( 1503 ) the two styles would seem to be mixed in the same sentence.<sup>20</sup> A stone inscription of Tha Bo, Nongkhai, can be confidently dated by astronomical means to 1507; it is written in a type of FK (i.e. in what has come to be referred to as 'Thai Noi' or - more recently - 'Thai Isan' script ).<sup>21</sup>

The inscription catalogued as Nongkhai- 11 ( Wat Phadungsuk 2 ), a FK text of Phonphisai, Nongkhai, has been dated by some authorities to 1472, which would make it a good candidate for being the oldest Lao or Northeastern Thai text presently known. However the correct date for this inscription is 1570.<sup>22</sup>

These orthographic developments would appear to be closely linked to the political and religious history of the region. As noted above, in the 15<sup>th</sup> century Lan Na Buddhist missionaries were reportedly sent to the central Mae Khong region, including to That Phanom - hence perhaps the inscribed Buddha images mentioned above. However Lan Na political and cultural links to Lan Sang became especially strong in the reign of the Lan Sang King Photisan ( also Photisarat, Photisarat, r. 1420 -1547 ). He took as major queen Nang Yo't Kham Thip, a daughter of the Lan Na King, Mu'ang Kaeo - signalling a close pact.<sup>23</sup> Pho-

tisan is known from inscriptions and chronicles as an ardent reformer and promoter of Buddhism - to the point of issuing decrees in 1527 suppressing animistic practices with associated shrines to be destroyed.<sup>24</sup>

Perhaps in line with these Buddhist considerations, the Wat Daen Mu'ang inscriptions of Nongkhai and contemporary ones of similar type have as their purpose a deed-like recording of monastic land grants decreed through the king's offices. ( They regularly contain curses to prevent local lords from subsequently ignoring the grant and appropriating productive lands and slaves. Local power bases, both in terms of land and manpower, were thus eroded by such monastic grants; at times this erosion of local power may well have been in a king's interests. ) In any case, the writing system for these early 16<sup>th</sup> - century texts is essentially FK of Lan Na, which was also used to record similar land grants and donations of the same period in the Lan Na area.<sup>25</sup>

It then seems reasonable to suppose that not only Lan Na scripts but also Lan Na writing conventions and practices - the standard purposes to which respective scripts were put - arrived in the central Mae Khong region in this way and during this general period. In particular, both the FK ( subsequently " Thai Noi " ) and LN ( subsequently ' Lao Tham ' or ' Tham Isan ' ) systems were introduced, each with the conventional functions they had acquired in the Lan Na area.

Saiyasettha, ( Chaiyachetthathirath ) the oldest son of Photisan, was given the rule of his mother's town, Chiang Mai, in 1546, further strengthening the political-cultural linkages. Soon Saiyasettha returned to Luang Prabang to succeed his father as king of Lan Sang. During his reign in Lan Sang ( 1547 - 1570 ) land grants continued to be documented by

<sup>19</sup> Dhawaj Poonotoke ( 1987:121 ). Inscriptional fragments in FK-like script found at Ban Rae, Sakon Nakhon ( ibid., p. 225 ) would seem to date to 1450 ( Chulasakarat 812 ). However the astronomical and calendrical data in the inscription fail to confirm this date ( J.C. Eade, personal communication ). Nor do they support any better Dhawaj's conjectural reading of 1350 ( Chulasakarat 712 ). Dating remains problematic.

<sup>20</sup> ibid., p. 228; for FK only the word *tua* ' classifier for numbers ' occurs.

<sup>21</sup> ibid., p. 229; J.C. Eade, personal communication. The letter forms are rather angular, as they are in the Wat Daen Mu'ang Inscription of 1530 in Phonphisai District, Nongkhai. Another inscription of the latter site dated five years later is closer to ' standard ' FK orthography of the Lan Na area. See *Charu'k nai Prathet Thai* 5 ( 1986:328; also Dhawaj Poonotoke 1987:236 - 240 ).

<sup>22</sup> C.S. 932 is the clear reading. For the earlier date, see *Charu'k nai prathet Thai* 5. p. 317.

<sup>23</sup> Aroonrut Wichiankeo ( 1978:22 ) citing local chronicles, in which the Chiangmai King is called Phra Ket Klao.

<sup>24</sup> See discussion by Wyatt ( 1984:84 ).

<sup>25</sup> E.g. Inscription 73, Nan, 1512 ( *Prachum silacharu'k* 3, 1965:198 ). Inscription Lamphun - 29, Phayao, 1523 ( Champa Yuangcharoen 1979:62 ). Inscription 104, Chom Thong District, Chiang Mai, 1556. ( *Prachum silacharu'k* 4 1965:111 ).

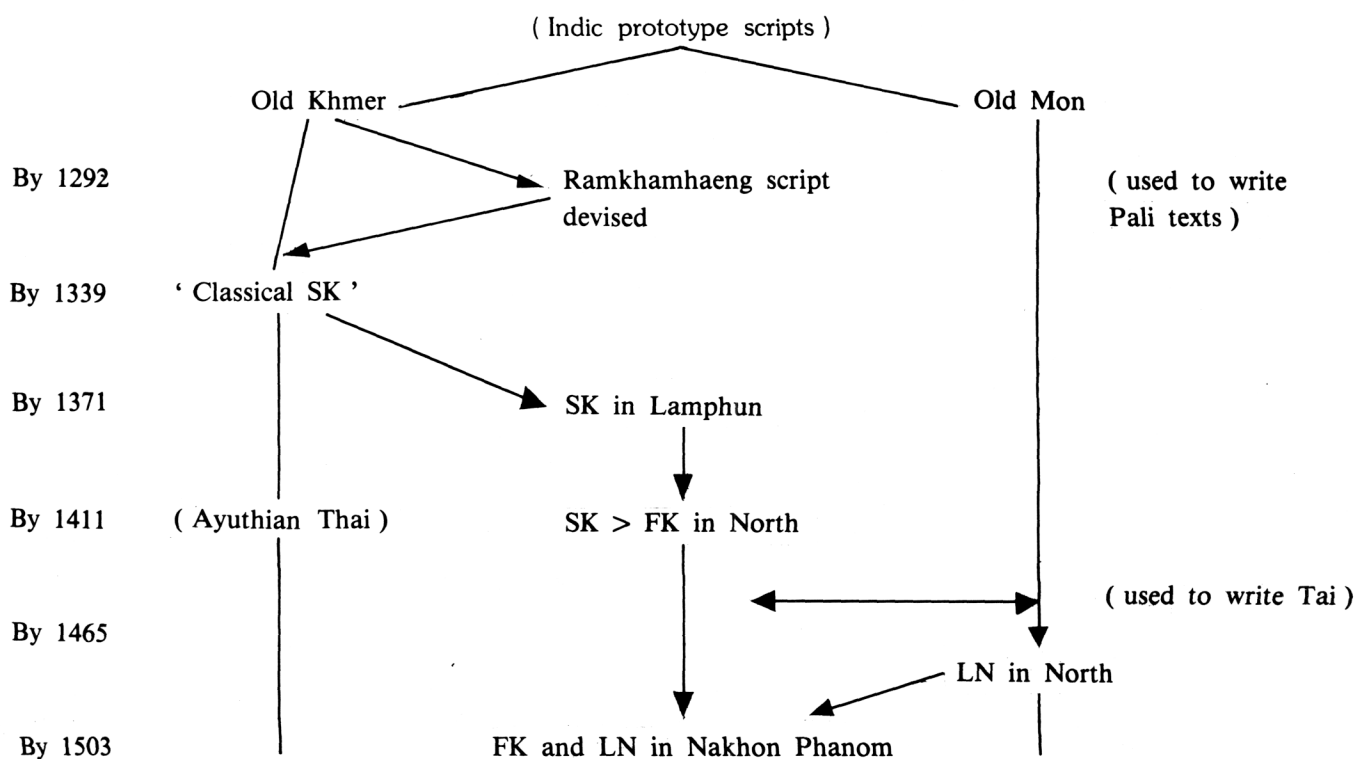
inscriptions. These include the 1561 inscription of Wat Ban Wiang Kham, Thurakhom, sometimes considered the first Tai-language stone inscription known from what is now Laos proper (Sila Viravongse 1973:7).

To judge from surviving materials, by the reign Saiyasettha there seems to have been a shift in functional conventions, in that LN came to be an appropriate option for Tai-language stone land-grant inscriptions. This practice was true both for the Lan Na area<sup>26</sup> and in the central Maekhong communities near Wiang Chan, where Saiyasettha maintained his capital.<sup>27</sup> His 1560 pact in Loei with King Mahachakraphat of Ayutthaya was a Tai text written in LN.<sup>28</sup> As before, features of FK were further borrowed or mixed into local forms of LN, especially when the latter was used to write texts in Tai.

It remains to observe that both Northeastern FK and LN were used in the following centuries, with some functional shifting and with the development substantial local variation including degrees of FK - LN mixing.<sup>29</sup> In 1921 under French direction a standardized orthography was promulgated: in etymological terms, this can be seen as predominately from FK, but with a few LN features; spelling was simplified to the point of becoming nearly a one-to-one phonemic representation, at least for consonants. All letters relevant only to Indic source spelling were dropped. Tone marking, which had previously been rare and sporadic in Lao/Northeastern Thai writing, in 1921 was adopted in the manner of contemporary Standard Thai with only minor adjustments.<sup>30</sup>

These views of orthographic development are summarized in [ 3 ].

[ 3 ] Script relationships suggested by presently-known dated texts



<sup>26</sup> E.g. Inscription 74, Na, 1548; ( *Prachum silacharu'k* 3, 1965:302 ).

<sup>27</sup> E.g. the two inscriptions of Wat Tham Suwan Khuha, Udon, 1562, 1572; *Charu'k nai prathet Thai* 5, 1987:302 - 307. The second inscription, reestablishing the monastic grant under Saiyasettha's successor, would seem to represent a 'relapse' into FK script; the calendrical system is also readjusted ( J.C. Eade, personal communication ).

<sup>28</sup> The Ayuthian version was written in Khmer script. Griswold and Prasert na Nagara ( 1979 ).

<sup>29</sup> Lafont ( 1962a, 1962b ).

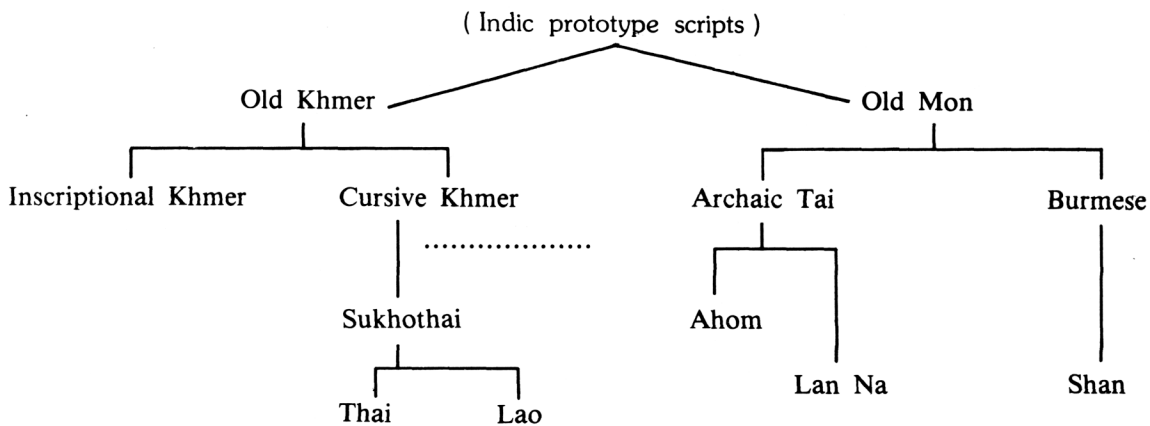
<sup>30</sup> Uthai Piromruen and Dhawaj Poonotoke ( 1984:13 ).

#### 4. DIVERGENCES FROM THE PRECEDING VIEWS

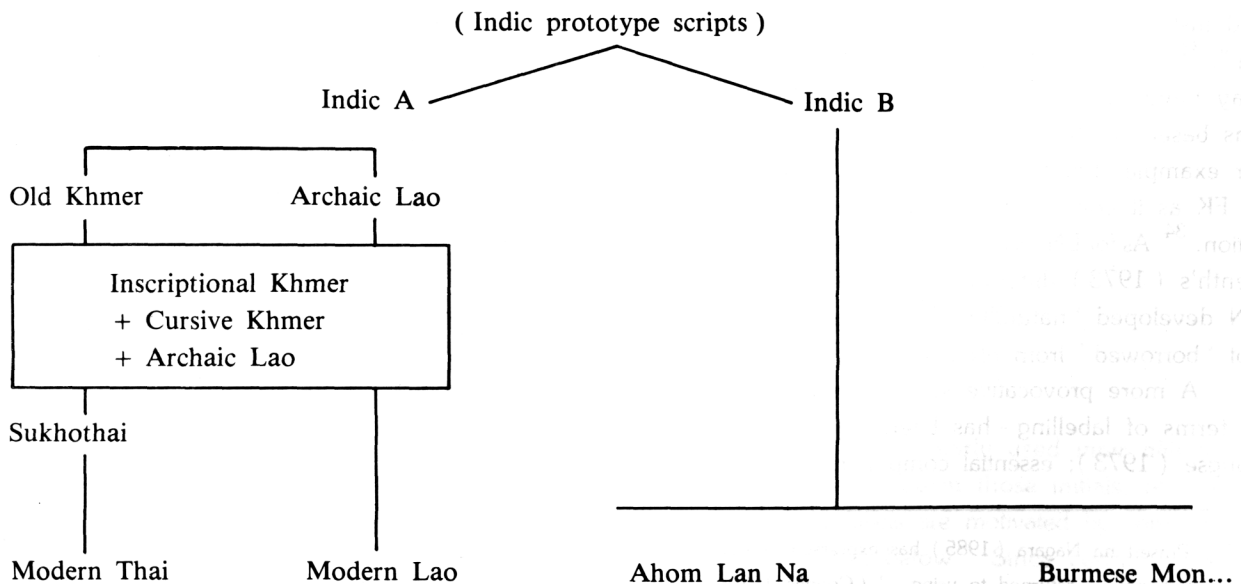
Coedès, writing in 1925, hypothesized the existence of 'Archaic Tai writing' (*aksǎʔ:n thay doe:m*), based on Old Mon and predating SK. This proposal has been recently revived. Coedès noted that no samples survive to document this writing conclusively. However, he suggested that some features

of original 'Archaic Thai' may be reflected in LN and in Ahom scripts - although surviving samples to these scripts, he thought, do not directly portray the earlier system.<sup>31</sup> The main relationships he proposed are summarized in [4] He also saw Modern Lao script as a modification of Sukhothai writing, although he did not consider an essentially Lan Na - Lan Sang route.)

##### [4] Relationships of Tai scripts after Coedès (1925)



##### [5] Relationships of Tai scripts after Sila Viravongse (1973)



<sup>31</sup> Coedès (1925:25). Note that he refers to Lan Na, Lue, etc., writing as "Thai Noi" script, as distinct from Shan (which he calls "Ngiaw" or "Thai Yai"). Coedès also suggests the functional assignment noted above of "Thai Noi" *tham* to religious texts, including moral Jataka - like tales.

More recently Penth (1985a, b) has made proposals in essential harmony with those of Coedès. He has suggested that as Tai speakers came in contact with Mons, the former began to use a handwritten script of the latter: "...it is not possible to say exactly when the Thai borrowed the Mon letters, nor where." He adds that the "process of learning and trying out [Mon letters to write texts in Tai] could have occurred several times and in different localities, whenever Thai met Mon...The time was probably between 1150 - 1250 A.D." (1985a:13). Following from this hypothesis, Penth goes on to speculate that some inscriptional fragments from Wat Kan Thom, near Chiang Mai, may actually be samples of such early writing (in essence representing Coedès "Archaic Tai"). Unfortunately since these fragments are undated the argument has not convinced all who have studied the matter.<sup>32</sup>

Penth emphasises the influence of such 'learning and trying out' of Mon letters in the evolution of SK: "Thus, the so-called 'Sukhothai' script was not invented in Sukhothai. It possibly was not invented at any particular place, but came slowly into being along a contact zone between Mon and Thai" (Penth 1985a: 16).

With respect to the evolution of LN, Coedès' opinion was that sometime after the mid 15<sup>th</sup> century "the people of Lan Na stopped using Sukhothai letters and instead used the Lue script of Sip Song Pan Na".<sup>33</sup> He suggested that Burmese political influence may have been the reason. Coedès' conclusion was based on facts as they were known in 1925; for example, he did not take into account the use of FK as it continued even under Burmese occupation.<sup>34</sup> As for LN, given documentation now available, Penth's (1973) differing history is more plausible: LN developed 'naturally' from local Mon and was not 'borrowed' from elsewhere.

A more provocative set of proposals - especially in terms of labelling - has been made by Sila Viravongse (1973); essential components of it are summarized in [5].

He sees a 'Sanskrit - Devanagari' system (referred to as 'Indic A' in [5]) as giving rise to both to Old Khmer inscriptional writing and to an ancient Lao alphabet derived "from Sanskrit" (Sila Viravongse 1973:4). This was said to have developed in the course of trade between the Ai - Lao kingdom and India, during which time the [Tai? -] Lao people were also said to have been introduced to Mahayana Buddhism. These conjectures are presented without supporting material evidence apart from references in Chinese records. Leaving aside obvious problems of paleo-ethnography, the references to writing are indirect and problematic.<sup>35</sup> As for what were called 'Mon-based scripts' above, another form of Indic writing (which he refers to as 'Pali', i.e. 'Indic B' on [5]) was said to have given rise to them.

Sila Viravongse's construction could easily be dismissed as merely a folkloristic attempt to shift nomenclature and arrange dubious citations in such a way as to relate to Lao nationalistic sentiments, i.e., to avoid the 'indignity' of Lao script being borrowed directly from Thai. On the other hand, his interest in the naming of earlier scripts is salutary in that it points to similar covert assumptions inherent in terms like 'Archaic Tai', 'SK', 'FK', etc., if used as anything more than arbitrary labels. For example, in the case of Coedès' argument summarized in [4], 'Archaic Lan Na' or even 'Archaic Lao' would seem to be as appropriate as 'Archaic Tai', i.e. for putative early adaptations of Mon script by Tai/Lao speakers. The suggestions put forward also show that it would be difficult to constrain conjecturing of this sort which is not based on more solid and dated documentary evidence.

Yet another sort of challenge to the traditional view has been argued by Vickery (1987). In this case the authenticity of Sukhothai Inscription 1 is called into question. Vickery also makes more general proposals regarding the development of Tai scripts which would be generally in line with the views of Penth summarized above.

<sup>32</sup> E.g. Prasert na Nagara (1985) has expressed skepticism about the early dating of these fragments.

<sup>33</sup> Or perhaps: "...returned to using..." (Coedès 1925:16): *tâe:pha:yǎng mûa ra:w pho'sô':2050 cha:w la:n na:thay dâi lôe:k chay tua aksô':n sukhô:thay lăe klâp chay tua aksô':n phûak lû', khû:thay muang sip sô':ng phan na: ...*

<sup>34</sup> Or perhaps it is also possible to read 'Lue script' in this passage not as a claim about the provenance of LN script, but merely a means of differentiating it from FK (= Coedès' 'Sukhothai')?

<sup>35</sup> E.g. Inscription 76 of Wat Chiang Man, Chiang Mai, 1581 (Griswold and Prasert na Nagara 1977).

Whatever merit this proposal may have in general terms, the specific chronological claim of 147 A.D. is - for the present at least - in the realm of folklore or folk history.



## 5. 'LUSTRAL Y' AND PALATAL CONTINUANTS IN INSCRIPTIONAL SOURCES

We turn now to consider an 'extra Y' letter in certain Tai writing systems and assess how its form and development may throw some light on the issues above.

For convenience the letter shape in question is referred to as 'lustral Y'. (This is a glossing of its usual name in Lan Na treatises: *yô: yâ:t ná:m*, or *áya: [as in] yâ:t ná:m*; i.e. the letter 'Y' as in (the Lanna spelling of) the word *yâ:t* 'to drip'. In texts the latter word is frequently encountered in the expression *yâ:t ná:m* meaning 'to pour lustral water' or 'to consecrate'.)

'Lustral Y' is extra in the sense that it is a

Y-like symbol in the FK, LN and Modern Lao (henceforth ML) writing systems with no direct single counterpart symbol in SK or in modern Standard Thai (MT). For SK, the regular correspondence with 'lustral Y' is the compound digraph: glottal stop (*o: â:ng*) + simple 'Y' (*yô:yák*). This 'extra' letter however is clearly formed by a supplementation to the existing FK inventory. The addition was most plausibly accomplished by adding an upwards tail stroke to the familiar SK - FK simple 'Y' symbol (*yô:yák*); see [6], upper left-hand item. (Recall from [1] (ii) (â) that *yô:yák* itself is a simplification of Khmer or Mon prototype scripts.) An additional consideration is noted by Kannika Wimonkasem (1983:29): the left part of the FK glottal-stop sign also resembled the FK 'Y' symbol; this may have served as a further motivation for the derivation.

### [6] Palatal continuants in several Tai writing systems

	'Y	Y	Ñ	HÑ	HY	
LÜ						LU
LANNA						LN
FAK KHAM						FK
MODERN LAO						ML
SUKHOTHAI						SK
MODERN THAI						MT
AHOM						AH
WHITE TAI						WT

Before taking up 'lustral Y' in particular, we review more generally how vocabulary in palatal continuants appears in inscriptional sources. [6] compares symbols representing sounds /y/, /ñ/ and phonologically similar items in several scripts. For convenience, in discussion below these orthographic symbols are cited by designations indicating row and column in [6]. Row - the particular variety of script - is shown following brackets. The brackets contain upper-case letters referring to column. Columns Y

and Ñ show letters regularly used *inter alia* to represent Indic vocabulary in those initials, at least in older texts; other labels are motivated by comparative-historical discussion below. Since certain rows represent script traditions of several centuries, symbols shown should be considered merely as representative tokens; other variants would occur. 'Lustral Y' thus appears four times in [6]: in Mon-based Lan Na writing in the form ['Y] LN; similarly as ['Y] FK and ['Y] ML, and in 'Lü' -

In Sukhothai inscriptions of the 13<sup>th</sup> century, the four graphemes [ 'Y ] SK, [ Y ] SK, [ Ñ ] SK, [ HÑ ] SK occur representing cognates of modern Thai vocabulary items shown in [ 7 ]. [ 'Y ] SK and [ HÑ ] SK are compound items in inscriptions of the Sukhothai area. As noted above, [ 'Y ] SK is composed of the glottal stop sign ( now called *o'*: *â:ng* ) followed by a plain [ Y ] SK, while [ HÑ ] SK is simply a close juxtaposition of the two items indicated in the brackets.

Modern Standard Thai ( MT ) spelling of the initial is indicated to the right in [ 7 ]. It is clear that

[ 7 ]

SK spelling	MT cognate		Inscriptional sources	Cp.Mt spelling
[ 'Y ] SK	yù:	‘ stay ’	3.1.32; 8.3.12	[ 'Y ] MT
	ya:	‘ medicine ’	3.1.23; 5.1.25	[ Y ] MT
	yen	‘ cool ’	8.3.18; 5.3.24	[ Y ] MT
	yu':n	‘ stand ’	2.1.47; 5.3.39	[ Y ] MT
	yâw	‘ house ’	38.1.8; 3.2.44	[ HY ] MT
	yang	‘ towards ’	8.3.11; 8.3.12	[ Y ] MT
	yìap	‘ trample ’	8.1.3; 3.2.53	[ HY ] MT
	yam	‘ fear ’	3.1.23; 3.2.37	[ Y ] MT
	yò':n	‘ loosen ’	49.1.16; 49.1.32	[ HY ] MT
[ Y ] SK	yâ:k	‘ difficult ’	2.2.24	[ Y ] MT
	yu':n	‘ long time ’	3.2.47; 45.1.18	[ Y ] MT
	yúng	‘ grannary ’	13.2	[ Y ] MT
	ya:m	‘ period ’	3.1.2; 9.3.26	[ Y ] MT
[ Ñ ] SK	yang	‘ still ’	3.1.16; 5.1.35	[ Y ] MT
	yô':m	‘ apt to ’	3.1.55; 8.1.12	[ Y ] MT
	yǐng	‘ woman ’	38.1.11; 1.2.11	[ HÑ ] MT
	yin	‘ hear ’	40.1.11; 1.2.1	[ Y ] MT
[ HÑ ] SK	yây	‘ big ’	38.1.21; 45.1.13	[ HÑ ] MT

Of interest are several homonym/homographs in present-day modern Central Thai; *yu':n* [ Y ] MT, meaning either ' stand ' or ' for a long time ' ( mainly in compound expressions ); *yang* [ Y ] MT ' still ' or ' towards '. These meanings are regularly differentiated in Sukhothai writing in a way consistent with comparative evidence.

Not shown in [ 7 ] are items of ( ultimately ) Indic provenance. These are almost always spelled such that Pali-Sanskrit *y-* = [ Y ] SK and *ñ* = [ Ñ ] SK.

no all-embracing system of one-to-one relationships can be established between Sukhothai and modern spelling, but neither is the relationship entirely arbitrary.

Duangduen Suwattee and Pranee Kullavanijaya ( 1976 ) have discussed a number of these items. They note that spelling with the four graphemes in Sukhothai materials is generally consistent for those materials, with some apparent exceptions to be considered below. Also, they observe that a grapheme answering to H + Y or to [ HY ] SK is not found at this stage.

Examples ( MT cognates indicated ): [ Y ] SK - *yama:*, *yom* ' god of death ' ; *yót* ' rank ' > Skt. *yaśa* ); [ Ñ ] SK - *ya:n* ' wisdom ' ( > Skt. *ñān* - ); *yâ:t* ' relative ' ( Pali - Skt. > *ñāti* ).

The earliest firmly dated Tai-language source presently known in the Lamphun - Chiang Mai area is the 1371 inscription of Wat Phra Yu'n, Lamphun ( see section 2 ). Words like *yù:* ' stay ' and *yu':n* ' stand ' are spelled as [ 'Y ] SK, i.e. with two adjacent consonant symbols, as they are on contemporary in-

scriptions found in the Sukhothai area.

As observed above, samples of the FK variant of SK script can be found dated within fifty years after the Wat Phra Yu'n text. In nearly all features, the relationship between FK and SK represents only superficial adjustments in letter shapes and in other stylistic details of execution. In fact the main systematic inventory difference is the presence of a single 'lustral Y' symbol [ 'Y ] FK answering to the compound [ 'Y ] SK. Kannika Wimonkasem (1983:173) documents [ 'Y ] FK from 1411 and shows that it is used consistently in over fifty FK inscriptions over the three centuries thereafter. The lexical items using initial [ 'Y ] FK on the FK inscriptions is regular: it is found in exactly those items which appear with [ 'Y ] SK in the Sukhothai-area inscriptions, e.g. those listed in the first set in [ 7 ]. In addition there are a few items with no SK counterparts. [ 'Y ] FK appears never to have been used for Indic vocabulary; the latter was confined, as in SK, to [ Y ] FK [ Ñ ] FK.

The 1556 FK inscription of Wat Phrathat Si-Chom Thong, near Chiang Mai, is representative. Spelled with [ 'Y ] FK are cognates of the (MT) items *yā*: 'do not'; *yū*: 'to stay'; *yā*: 'medicine' and *yu':n* 'to stand'; all of these have attested SK spellings in [ 'Y ] SK. In addition, the item *yā:t* 'to consecrate' appears with [ 'Y ] FK. FK letters [ Y ] FK and [ Ñ ] FK are not used to spell vocabulary of this sort.<sup>36</sup>

Not only was [ 'Y ] FK used as an initial consonant in FK but it was also used occasionally as a vowel + final unit, almost certainly representing the sound /o':y/. Thus the cognate of MT *rō'y* 'hundred', etc.<sup>37</sup> This usage suggests that some scribes understood the symbol [ 'Y ] FK as functioning in a manner entirely commensurate with the corresponding two-graph sequence in SK.

Turning to LN, we find in the Mon prototype script used to write Pali the symbols [ Y ] LN and [ Ñ ] LN, but not [ 'Y ] LN. For early Tai-language

texts written in LN script, there is some variation in the representation of vocabulary cognate to that spelled in [ 'Y ] SK (e.g. items in [ 7 ].<sup>38</sup> However with a few early exceptions consistent practice was established to use the symbol [ 'Y ] LN as shown in [ 6 ]. In the 16<sup>th</sup> century, this symbol [ 'Y ] LN does not depart in any significant way from [ 'Y ] FK either in form or in usage. (Later LN texts may show an extra slight upwards jag in the bottom portion of the letter, this was true in some FK sources as well.) Of various possible inferences that could be made, the least problematic would seem to be that LN - perhaps after some early experimentation - borrowed 'lustral Y' from local FK to represent a necessary Tai phonemic distinction that was not coded in the Hariphunchai Mon system on which LN was based.

Both [ 'Y ] FK and [ 'Y ] LN are found in the central Maekhong as discussed above from the earliest appearances of such sources. [ 'Y ] FK appears on inscriptions of the Nongkhai area with both the initial - consonant function and also with the final /o': + y/ function; i.e. the usage is analogous to that in FK inscriptions of the same and earlier periods in the Lan Na area. These facts are again in line with a view of Northeastern or Lao writing practice disseminating from Lan Na.

Once [ 'Y ] FK and [ 'Y ] LN become established in their respective writing practices, as noted above, there is almost no variation in the stock of items spelled in this manner. The strong impression is of spelling based on an important phonological distinction. The same cannot be said for the other palatal continuants. Starting in the early 16<sup>th</sup> century, FK sources show considerable item-by-item variation with respect to [ Y ] FK and [ Ñ ] FK. Thus the medial -y- in the name of the town 'Phayao' is spelled variously with [ Y ] FK and [ Ñ ] FK, as it is the title *phraya*.<sup>39</sup> Some-

<sup>36</sup> The items *yā*: 'don't' and *yā*: 'separate' are probably connected in terms of ultimate etymology. Superficially the spelling of these items appears to be erratic; more study is needed.

<sup>37</sup> E.g. in the 1496 text of Wat Pa Bong discussed by Penth (1985b); see also Kannika Wimonkasem (1983:90) for the item *do':y* 'with' so spelled in an inscription of 1611, although in several other FK sources two separate graphs are used.

<sup>38</sup> Naina Prongthura (1984:69). A compound symbol composed of glottal stop + [ Y ] LN, the latter in subscript form, is found on a Nan inscription of 1548 (Inscription 74.2.17 = Nan. 5).

<sup>39</sup> Compare inscriptions Lamphun - 19 and - 2, 1502 and 1535 respectively.

times the same item is spelled variously with [Y] FK and [N] FK in the same inscription, as on the Wat Chiang Man inscription of 1581.<sup>40</sup> The impression here is that what were formerly two distinctive sounds are at this point in time falling together and that the letters formerly used to differentiate the sounds are by now treated by scribes as mere variants one of another. This impression is strengthened by comparative considerations in the next section.

## 6. SOUTHWESTERN TAI PALATAL CONTINUANTS

Duangduen Suwattee and Pranee Kullavanijaya (1976) called attention to the fact that SK spellings

### [8] Preglottalized /y/ items in the Fengshan dialect of Zhuang

'yu:	'stay'
'yie	'medicine'
'yen	'to add water'
	(cp. 'cool')
'yiak	'hungry'
'yieng	'to roast'
'yieng	'resin'
'yiet	'stretch'
'ya:	'to open the eyes'
'yong	'to stir (e.g. rice)'
'yan	'to hide'

When cognates with documented SK items are available, the regular correspondence is: Fengshan /y-/ with [Y] SK. (Other Fengshan palatal initials correspond regularly with the other SK initials.) Li's reconstructions - especially along with the availability

in [Y] SK, [Y] SK, [Ñ] SK and [HÑ] SK correlate well with the Proto-Tai reconstructions of Fang Kuei Li.<sup>41</sup> In fact, Li reconstructed exactly the four initials shown in brackets for Proto-Tai, and also for less remote Proto-Southwestern-Tai. Li used comparative rather than philological evidence in establishing reconstructions, so there is no circularity in this observation.

In particular, preglottalized /y/ is still present in a few Tai varieties of Guangxi and Guizhou, such as the Fengshan dialect of Zhuang. In this dialect, a consonantal distinction /y/ ≠ /y/ is maintained. Some relevant items from this dialect are shown in [8].<sup>42</sup>

#### Cp. MT

tone B2	yù:
tone A1	ya:
tone A1	yen
tone D2	yà:k
tone C1	yâ:ng
tone A1	ya:ng
tone D2	yìat
tone C2	-
tone A1	-
tone A1	-

of firm corroborating synchronic data like that in [8] - are helpful for understanding the essential regularity of SK spelling for items such as those in [7].

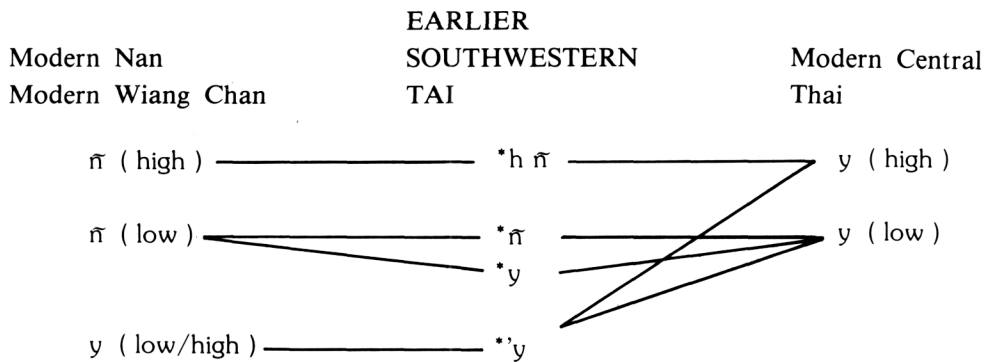
[9] presents a likely hypothesis as to diachronic phonological relationships among palatal continuants.

<sup>40</sup> Griswold and Prasert na Nagara (1977). The item 'woman' is variously spelled with [Y] LN and [N] LN.

<sup>41</sup> See Li (1977:173-181).

<sup>42</sup> Luo Yongxian kindly supplied the Zhuang data. Tones: A1 35; B1, D1 55; C1 23; A2 11; B2, D2 33; C2 52. Note that this initial contrasts with plain /y/ in a manner accounted for by Li's reconstructions.

[ 9 ] Consonant mergers implied by Proto-Tai reconstructions of Li ( 1977 )<sup>43</sup>



From the vantage point of 20<sup>th</sup>-century MT dictionary norms, SK spelling could well appear arbitrary or capricious. However from the arguments of Duangduen Suwattee and Pranee Kullavanijaya it must be instead that MT spelling - rather than SK - is to be considered capricious in this case. Phonologically, MT appears to have merged original sounds /y/, / $\bar{n}$ /, /h $\bar{n}$ / and /'y/ all into /y/, with some compensatory tonal distinctions (the tonal separation of consonant classes), but inadequate to carry all of the original functional load. This situation has given rise to numerous /y-/ homonym and even homograph pairs in MT for items distinguished elsewhere; it also is in line with Ayutthaya-era spelling fluctuation from which numerous etymologically spurious spellings have been recently codified.

Other Southwestern Tai varieties are frequently more conservative with respect to the treatment of these initials. In White Tai and in several other varieties mergers involving /\*'y/ > /y/ and /\*h $\bar{n}$ / > / $\bar{n}$ / have occurred, but with tonal conditioning so as to preserve all previous lexical distinctions.<sup>44</sup> Southern Thai of the Songkhla area is also characterized by the preceding mergers, with items from /\*'y/ now distinguished tonally from those derived from /\*y/; also from those derived from the other initials.<sup>45</sup>

## 7. 'LUSTRAL Y', CONSONANT MERGERS AND AUSTRASIATIC CONTACT

Probably then the four SK representations [ 'Y ] SK, [ Y ] SK, [  $\bar{N}$  ] SK, and [ H $\bar{N}$  ] SK represented four distinct SK sounds which had been preserved from the Proto-Southwestern-Tai stage. The reconstructions by Li ( 1977; see [ 9 ] ) are backed by comparative evidence, as noted above.

Following the preceding scheme of phonological development, one would seem justified in interpreting the compound digraph [ 'Y ] SK as an indication that a preglottalized semivowel was pronounced at the time the SK writing system was devised. The representation is surprisingly iconic, but so are other features of the SK system. How long preglottalization may have persisted is problematic. For the Sukhothai area and south to Ayutthaya it is difficult to argue from orthographic sources alone how long this phonetic characteristic was maintained. This is because once spelling had become somewhat established or codified it is not unreasonable to suppose that preglottalization became lost phonetically while the [ 'Y ] SK representation was retained in writing.

On the other hand, for the Lan Na area, the

<sup>43</sup> Li ( 1977:256 ); Nan follows Davis ( 1970:3 ). Note that among younger Lan Na speakers in urban areas such as Chiang Mai there has been a recent loss of phonemic status of / $\bar{n}$ / through the change / $\bar{n}$ / > /y/, i.e. as though to bring the Lan Na consonant inventory in line with that of Central Thai ( Singkha Wannasai 1975:106 ). This may account for the conflicting opinions of how specific palatal items are now to be spelled in modern LN; such differences are to be found in various recent Lan Na manuals and word lists not reflecting an analysis of older textual usage. Designations 'low' and 'high' in [ 9 ] refer to tone classes and thus indirectly to some attributes of modern MT spelling.

<sup>44</sup> Donaldson and Dieu ( 1970 ). Similarly for Saek ( Wilaiwan Khannitanan 1976 ).

<sup>45</sup> See Diller ( 1979 ). Note that the Southern Thai dictionary of Suthiwong Phongphaibun et al. ( 1982 ) appears to report preservation of preglottalization for /\*'y/ items; local dialects may differ in this regard.



writers of FK 'went out of their way' as it were to represent the class of lexical items with initial derived from /\*y/ with the unitary symbol [ 'Y ] FK. That this innovation was accomplished while many other features of SK were shared in FK can hardly be due to chance. A reasonable deduction would be that by about 1400 vocabulary etymologically of the /\*y/ category was no longer pronounced with a glottalic onset in the Lamphun - Chiang Mai area. However a tonal 'residue' was probably left behind. That is, there was a distinctive tonal patterning for lexical items in /b-/ , /d-/ and those in glottal stop; included in this set were items in /y-/ if previously preglottalized.

Lan Na scribes writing in their 15<sup>th</sup> - century FK probably were aware of what was for them by then a plain or unitary sound for vocabulary etymologically of the /\*y/ category. Thus rather than to write what was for them the unmotivated compound digraph of SK, they chose to make a superficial modification of the SK-FK [ Y ] symbol. Simply using the latter symbol unaltered was apparently an unappealing solution for these scribes. It would have introduced homographs: there would have been items (from /\*y/) that would have then been spelled the same way as ones derived from /\*y/; however because of the 'tonal residue' the lexical items would have been distinguished in the spoken language of the scribes.

The 'tonal residue' hypothesised above is still characteristic of many varieties of Lao. In terms of the tone categories of Li ( 1977 ), these varieties tonally distinguish \*A mid-class items from high-and low-class ones.

16<sup>th</sup> - century Lan Na texts begin to show spelling variation affecting initial consonants formerly written with [ Y ] LN and [ Ñ ] LN. This suggests that the merger shown in [ 9 ] for Nan of /\*y/ and /\*ɲ/ to /ɲ/ , with low-class tones, was by then underway for Lan Na and probably in Lao varieties also. ( Ultimately the symbol [ Y ] LN 'won out' to represent the sound [ ɲ ] with low-class tones, at least for Tai-provenance vocabulary, and is now considered the standard way to write items in Lan Na script derived from earlier Tai /\*y/ and /\*ɲ/. In modern Lan Na usage the symbol [ Ñ ] LN is now confined to Pali texts. The preceding distribution is true for [ Y ]

ML in reformed modern Lao script as well. Similarly, in Lao [ HY ] ML is now used to represent items etymologically from /\*hɲ/ , as [ HY ] MT is for most items in MT. )

Note that in LN varieties where /\*y/ items now occur with \*A low-class tone and with the phonetic value /y/, the relevant tonal and consonantal mergers must be ordered either as above or in some other manner that gives a plausible sequence. Otherwise a merger would be posited which would need to be subsequently reversed.

Might the retention of a preglottalized semivowel in SK speech, but its loss in Tai varieties of the LN area, be explained in part by differential Austroasiatic contact? For Khmer, Jenner has hypothesised a series of preglottalized consonants, including continuants such as semivowels and nasals. For example, Old Khmer inscriptions show quite directly a glottal-stop sign compounded with subscripted continuant symbols.<sup>46</sup> This may well have been the prototype for the SK treatment of /\*y/ items. If this were the case, Khmers coming to use spoken Tai would have had a native speaker's motivation to preserve a preglottalized semivowel such as that surmised above. It would seem reasonable that a good share of the population of 14<sup>th</sup>-century Sukhothai would have ultimately had Khmer speech in their backgrounds. These speakers could have contributed significantly to the preservation of preglottalization.

On the other hand, a good share of the 14<sup>th</sup> - century population of the Lan Na area, especially near Lamphun, would - one presumes - have come from a Mon-speaking milieu, or perhaps from other Austroasiatic groups. In the phonological systems of Old Mon proposed by Shorto and by Diffloth, no preglottalized semivowels or nasals are reconstructed.<sup>47</sup> Nor, apparently, is there direct Old Mon inscriptional evidence to support such a grade of consonants - although other grades of prenasalized stops, etc., are attested or can be deduced.

It may be premature to raise such possibilities of Austroasiatic contact in the context of Southwestern Tai phonological development. In this case however there does appear to be a plausible convergence of phonological, orthographic and external - historical sequences.

<sup>46</sup> Jenner ( 1981:xix, 356; 391 - 394 ). Items spelled as though /val/ or /wal/ 'turn' are attested from the late 7<sup>th</sup> century ( ibid. p. 393 ).

<sup>47</sup> Shorto ( 1970:xiii ); Diffloth ( 1984:315 ).

## 8. PHONOLOGICAL AND ORTHOGRAPHIC CHANGE

How plausible then is the historical - philological outline of sections 1 - 3 above - a synthesis of rather 'traditional' views - as a way to address the more comparative linguistic issues discussed in sections 5 - 7? What of the differing proposals in section 4?

The currently known orthographic sources which are firmly dated (mainly inscriptional evidence taken more-or-less at face value) point to a sequence of *phonological and orthographic relationships in line with the comparative evidence*. For example, [ 'Y ] SK items in Sukhothai inscriptions [ 7 ] are represented by preglottalized cognates in present-day Zhuang dialects like that of Fengshan [ 8 ], in accordance with observations of Li ( 1977 ). Other SK palatal continuants are not represented by such Zhuang cognates. This would seem reasonable justification for interpreting the contemporary SK value of [ 'Y ] SK as a preglottalized palatal semivowel.

The full hypothesis would then go as follows. Although there would almost certainly have been some pre-SK experimentation in using Mon and Khmer scripts to write Tai, the orthographic innovations of SK suggest a far more unified and systematic attempt at organized modification. This was probably imposed to some extent 'from above'. It also reflects an analytic (one could almost say 'scientific') interest in the SK Tai sound system of the day and in its reasonably accurate and systematic representation. - This, rather than a haphazard collection of gradual and locally-varying accretions lacking a single over-all guiding plan.<sup>48</sup>

Modification and invention was undertaken by the compiler (s) of SK script to enable an accurate representation of then-distinctive Tai sound units - among them / 'y/. There may have been both Khmer orthographic precedents for representing this (preglottalized) initial and also Khmer - related motivations for its phonological preservation.

Most of the structurally important SK innovations characterize all SK writing - not just Inscription 1, as is sometimes claimed. Inscription 1 in fact shows

additional innovations either which were not retained in SK at all or which only received widespread acceptance considerably after the date of the inscription. There were perhaps language-external reasons for this, but it remains an important problem for the traditional account.

The [ 'Y ] FK symbol, as we have seen, is clearly a modification of [ Y ] FK and, it would seem, of [ Y ] SK. Furthermore, the letter on which the FK modification is based - viz [ Y ] SK - itself represents a shape simplification of (probably) a Khmer prototype along lines analogous to other simplifications characteristic of SK script. In terms of superficial shape developments, the 'traditional' progression along the lines of [ 3 ] seems plausible:

Khmer prototype > [ Y ] SK	( simplification; similar in treatment to other letters )
[ Y ] SK > [ Y ] FK	( SK writing practice spreads to Lan Na )
[ Y ] FK > [ 'Y ] FK	( 'raised tail' FK innovation to replace [ 'Y ] SK )
[ 'Y ] FK > [ 'Y ] LN	( FK letter used in LN to make needed sound distinction )
[ 'Y ] LN/FK > [ 'Y ] ML	( Lan Na writing practice spreads to central Maekhong )

'Lustral Y' - in the first instance [ 'Y ] FK - was an innovation of the Lan Na region that spread subsequently far and wide to the west, north and east. It was not used to the south in Sukhothai or Ayutthaya. [ 'Y ] FK - along with other features - was soon borrowed into LN - i.e. into local Mon script modified to write Lan Na Tai.

The presence in LN of a symbol essentially identical to [ 'Y ] FK - but the absence of one like [ Y ] FK - is important for confirming the directionality of LN/FK borrowing attested to by surviving material sources as discussed in section 2. Thus it is highly unlikely that LN donated [ 'Y ] LN to FK. This would mean that LN would have possessed the modified

<sup>48</sup> The latter in fact is more representative of the Lan Na tradition of writing, which until very recently appears not to have had the same degree of uniformity as did the southern SK system.

or elaborated symbol [ 'Y ] LN without the basic one - viz [ 'Y ] LN minus its tail. The latter is in fact equivalent to [ Y ] FK ( and indeed to [ Y ] SK ). Note that all surviving LN texts show [ Y ] LN directly from Mon, substantially different in shape from [ 'Y ] LN; the former Mon letter could scarcely have been prototype for the latter 'lustral Y'.

With a firm directionality FK to LN established in this way on formal grounds for [ 'Y ] LN and supported in terms of 'phonological background' by plausible reconstructions, the presence of other FK-like or SK-like features in LN such as those in [ 2 ] is tentatively conjectured to have had the same directionality - barring the uncovering of material evidence to the contrary. I.e., such innovating features were borrowed from FK into LN, not vice versa. This this also accords with presently available material evidence.

We turn now to the opinion of Coedès cited above with respect to 'Archaic Tai' writing and a provenance of Chiang Mai script from the Lue town of Chiang Hung in Sip Song Pan Na. If Coedès ( 1925 ) is to be read as implying that LN of the Chiang Mai area was borrowed from a preexisting Lue writing practice in Chiang Hung ( i.e., in some way the direct successor of Coedès' 'Archaic Tai' ) then at least the symbol [ 'Y ] LN must have moved in the opposite direction. One wonders immediately how vocabulary etymologically from / \*\*y/ would have been spelled in a putative preexisting Chiang Hung script.<sup>49</sup> Also, what could have been the motivation for giving up such earlier spelling and adopting instead just this one letter in the Chiang Mai manner?

There may of course be plausible answers for these questions, but Coedès' argument did not focus on such issues. In particular, the presence of a pre-1400 source in Chiang Hung with a letter shaped like 'lustral Y' would substantially affect this argument, but ( as of time of writing ) material sources in the Sip Song Pan Na area that might shed light on this question have yet to be thoroughly investigated. ( Versions of LN-like script used in Keng Tung - i.e. Tai Khoen - also show 'lustral Y' symbols

agreeing in form and function with LN textual practice. The antiquity of this script also needs further investigation. )

As for the Northeast and Lao, [ 'Y ] LN and [ 'Y ] FK are present in the central Maekhong from the start of documented Tai writing in that area in about 1500. A Lan Na provenance is strongly indicated for Lao-Northeastern script instead of any direct connection with Sukhothai or Ayutthaya, where compound [ 'Y ] SK was retained at this period. Again, the system-internal features of the orthography point to the same conclusions that external historical sources suggest: Lan Na cultural and political ties to Lan Sang and thus to the central Maekhong area, beginning in the late 15<sup>th</sup> century and culminating in the reign of Saiyasettha, account for how scripts of the Lan Na area were transmitted, along with their characteristic writing practices. Thus [ 'Y ] FK survives as Modern Lao [ 'Y ] ML.

There is at present neither material evidence nor any obvious system-internal argument to suggest the existence of a conventionalized 'Archaic Lao' script that predated the arrival of LN and FK in central Maekhong as sketched above - let alone one that predated SK of the 14<sup>th</sup> century. In fact both FK and LN as written in the central Maekhong area are, for the 16<sup>th</sup> century at least, almost identical to preexisting documented FK and LN in the Lan Na area. Of course a different script may have been used earlier, but evidence has not been reported.

In summary, it is unlikely that a pre-SK script could have had 'lustral Y' - although it is not impossible. Since [ Y ] SK appears to be one of a number of similar SK shape-simplifications of existing Khmer-Pallava writing, its case should not be assessed in isolation. Evidence is good that [ 'Y ] SK was in SK times a motivated digraph to represent conserved preglottalization. [ 'Y ] FK/ [ 'Y ] LN, on the other hand, is clearly a *subsequent* modification in turn of this very [ Y ] symbol - viz [ Y ] SK. The modification appears to have been motivated by loss or lack of preglottalization in the LN area, but with compensatory tonal differentiation - part of a larger phonolo-

<sup>49</sup> However this account ignores the problem of reconstructing earlier stages of Lue phonology. For example, most ( all? ) modern dialects of Lue show the same sound changes as characterize MT in [ 9 ]: / \*\*y/ / \*\*ɤ/ / \*\*y/ and / \*\*hɤ/ all merging to modern / y/. When did these changes take place in Lue and how would they affect the orthographic developments under discussion here?

gical change. Loss of systematic preglottalization is almost certainly a one-way and irreversible sound change. Similarly, at least in the Tai milieu, a consonant shape with an added 'tail' can safely be assumed to follow (and not to precede) the 'tail-less' counterpart. These two constraints would need to be kept in mind if one were to construct a sequence to replace the one suggested above.

Other scenarios of course are possible and the construction above is only one way to account for the linguistic and epigraphic facts. However this way would appear for the moment to be the simplest way. It is hoped that the discussion above both may lead others to advance and test alternate proposals.

## REFERENCES

- Aroonrut Wichienkeeo. 1978. Prawatsat Chiang Mai. In Prakhong Nimanhem and Songsak Prangwattanakun (Eds.). *Lan na thai khadi*, 11-47. Chiang Mai: Sun Nangsu Chiang Mai.
- Chaliao Munchan. 1983. Akso'n tham lan na. Bangkok: Thai Wattanaphanit.
- Champa Yuangcharoen et al. 1979. *Wikhró' silacharu'k nai phiphithaphansathan haeng chat hariphunchai*. Bangkok: Krom Siplakorn.
- Charu'k nai prathet thai. 1986. Bangkok: Fine Arts Department.
- Charu'k samai sukhothai. 1983. Bangkok: Fine Arts Department.
- Chit Phumisak. 1983. *Ruam botkhwam thang phasa lae niruktisat*. Bangkok: Dok Ya Press.
- Coedès, George. 1925. *Tamnan akso'n thai*. Bangkok: Khurusapha, 1983.
- Davis, Richard. 1970. *A Northern Thai Reader*. Bangkok: The Siam Society.
- Dhawaj Poonotoke. 1983. Akso'n nai prathet thai kap kan ti khwan ruang chon chat. In 700 pi haeng laisu Thai, 11-25. Bangkok: Ministry of Education.
- \_\_\_\_\_. 1987. *Silacharuk isan*. Bangkok: Ramkhamhaeng University.
- Diffloth, Gérard. 1984. *The Dvaravati Old Mon Language and Nyah Kur*. Bangkok: Chulalongkorn University Printing House.
- Diller, Anthony. 1979. How many tones for Southern Thai? In Nguyen Dang Liem (Ed.). *South-East Asian Linguistic Studies*. Vol. 4. Pacific Linguistics C49, 117 - 129. Canberra: Pacific Linguistics.
- Donaldson, Jean and Diêu Chính Nhâm. 1970. *Tai-Vietnamese-English Vocabulary*. Saigon: Bộ Giáo-Dục Xuất Ban.
- Duangduen Suwattee and Pranee Kullavanijaya. 1976. A study of ออ อ หอ and หอ In T.W. Gething, et.al. (Eds.). *Tai Linguistics in Honor of Fang-Kuei Li*, 214-224. Bangkok: Chulalongkorn University Press.
- Gelb, I.J. 1952. *A study of writing*. University of Chicago Press.
- Griswold, A.B. and Prasert na Nagara. 1971. Epigraphic and historical studies No. 9: the inscription of King Rama Gamheng of Sukhodaya (1292 A.D.). *Journal of the Siam Society* 59:179 - 228.
- \_\_\_\_\_. 1974. Epigraphic and historical studies No. 13: the inscription of Wat Phra Yün. *Journal of the Siam Society* 62.1:123 - 125.
- \_\_\_\_\_. 1977. Epigraphic and historical studies No. 18: the inscription of Vat Juan Hman (Wat Chieng-Man) *Journal of the Siam Society* 65:111 - 144.
- \_\_\_\_\_. 1978. Epigraphic and historical studies No. 19: an inscription from Keng Tung (1451 A.D.). *Journal of the Siam Society* 66.1:66 - 88.
- \_\_\_\_\_. 1979. Epigraphic and historical studies No. 24: an inscription of 1563 A.D. recording a treaty between Laos and Ayutthaya in 1560. *Journal of the Siam Society* 67:54 - 69.
- Jenner, Philip N. 1981. A chrestomathy of pre-Angkorian Khmer. Vol. 2. Lexicon of the dated inscriptions. Southeast Asia Paper No. 20, Part II. University of Hawaii Center for Asian and Pacific Studies.
- Kannika Wimonkasem. 1983. *Akso'n fak kham thi phop nai silacharu'k phak nu'a*. Bangkok: Silpakorn University.
- Lafont, Pierre - Bernard. 1962a. Les écritures pali au Laos. *Bulletin de l'École Française d'Extrême-Orient*. 50:395 - 405.
- \_\_\_\_\_. 1962a. Les écritures tai au Laos. *Bulletin de l'École Française d'Extrême Orient*. 50:367 - 93.
- Li, Fang Kuei. 1977. *A Handbook of Comparative Tai*. Oceanic Linguistics Special Publications No. 15.
- Naina Prongthura. 1984. *Akso'n tham lan na*. Bangkok: Silpakorn University.
- Pentth, Hans. 1973. Notizen zur Geschichte der Yuan-schrift. *Acta Orientalia* 35:163-165.
- \_\_\_\_\_. 1985a. The Wat Kan Thom inscriptions and the development of Thai letters. Seminar on Lan Na History and Archaeology, Chiang Mai Teachers College, 28 - 31 January 1985.



- \_\_\_\_\_. 1985b. Kansamruat lae wichai charu'k 1.6.1.1 Wat Pa Bong, pho' so' 2039 - kho' so' 1496. *Silpakon* 29.2:65 - 69.
- \_\_\_\_\_. 1986a. Thai scripts: an outline of their origin and development. In H.R.H. Galyani Vadhana (Ed.). *Yunnan*, 246 - 249. Bangkok.
- \_\_\_\_\_. 1986b. On the history of Thai scripts. *The Siam Society's Newsletter* 2.3:2-4.
- Prachum Silacharu'k 3. 1965. Bangkok: Office of the Prime Minister.
- Prasert na Nagara. 1983. Laisu' thai. In: *Ruam bot khwam ru'ang phasa lae akso'n thai*. Kong Wannakhadi lae Prawatisat, Krom Silpakorn, p. 19 - 39. Bangkok: Fine Arts Department.
- \_\_\_\_\_. 1985. Prawatsat lan na chak charu'k. *Silapawattanatham* 6.6:84 - 90.
- Shorto, H.L. 1970. *A Dictionary of the Mon Inscriptions from the Sixth to the Sixteenth Centuries*. London Oriental Series, Vol. 24. London: Oxford University Press.
- Sila Viravongse. 1973. *Akso'nsat lao pawatsat nangsulao*. Wiang Chan: Phai Nam.
- Singkha Wannasai. 1975. *Tamra rian akso'n lan na thai*. Chiang Mai University.
- Suthiwong Phongphaibun et al. 1982. *Photchananukrom phasa thai thin tai*. Songkhla: Institute of Southern Thai Studies.
- Udom Rungruangsi. 1984. *Rabob kankhian akso'n lan na*. Chiang Mai University: Khrongkan Tamra Mahawit-thayalai, Andap 19.
- Uthai Piromruen and Dhawaj Poonnotoke. 1984. The Northeastern Scripts During the Lao Period, 16 - 19 Century A.D. Paper presented to the International Conference on Thai Studies, Bangkok, 1984.
- Vickery, Michael. 1987. The Ram Khamhaeng Inscription: a Pitdown Skull of Southeast Asian History. In Ann. Buller (Ed.). *Proceedings of the International Conference on Thai Studies*. The Australian National University, Canberra, 3 - 6 July, 1987. Vol. 1 : 191 - 211.
- Wikkhro' silacharu'k nai phiphitthaphansathan haeng chat hariphunchai. 1979. Lamphun: Fine Arts Department
- Wilaiwan Khanittanan. 1976. *Phasa saek*. Thammasat University.
- Wyatt, David K. 1984. *Thailand, a Short History*. Yale University Press.