CHAPTER 1

THE RAM KHAMHAENG INSCRIPTION : A PILTDOWN SKULL OF SOUTHEAST ASIAN HISTORY?

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Nearly ten years ago General Saiyud Kerdphol, then Supreme Commander of the Armed Forces of Thailand and director of the ISOC, said the Thai possessed a "traditional cultural and religious regard for human rights and freedom of the individual inherited from our first king—Ramkamhaeng the Great of the 13th century;" and he must have considered the so-called Ram Khamhaeng inscription as evidence for those qualities, for no other source mentions 'Ram Khamhaeng' at all.[1]

Some 60 years earlier, however, George Coedès, who finally supplied the first really complete translation of the Ram Khamhaeng inscription (RK), and then used it in an original analysis of Sukhothai state and society, said that the social system implied was reminiscent of that of the Mongols. "De même qu'au sommet de l'édifice social des Mongols se trouve la 'famille d'or', dont le chef est le grand Khan, et dont les princes sont les fils du grand Khan, de même Rama K'amhèng se donne dans son inscription le titre de *p'o khun*, 'pére khun', tandis que les princes et hauts dignitaires sont les *luk khun*, 'fils khun'."[2]

If these two views of the Ram Khamhaeng inscription seem to imply a link between Genghis Khan and Thomas Jefferson and give the former some claim to be a forerunner of the latter in an international struggle for democracy, we should not be too astonished, for probably few other historical documents have

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been forced into so many divergent contexts or have had such diverse *a priori* judgements forced onto them.

Similarly, extreme contrasts in opinion have also been expressed about RK's style and script. For A.B. Griswold and Dr. Prasert na Nagara Ram Khamhaeng's "style of composition was sobre, disciplined and orderly, with a well-defined succession of events and a clear topography,"[3] while C.B. Bradley saw it as an example of "primitive speech," with a "marked tendency toward formal and conventional phrasing," which "moreover is generally marked by some isolation or obscurity of meaning...due, as we may imagine both to exigencies of rhyme and to the use of antiquated diction" (Bradley, pp. 19, 41).[4] In even greater contrast, Bradley excoriated the tone-marking system, calling it a "twice, nay thrice, involved scheme...together with the absurdly inflated consonantal alphabet which is part and parcel of it...it might well bear the palm of what Professor Whitney has called 'devices of perverse ingenuity' " (Bradley, p. 14); while Marvin Brown thinks it was a work of genius.[5]

There are two separate issues involved in the question of the authenticity of the Ram Khamhaeng inscription. Is it a genuine work of the 13th century, and if so does it represent the invention of Thai writing? If it could be shown that the Ram Khamhaeng inscription is a later composition, then it was certainly not the first Thai script, but even if its temporal authenticity cannot be assailed, there could conceivably be internal evidence indicating prior Thai writing.

Publicly, or in print, very little doubt has ever been cast on the authenticity of the Ram Khamhaeng inscription in either way. Prince Chand Chirayu Rajani wrote that it must have been composed by King Lidai, but he still accepted that its system of writing had been devised earlier as the invention of Thai writing; and I cast doubt on it by describing some of its anomalies.[6]

Now a serious gauntlet has been thrown down by Art Historian Piriya Krairiksh who has stated flatly that the inscription cannot have been written before the beginning of the 15th century, which if true means that it not only does not

represent an early Thai script, but is a deliberate historical fake (Krairiksh 1986).

There are three ways to investigate the inscription's authenticity–(1) script, (2) vocabulary, (3) content, its description of the city of Sukhothai, its politics, economics, and religious activity. This last was the aspect examined by Piriya Krairiksh, who said that the writer of the inscription had no idea of the architecture of the city in the time attributed to the inscription.

All three of these aspects show a number of inadequately explored anomalies. My purpose here is to set out clearly the nature of these anomalies, and the linguistic and historical evidence bearing on them. In the space available not all of the problems will be resolved, but I hope at least to demonstrate, even if it is impossible to prove the Ram Khamhaeng inscription a hoax, that it may not be considered as a true example of 13th-century Sukhothai Thai and used as such by linguists or historians.

First let us review what is known of the circumstances of the inscription's discovery.

According to Prince Patriarch Vajiraňan, Prince Mongkut brought the stone throne from Sukhothai, and "He also secured a stone pillar inscribed in Khamen letters, and one inscribed in ancient Siamese...of wondrous import, as if presaging that he would be sovereign of Siam, a king of majesty, power, and goodness far-reaching, like the Phra Bat Kamaradeng At,...who was king in Sukhothai, as recorded in that inscribed stone." Bradley added, "the reference in the last sentence is to the other stone. I am at a loss to understand how it is that the Siamese generally seem to value so highly Prince Kamaradeng At and his Khamen inscription" (Bradley, p. 7, n. 2).

The reason, as clearly implied in the quotation from Prince Patriarch Vajiraňan, was that then both inscriptions—nos. 1 and 4—were believed to be of the same date and of the same king, that is Phra Bat Kamaradeng At was believed to be Ram Kamhaeng, although Bradley realized that such was not true.[7]

According to Griswold and Prasert (EHS 9, p. 183). "In 1836 the task of decipherment was turned over to a Commission of scholars under the direction of Prince Rksa, the learned monk who is best known by his later title Kram Brahya Pavareç-variyalankarana [a first cousin of Mongkut][8]... .The first published work to mention this inscription is *The Kingdom and People of Siam,* by Sir John Bowring (London 1857)...."

A slightly different tale of discovery is reproduced in Caru'k samay sukhothai, cited from Prince Pavareçvariyalankarana's notebook.[9] It is worth translating in full, perhaps for the first time.

> In the year 1195 [1833] snake year 5th of the decade... [Mongkut] went up to visit the northern *möang* and pay respects to the various chedi sites...on the 6th of the waxing moon he came back down by boat; on the 7th at noon he reached the landing of Thani [i.e.rājadhāni, the new town of Sukhothai]; he walked to *möang* Sukhothai reaching it in late afternoon. He stayed there two days. He walked around, and came upon a stone slab near the edge of a palace mound, set up as a pedestal, broken down and leaning on its side in that place. The local people venerated it as a *san cau.* They had a boxing match to celebrate it every year.... He ordered that it be brought down, and set it up as a throne under a tamarind tree at Vat Samoray, along with a stone pillar inscribed with Khmer letters. [The one] at Vat Phra Çri Ratnasasdaram was brought at the same time as the stone throne".

This sounds very much as though Mongkut's contemporary, and the first translator of the Khmer no. 4, considered that *it* was *the* inscription which Mongkut found, and brought down from Sukhothai, along with the stone throne.

The introduction to no. 1 in *Caru'k,* however, adds that Prince Pavareçvariyalankarana's notebook, not quoted, also refers to "another 'stone pillar' saying it was a stone pillar which had come from Sukhothai, containing information about the first Thai writing arising in that *möang*, and describing the content of side 4 of the Rama Khamhaeng inscription." *(Ibid.).*

The Sukhothai Language

It may first be helpful to summarize current linguistic views on the history and interrelationships of the Thai languages and the place of the Sukhothai language among them.

There are over 100 still living Thai languages and dialects which have been studied to some extent by modern linguists, plus one branch, Ahom, now extinct, but written texts of which have been preserved. Just as in the field of Indo-European linguistics, such a large number of modern languages, plus earlier written documents in some of them, permit comparisons of sound changes leading to reconstruction of the phonemes of ancestor languages and to inferences about descent of later languages from earlier ones.

The Thai languages are divided into three large sub-groups, North, Central, and Southwestern, the last including all of the Thai languages of Thailand (except Saek, a Northern Thai language), Burma, most of the Thai languages of Laos, the dead language Ahom, and several, such as Red, Black, and White Thai, of northern Vietnam. The most significant work of comparison of these three groups is Fang Kuei Li's *A Handbook of Comparative Tai*.

"From the correspondences of tones and from their distributions, it is possible to assume...four tones in Proto-Tai," designated conventionally by linguists A, B, C, D, the first three in words ending in a vowel or nasal (after the loss of final consonants in pre-Proto-Tai), and tone D in syllables still ending in a stop (Li, p. 25).

These four original tones were further influenced by the quality of initial consonants, voiced/unvoiced, aspirated/unaspirated, glottalized. In particular the "opposition of voicing and voicelessness...influences practically all the tones in all dialects." Thus it is assumed that the four Proto-Tai tones first split into two series, those on syllables with voiceless initials and those with voiced.[10]

As long as the initial consonants maintained their voiced/

unvoiced distinction the two series of tones would have been allophones, that is not essential to distinguish one word from another; but as some of the voiced initials began to unvoice (and comparison of the initial consonants of modern languages shows that this happened), the tones became phonemic. Linguists have considered that devoicing did not necessarily occur at the same time in all languages; and here Li first took notice of, and was apparently influenced by, our Ram Khamhaeng inscription, saying that it "maintains the distinctions of voiced and voiceless consonants and disregards the differences of tones between the two series," that is kha^2 (ฆ่า) 'kill' and ga^2 (ค้า) 'trade' carried the same tone as well as tone mark; and "This may indicate that as late as the 13th Century the two series of tones were not quite phonemic, in Siamese at least." This supposition represents a gross anomaly in terms of the other features of historical development outlined by Li, and as we shall see it is a quite unnecessary inference, almost certainly untrue (Li, p. 26).

This and further mergers of original initial consonants, as well as different developments of original aspirated consonants, meant that phonetic tones differed from one language to another, but "the two series of tones, corresponding to the old voiced and voiceless initials, are generally maintained in all dialects."[11]

More detailed subdivisions of the Southwestern Thai languages have been made by James Chamberlain. The first criterion is the way in which original Proto-Thai voiced initial stops devoiced in Proto-Southwestern, or Proto-South Central Thai (PSWT, PSCT), the ancestor of nearly all dialects in Thailand and Laos, including ancient Sukhothai. They became unvoiced and unaspirated in some languages, unvoiced but aspirated in others. Chamberlain terms these respectively P and PH languages.[12]

The former include Black, White, Red Thai, Lue, Shan, Yuan (Chiang Mai, Chiang Rai), and Ahom, while among PH languages are Standard Thai, Phu Tai, Phuan, Lao (Luang Prabang, Vientiane) and Southern Thai of Thailand.[13] Relevant to our purpose here is also a further split, in tones, within the

PH languages, which places Lao and Southern Thai in a separate branch from Standard Thai, Phu Tai, Neua, and Phuan (see attached diagram).

Thus for Chamberlain – and I believe this is a general consensus of linguists of Thai, the languages of Sukhothai and Ayutthaya represented different sub-branches of Southwestern Thai, and the former was not a linguistic ancestor of the latter (also Brown 1965, Hartmann).

Although Chamberlain took little notice of the implications for RK, his periodization of language splits assumes a devoicing of Proto-Thai voiced initials at the time of the P/PH language split, long before the Sukhothai period, and well before there is evidence of Thai settlement within Thailand, perhaps as early as the 8th century.[14] If so, the explanation which Li offered for the tonemarking system of the Ram Khamhaeng script cannot possibly be valid. Even within the terms of Li's own descriptions of dialect development it required a serious suspension of disbelief, for it implied a unique line of descent of the Sukhothai language from Proto-Thai, a supposition which cannot be sustained with any of the other evidence. If Sukhothai language had had such an isolated and unique development, one would expect its vocabulary to reflect the uniqueness, and to diverge more significantly from neighboring dialects.

Marvin Brown indeed did treat Sukhothai in that manner, showing it in a unique line of descent from "Ancient Thai," or a fictive pre-950 "Yunnan;" but Brown ignored all but the Southwestern languages of Thailand, Shan, and Mekong Valley Laos, and to reach his conclusions about Sukhothai he had to assume the validity of the now-discredited Nan Chao theory (direct physical movement of the Thai population into Thailand from Yunnan), plus the preservation of initial voiced consonants in 13th century Sukhothai, and accept the tone marks of Ram Khamhaeng, true inventor, as a rational system, in which *therefore* each tone marker, *mai ek* or *mai tho*, must always have indicated the same tone, whether associated with 'high,' 'middle,' or 'low' consonants.[15]

The question of Sukhothai voiced initial consonants has been a red herring muddying the waters of historical linguistics ever since the first serious work on Sukhothai sources.

The chain of assumptions has been (1) Ram Khamhaeng invented *the* Thai alphabet, (2) he borrowed an Indic alphabet from the Khmer, (3) it included a series of initial consonant symbols traditionally considered voiced because that had been their value in Indic (Sanskrit and presumably early Khmer), and (4) proto-Thai (shown by linguistic comparison) had initial voiced consonants whose descendants are represented in writing by the traditionally voiced Indic initial consonant symbols.

The first weakness in this chain of reasoning is that devoicing of earlier voiced initial consonants was not only a feature of the Thai languages, but something which swept across Southeast Asia, affecting Mon-Khmer as well as Thai, regardless of language relationship; and it affected vowels and tones in different ways, as has been remarked with respect to the P and PH languages of Thai. In Khmer the old voiced initials became unvoiced and unaspirated, thus making Khmer a P language in the terminology used for Thai by Chamberlain; and in Khmer the following vowels were modified to take up the distinctions which initial consonants had lost. The dates of these changes in Khmer are not known, but most linguists posit a period of about 1000 years ago for devoicing.

In fact, Khmer devoicing could have occurred before any Khmer alphabet was adopted by the Thai, but – and this is the important point – this would not necessarily have affected what happened in Thai writing, nor does the quality of those initial consonants in Khmer have any diagnostic value with respect to the corresponding Thai consonants at the time, for voiced or unvoiced, both series of consonants, or some other symbolic notation, were still required to indicate contrasts which persisted even after Thai devoicing.

As a concrete example take Thai /khaa/ (*kha* ขา) 'leg', and /khaa/ (*ga* คา) 'stuck'. In Proto-Thai as reconstructed they would have been pronounced /khaa/ and /gaa/, without tone distinction,

and it was the initial consonant, both in speech and writing which distinguished one word from the other. After devoicing, the initial consonants were both pronounced /kh/, and the distinction shifted to tones, but in writing this distinction could still be indicated by the different initial consonants, that is *kh* meant /kh/ in a syllable with one tone, while *g* meant /kh/ in a syllable with another tone. In Khmer still another development occurred, tones did not develop, but vowels split into two series, so that now *kha* is /khaa/, but *ga* is /kea/.

Thus, even if Sukhothai consonants, and Khmer, had already devoiced in the 13th century, the former voiced consonant symbols were still required to maintain written distinctions between words in which the distinction had shifted from initials to tone. If Sukhothai had devoiced, but Khmer had not, and if therefore the voiced series of consonants had been rejected by the inventors of the Thai alphabet, then even more 'tone' marks than have ever been used would have been required to indicate such differences in writing.

In fact, as I shall indicate below, there is evidence within the Sukhothai corpus, including RK, that original voiced initials had devoiced, just as the logic of the Li-Chamberlain models implies, and there is no need to postulate their preservation, certainly not on the basis of the script.

This discussion of Sukhothai in comparison to other Thai languages must be interrupted for a moment to define more clearly what 'Sukhothai' means. Linguists have apparently relied exclusively on the Ram Khamhaeng text as 'Sukhothai,' a procedure – ignoring all but one single text of an ancient language – which could probably not have passed muster in any other branch of historical linguistics.[16] At the very least the several rather long mid-14th century inscriptions of the period of Lithai, grandson of 'Ram Khamhaeng,' should also be studied as 'Sukhothai' – in particular no. 2, ascribed to one of the leading scholars of the time.[17] I shall maintain that all inscriptions from the Sukhothai, Phitsanulok, Khamphaeng Phet area until the end of the 14th century should be taken together as repre-sentatives of old Sukhothai language, and the status of the

Ram Khamhaeng inscription must depend in part on its congruence with the significant features of that language.

Since Sukhothai is now a dead language, preserved only in writing, we cannot know its exact pronunciation–in particular we cannot know anything about its tones, except as they may be systematically inferred from historical comparison of all Thai languages. Even such inferences about the tone system depend on the place of Sukhothai within the total Southwestern group as inferred from the development of original voiced initial consonants, and the inferences which have prevailed to date have sometimes depended on assumptions based on speculative non-linguistic criteria.

It must first be emphasized that the complete tone-marking system of Ram Khamhaeng tells us nothing, for it is the same tone-marking system as used in modern standard Thai.

We in fact do not really know, from strict linguistic reasoning, whether Sukhothai Thai was a P or a PH language, and if the latter whether it belonged with Lao (Luang Prabang, Vientiane) and Southern Thai, as conventionally accepted by many linguists, or with Ayutthaya, Phu Thai, Neua, and Phuan. Geographically Sukhothai stands midway between the migration routes of speakers of P languages (Chiang Mai, Nan, Phrae) and PH languages (Luang Prabang, Vientiane, Lom Sak, Ayutthaya (Chamberlain 1975, 1984; Hartmann); and the wider Sukhothai area could have been settled by speakers of more than one Thai language. Even today there are at least three different dialects spoken around Sri Satchanalai, one of them the Phrae variety (P type), and one of them by people locally termed 'Phuan' (a PH language).[18]

Impressionistically there has never been doubt about the 'Lao' character of RK. For Bradley, "there can be no doubt that ... the northern flavor of this speech is quite pronounced; while to a cultivated Lao...it would probably seem very good Lao, only perhaps a trifle old-fashioned;" although he could identify as Lao only 6 of 21 Thai words not current in the modern language.[19]

Likewise, in his "Notes critiques," Coedès explained some

of the difficult terms of RK by reference to words from 'Lao,' the Tai languages of northern Vietnam, or Shan.[20]

The Ram Khamhaeng Script

The major problems of the RK script do not relate to the form of the letters and their derivations from other scripts. Those aspects are shared with the entire Sukhothai corpus, and with a few exceptions which may be useful with respect to the problem of origins, the Sukhothai letters all obviously derive from other Southeast Asian Indic scripts, particularly Khmer and Mon, and there is therefore nothing anomalous in their forms.

The troubling anomalies of RK are those features which differ from the rest of the Sukhothai corpus, and which, if RK represents Sukhothai origins, were rejected by successors. The anomalies are (1) the placement of all vowel signs on the line, a feature unknown to any Indic script of Southeast Asia or in any of the major scripts of India, (2) a complete modern tone-marking system, not found again until the 17th or 18th century after very gradual and tentative developments, and (3) certain vowel signs common to modern standard Thai, but not used in the 14th-century Sukhothai corpus.

In an earlier paper I raised some of these questions to suggest that RK was not genuine; and at that time I considered that vowel signs on the line was the most suspicious feature, being quite contrary to Indic scripts, and unlikely to have been adopted before a time when western scripts had become familiar. Since then it has come to my attention that some Indic Grantha scripts also place medial *i* and *u* vowels on the line.[21] I have been unable to ascertain when that style of Grantha was first used, that is whether or not it could have influenced 13th century Thai, and thus shall not pursue the matter here. It is worth noting, though that Grantha, like western scripts, puts the vowels on the line in phonetic sequence, to the right of the consonant symbol, while RK perversely places them all to the left. In this aspect RK appears to be the work of an eccentric, rather than a brilliant innovator.

In view of the almost sacred character which RK has acquired, it is interesting to note that some of the earliest competent scholars gave no credence to the possibility that it represented *the* original Thai script. Louis Finot suggested that alphabets for the Tai languages of northern Vietnam had already been devised on the basis of a Khmer cursive script, and that "the work of Rama Kamhen (sic) would have consisted in placing that rudimentary system within the Indian alphabet and in completing it with some new symbols and tone notations."[22]

The much more authoritative linguists Coedès and Burnay also made the claim that "Rama Gamhèn's script was not an entirely new one, but an improved form of a Tai script in use before that king's time." His contribution "was to improve the tone notation, or better to set it up altogether." Their major difference from Finot was to argue that the *Tai* model for Ram Khamhaeng was not one of the "degenerate" alphabets of Northern Vietnam, but that "the Sukhodaya script is a modification of an alphabet ('Proto-Siamese script') the content of which was identical with that of the eastern Lao alphabet", and which ultimately derived from Khmer.[23] It is interesting that later work on RK, which includes copious citations from Coedès for authority, has tended to ignore these inconvenient observations.

Very recently Hans Penth has argued for a type of proto-Thai script before Ram Khamhaeng, but thinks it was based on Mon, not Khmer; and James Chamberlain has returned to the ideas of Finot and Coedès about the origins of Thai script in northern Vietnam, proposing that the original Indic source may have been Cham (Penth 1985; Chamberlain 1984, p. 65).

For study of the position of RK, the form of script is much less significant than its tone-marking system, very modern with respect to the use of the markers *mai ek* and *mai tho*, including the irrationalities of modern usage. That is each tone marker indicates different tones in different consonantal contexts, whereas one would expect a rationally devised system to ascribe a single function to each symbol.

Interestingly, Bradley, (p. 13) considered 'Lao,' by which he meant the P-type language now known as 'Khammöang' or 'Thai Yuan' of Lampang-Chiang Mai, to be more rational, but Bradley ignored linguistic development and assumed Ram Khamhaeng and other early innovators to have started cold with Indic script to apply rationally to Thai languages in which vowels and consonants were pronounced as they are today, and in which, assuming central Thai pronunciation, there should have been, for example, two *kh* consonants each regularly assuming a different tonal value. Bradley also assumed full use of the possibilities of Khmer script, something not true for any Thai language (see further below).

Later advances in Thai linguistics have shown that the tone splits differentiating the 'high' and 'low' consonants occurred well before the Sukhothai period. Therefore, it was not possible for a single symbol, on consonants of different classes, to represent a single tone in every class; and just as there is today no Thai language in which standard tone marking would correspond to the language's tonal categories, such was no doubt true in the 13th century. Brown's logic was correct. For the RK tonemarking system to be rational and useful each tone marking would have had to indicate the same tone for each consonant series, a situation which has not existed since at least the time of PSWT 2000 years ago, if not much earlier. This alone is sufficient evidence that either RK is a fake or else the Thai script it exhibits was devised hundreds of years earlier.

I emphasize that it is the early Sukhothai script, not RK in isolation, which must be studied to resolve the problems posed by the latter. Several long inscriptions date from just after mid-14th century, 75 years later than the latest date within RK, too short a time for the tonal system to have drastically changed. In these inscriptions, and throughout the 14th century, the period whose corpus I shall treat as early Sukhothai, there is no evidence of a tone mark system like that of RK. Tone marks, when used at all, appear hesitantly, irregularly, and inconsistently, and it is not that the complete RK system broke down, for the *mai-ek* in particular is not so much used as a tone marker, but generally

as a vowel sign. As time goes on the use of *mai ek* and *mai tho* gradually increases, until the system approaches that of modern Thai and RK, and this within the Sukhothai area, exclusive of Ayutthaya.

This is the type of evolution which is expected. Signs are gradually devised as they are perceived necessary to lend clarity to confusing contexts, and only at the end of such gradual development are they codified into complete systems. The scientific study of sign systems discredits the myths of wise hero kings of golden ages whose genius permitted them to suddenly invent perfect systems.

The RK inscription is thus suspect by the very completeness of its tone mark system. But for clarity let us review some of the evidence from the early Sukhothai corpus.

In the table the 14th-and 15th-century Sukhothai area inscriptions are listed by number, in chronological order with indications of the nature of their tone-mark usage. Most attention shall be given to *mai tho*, for *mai ek* in those contexts hardly qualifies as a tone mark, being used most often as a vowel marker.

– 107 (1340s?)[24] two occurrences of *mai ek* (line 21), on *tee'* and *k'=ko'*, where the *mai ek* functions as marker for the vowel *ò* (a Sukhothai characteristic), rather than for tone.

– 3 (1357) This inscription contains a rather wide, and frequent use of *mai tho* for the Sukhothai corpus. The *mai tho* is used irregularly. Most of its occurrences correspond to modern usage, but it is not consistently found even on those words; and it is missing from many other words where modern usage requires it.

The two words most frequently found with *mai tho* are *nann+* and *lee+*, the Lao emphatic sentence final particle now written in Standard Thai *lee*. This form accurately reflects Lao emphatic pronunciation. In the first 10 lines other words so marked are *hā+* (five), *phū+* (person), *tai+* (obtain), *dāv+* (title), *hava+* (offer), *dee+* (true), *bun+* (over there), *cau+* (master), *tan+* (tree). All of them are found in other contexts of the text without a tone mark, in particular *tai+*, at least 16 times.

In two occurrences of 'ninety-nine' we find *kausib kau*+ and *kausib kau* (lines 19, 35); and within two lines (42-44) both *phā*+ and *phā cibar* (monk's robe). Both *rū* and *rū*+ 'know' are found; and 'coconut,' *brāv*+, and 'exact,' *thvan*+ are also marked.

Unexpected lack of *mai tho* is on *haï* 'give,' *khau* 'enter,' and *khau* 'rice,' the latter two needing a contrast with *khau* 'they,' also found in the text,[25] *tai* 'under,' *mā* 'horse,' *gā* 'trade.'

There are also unexpected, 'irregular' uses of *mai tho*. In line 2/9 *gu*+ 'threaten' is used instead of *khū.*'. [26] This suggests that *mai tho* was being used ad hoc in some cases, and not systematically to indicate a single tone, for no language shows convergence of tones B1 and C4.[27] Even more significant is that if initial *g* could replace initial *kh*, the original voiced consonants were already devoiced. Another unusual case is *cuň*+ for *cuň*' (exhortative) in line 2/54. This again shows ad hoc use of +, for in no relevant language are tones B1 and B2 identical.

Finally there is the phrase, line 2/32, *brai fā khā dai*, 'the people', and the first two terms again in 2/40. Besides the lack of mark on *khā, fā*, presumed by all commentators to be 'sky,' is written with high consonant *f*, rather than the expected low consonant *v* (Li, p. 79), and it is written this way in *this phrase* several times in several inscriptions, nos. 1, 3, 5, 38 (*brai* fā). This is particularly strange in that 'sky' in other contexts is written correctly *vā*, even though without the tone mark: RK line 4/3*vā*+, no. 2, lines 2/ 53, *vā*, no. 5, line 3/6 *vā*, no. 8, line 3/ 23 *vā* ňàm, no. 13, line 3; no. 42, line 2/3, no. 45, line 26, no. 62, line 2/3 *vā*[2].[28] The *mai ek* mark is found even less, but in addition to its syllabic usage is found 'correctly' on *teen', tee', ayū,' vā'* (ว่า).

The three other Thai inscriptions explicitly from Lithai's reign, nos. 5, 7, 8, show even less regular use of *mai tho*, and the difference cannot be accounted for by their shorter content. No. 5 omits it from *phū* and *thvan*, but shows it on *khām*+ 'cross over,' *phā*+ 'cloth', *cau*+, and *ròy*+ '100'. *Khā*+ 'kill' is correctly marked, but *khā* in *khā sök* 'troops' is not.[29] There is also *thòn* + for *thòn* 'clear'.

Here also there are a few tonal uses of *mai ek*, in addition to its syllabic function, especially on *k'=kò*, thus *kòn'* 'before,' *graï'* 'desire,' *dān'* (sir), *kee'* (to), *tee,* 'from,' *ayū'* (be at).

No. 7 has no tone marks at all, and neither do the first two sides of no. 8. Sides 3 and 4 show *mai ek* as a vowel marker, and a few instances of *mai tho, dau+* 'up to', *cau+,* *phū + nòn+* 'the younger one', and *dāv+.*

The tone marking in no. 2, now dated around 1361, is similar to no. 3, but given its length the marking is quantitatively even less complete. Again *cau+* is most regularly marked; and other words showing fairly regular use of *mai tho* are *nann+, phū+, jān+, dāv+, lee+, leev+,* with examples of *mā+, tān+, mai+, tvay+, kau+sib,* and there is even more neglect on the second side than on the first.

Number 11, in part related to the events described in no. 2, and dated to the 1360s, has no tone marks at all.

Past the reign of Lithai neglect of tone marks generally continues throughout the remainder of the 14th, and the 15th centuries. Within the 33 lines of no. 42 of 1374, only the words *thvan*[2] and *vā*[2] are each marked once, interestingly with a mark resembling the modern *mai tho*, while it is absent from such words as *khā* 'personal pronoun,' marked once with *mai ek* instead, and *tai* 'obtain,' often marked in the earlier inscriptions. Here even *cau* (line 16) is unmarked. Besides *khā'* for *khā*[2] there is also *khò'* for *khò* 'request.' Otherwise there are only two examples of 'correct' *mai ek*, on *dvva'* 'every,' and *tee'.*

The 100-line long law inscription, no. 38, dated to 1373,[30] shows superficially a wide use of *mai tho*, at least 242 occurrences, on 34 different words; but 166 occurrences are on 6 words, *cau + phū+, khā+, haï+, tai+, bān+,* two of them, *phū+* and *khā+,* of particular frequency because of the subject of the inscription, abduction of 'slaves.' Unorthodox use of *mai tho* is on *kt+fán+* 'twist' (modern *ván'*), which should have been *fàn',* and *lee+.*[31] The spelling of *khamoy* with initial *g* proves devoicing.

In the even longer (120 lines) no. 106 of 1384, there are over 30 occurrences of + consistent with standard *mai tho*, most

of them on the words most typically marked in other Sukhothai texts, *tai+, cau+, phā+, phū. Mai ek* is very rare.

Number 45 of 1392 contains no *mai tho* at all, and only a few occurrences of *mai ek*, used as a vowel marker.

Another presumably late-14th century text is no. 95, with 36 lines and only two tone-marked words, *hlò+* for *hlò'* 'cast,' and *khau*[2] 'go in.'

Similar practice is seen in no. 49 of 1417, but with three examples of unusual *mai tho* on *sashnā+, hò+,* 'building', and *khò+,* as though the scribe were trying to use it to mark tone AD, the modern 'rising tone'.

In the short inscription on a Buddha base dated 1421 two words, *tai+* and *khā+,* are conventionally marked, but *cau* twice, *nī, khā* twice, *phū* twice, *tvay, keev, vai, haï* are not (*Carük* pp. 135-137).

Early 16th-century texts show similar practice. Number 13 on the Siva of Kamphaeng Phet marks *cau*[2] thrice and *khau*[2] 'rice' twice, as well as a few other words, using the modern form of *mai tho,* but there are still more cases, including *khau* 'enter', where marks are lacking. One 'incorrect' *mai tho* is *sòm*[2] for *zòm',* 'repair, which suggests a tonal system already evolving toward that of Ayutthaya. There is also an unexpected *büj*[2] 'seed.'

Number 15 of 1525 shows a few 'correctly' marked words, *cau*[2] twice (but also *cau*), *dāv*[2] four times, plus *tvay*[2], *tai*[2], *keev*[2] and *leev*[2], while no. 14 of 1536 has only one tone mark on the syllable *hnā*[2], which has been diversely interpreted. Coedès read *asahnā*[2], 'rug', Griswold and Prasert 'throne.' (Coedès, *Prajum*; EHS 15, p. 134).

The Jataka inscriptions of Wat Sri Jum are almost entirely devoid of tone marks, which may ultimately serve as a clue to their date. There is one occurrence of *mā'* for *mā*[2] 'horse,' together with the quite aberrant *goja'niajātak* and ja'k for *jā tak* (*Carük*, pp. 410, 435).

Contemporary use of tone marks in the north and in Ayutthaya is also significant for the ensuing argument because of the conventional view that the marking system spread outward from Sukhothai.

The first long inscription of the Chiang Mai area is no. 62 from Lamphun, dated 1371, and commemorating the arrival of the monk Sumana from Sukhothai. If ever there should have been instruction of provincial scholars by a Sukhothai teacher, it should be exemplified here. But in 81 lines there are only three examples of *mai tho, tai²* (line 5), *tān²* 'side' (line 36), and *leev+* (line 2.9), plus one *mai ek* on *ayū'* (line 9). There is also some use of *mai ek* as vowel sign.

In Ayutthaya a similar situation prevails. Number 41, a silver plate recovered from the crypt of Wat Mahathat in Ayutthaya, and therefore dated to around 1374, contains, for its length, a rather large number of *mai tho*, mostly on low and middle class consonants, such as *cau², jau², dāv², bon², nòn², rū²*, but also *hnau², khau²* 'enter', and *khā²*. *Mai ek* is found mostly as a vowel sign. Interesting is that the 'modern' *mai tho* is used here, earlier than its occurrence at Sukhothai.

Number 42, from the same provenance, has only one tone-marked word, *thvan²*, thus leaving several words marked in no. 41 unmarked.

From Chainat, north of Ayutthaya, no. 4 of 1373/4, considerably longer than the Wat Mahathat plate, has no tone marks.

An interesting case is no. 48 of 1408, one of the early Ayutthayan examples of Thai written in Khmer script. Two words have modern *mai tho, cau²* four times and *dau²*, interpreted as *dān'* 'sir' (*Prajum* III, notes, p. 81).

Also from Chainat, no. 52 of 1412 has no tone marks; no. 51 of the same date marks only *cau²* once.

In modern Thai, and in the system postulated by Marvin Brown for 13th-century Sukhothai, tone marks serve to make horizontal distinctions among syllables with identical initial consonants and vowels, such as *kau'* 'old,' *kau²* 'nine,' or *khau*

'enter', 'rice', *khau* 'knee', *khau* 'horn'.[32]   Such orthographic distinctions do facilitate reading, although there are very few situations in which context alone would not be sufficient. Vertical distinctions between high and low consonants are inherent in the alphabet, although the middle consonants, with respect to tone, fall together now with the high, now with the low consonants. The only example of confusing merger in standard Thai is between B4 and C1, that is the total homophony of /khaa/ (ค่า) 'price' and /khaa (ข้า) 'slave'; but here too context would easily permit distinction, whether in reading or speaking. Coedès recognized long ago that tone marks were unnecessary for competent practitioners of Thai, and he therefore suggested that Ram Khamhaeng had introduced tone marks to facilitate the teaching of Thai to the Khmer and Mon populations over whom the Thai ruled at Sukhothai. "As soon as the position of the Siamese became a strong one, the notation of tones became far less regular;" and the later restoration of tone marks "seems to be that a fresh expansion of Siamese power during the Ayudhya period made it necessary to revert to the policy launched" by Ram Khamhaeng (Burnay 1927, pp. 99-100).

This explanation is quite unacceptable today. It depended implicitly on the Nan Chao theory, which had the Thai descending rapidly from Yunnan to occupy central Thailand after the Mongol conquest of the latter area. It is certain now, however, that the Thai moved very gradually into central Thailand from the northeast, that there must have been generations of contact with the Mon and Khmer before the Ram Khamhaeng period, with increasing numbers of bilingual speakers among the latter in each generation. The introduction of tone marks to facilitate Thai reading for non-Thai at that time is quite inconceivable, even supposing that such modern educational ideas had been in vogue.

One matter which may easily be disposed of is instruction of Ayutthayan Thai speakers in tone marking by teachers from Sukhothai as the cause of tone mark problems in modern Thai. Coedès supposed this had been done for nationalist reasons, and that the present confusion of B4 and C1 tones was an "innovation

siamoise" because the non-Thai speakers could not maintain the "niceties" (Burnay 1927, pp. 105, 101).

Marvin Brown argued that around 1400 Sukhothai teachers had instructed Ayutthayan Thais, whose language was different, in the complete RK system, which did not fit the tonal categories of Ayutthayan Thai. The Ayuthayans, nevertheless, accepted this orthography, and their language, with the irrational orthography, eventually came to dominate central Thailand.

Countering this explanation, Dr. Prasert na Nagara (Saratthakhadi, pp. 54-55) has written that probably the Mahathera Sangharaja whom Ram Khamhaeng invited from Nakhon Si Thammarat brought his ideas of tone marking, based on southern Thai pronunciation, to Sukhothai, where it did not fit the local language, and this accounts for the irregularities. Thus it was dropped in later Sukhothai inscriptions because it was confusing. Dr. Prasert's idea, however, presupposes an earlier Thai writing system in the South, contrary to everything Dr. Prasert has said about the primacy of RK for written Thai, and it implicitly denies Ram Khamhaeng's genius in creating a perfect system for the language of his place and time.

Besides this, we have evidence that southern Thai speakers innovated in the use of tone marks, and even vowel signs, for the purpose of marking tones as they occurred in their language; and a tone marking system brought from the south to Sukhothai would have been quite different (Wyatt, *Crystal Sands*, pp. 16).

The examination of tone marks as used both at Sukhothai and Ayutthaya shows that around 1400 tone marking in Sukhothai was very defective, if not nonexistent, and that the Ayutthayans would not then have learned the system which eventually prevailed. Moreover, the Ayutthayan evidence shows incomplete tone marking similar to practices prevailing in Sukhothai at the same time, whether or not this was the result of purposeful instruction. Thus if Sukhothai teachers really did go to Ayutthaya, they taught what was currently being used in Sukhothai, not the ideal system of RK, which, we must again emphasize, is not found again until near modern times.

In 14th century Sukhothai usage the words most consistently marked are not among those for which confusion would likely arise.   It would therefore be easy to say that Sukhothai *mai ek* and *mai tho* mark no contrasts, since within a single text we may find *khau* for 'enter,' 'rice,' 'they;' but if they had not at some time been felt to serve a purpose, they would never have been introduced.   It is possible that the Sukhothai usage as preserved in the corpus really is irrational, an older once useful system in the process of disintegration, and this is supported by its gradual disappearance over 200 years, as local writers themselves realized its lack of utility.   But this still leaves us with the question of what the original system was.

Important clues are a few particular inconsistencies, which cannot be explained by reference to any kind of tone logic.   The first is 'sky', written regularly as *fa* in the phrase *brai fa kha dai,* or related expressions, but *va*, correctly, in all other contexts. It cannot be explained by saying that if tone marks had been used correctly the two syllables might have been interchangeable, for there is no relevant Thai language in which a high class consonant *(f)* with any tone coalesces with its homorganic low-class consonant *(v)* with tone C.

This example suggests an earlier writing system in which the old voiced consonants had devoiced, as they clearly had at Sukhothai, and in which there was only one character for /f/, which later became high class *f;* and it persisted in the set expression *brai fa kha dai* after 'sky' was regularly written with the correct but newly devised low class *v*. This seems particularly likely in the case of these two letters, which give the impression that one was devised from the other. Thai *ph* and *b* (both /ph/) give the same impression, whereas in neighboring Indic alphabets the two corresponding letters have distinctive forms.[33]   In such an alphabet diacritics would be useful to distinguish words which in Sukhothai and Standard Thai are written with different initial consonants; and if Thai had first been written in such an alphabet, then rationalized with additional letters at Sukhothai, the marks would first have been taken over, then found redundant.

As a preliminary conclusion we may say that the tone-mark system of RK was no more rational in the 13th century than today, that it was not even current Sukhothai usage, nor was it taught to speakers of a different Ayutthayan dialect; and the genuine Sukhothai usage contains clues to a much longer development of Thai writing than the period from Ram Khamhaeng to Lithai.

Another question in Sukhothai historical phonetics which bears on the authenticity of RK is the presence of the two obsolete initial consonants *kho khvat (kh, ฃ)* and *kho khon (g, ฅ)*. They are found not only in RK, but throughout the old Sukhothai corpus, although their use from one inscription to another is inconsistent. Burnay and Coedès (1927, pp. 119-126) discussed them as a problem in historical phonetics; and they recognized that such obsolete spelling distinctions might point to phonemes in a proto-language which have disappeared through merger. Significantly they did not isolate RK as a more pure example of archaism, but considered several Sukhothai inscriptions together as evidence of the Old Sukhothai language. They were unable to reach a definite conclusion about *kho khon*, but considered that *kho khvad*, "used much more frequently" in the inscriptions, represented a "voiceless guttural spirant; x" in 'proto-Siamese;' and "the transition of x to kh would have been late in Siamese, *because* [my emphasis–MV] the proto-Siamese writing [i.e. Sukhothai] has preserved traces of the ancient distinction."

Marvin Brown (1965, pp. 146-7) also saw evidence of ancient phonemes which he believed had still been pronounced distinctly at the time of Ram Khamhaeng. Unfortunately he derived his list of words representing such ancient phonemes from comparison only within the languages of Thailand plus Shan, and several of his examples are incorrect as well as in conflict with the evidence of the Sukhothai inscriptions, including RK.

More complete comparison and recovery of proto-phonemes is found in the work of Fang Kuei Li. At least six PT initial velars, *kh, *x, *g, *g, *khl, *khr, have merged in modern Thai kh (ฃ); and at least two more, *g and *g, have merged in g (ฅ).

Two languages of the Southwestern P type, Lue and White Thai, still preserve some of these distinctions, and were among the key evidence permitting Li's reconstructions. The comparative evidence is shown in the attached table, including illustrations from Li not found in the inscriptions. Note that no. 107, currently dated to the 1330s as the 'second oldest writing in Siamese', between RK and nos. 2-8, does not contain ข or ค.[34]

The table shows that White Thai has preserved distinctions which standard Thai has lost between x/kh and g/g, and it is closer to a theoretical PSWT (or PSCT), which Li did not discuss, in which some mergers had occurred, but not so many as were to occur later in the branches of SWT which include modern Thai, and inferentially Sukhothai.

It has been suggested that the distinctions in Sukhothai script between kh/*kh* and g/*g* indicate that the language of the inscriptions preserved some of the PSWT distinctions.

For this to be true there must be a correspondence between Sukhothai *kh*, White Thai x as a reflex of PT *x, and PT *x; or else, assuming the Sukhothai *kh* is a relic of PSWT unity, a complete correspondence of *kh* with White Thai x, regardless of PT, but in this case there must also be correspondence of Sukhothai velars with all White Thai velars deriving from PT *kh (l, r) phonemes. Correspondences of PT *kh-White Thai kh-Sukhothai kh prove nothing, since all the PT phonemes under discussion merged in Sukhothai kh.

On the contrary, we find in RK four examples of *x-kh, 'go-up', 'go-in', 'hang', 'goad', plus 'respond' in no. 3. Sukhothai and White Thai agree against PT for 'kill', 'rice', 'right', 'break'; but Sukhothai is in agreement with PT against White Thai in 'sell', 'they', 'sing', 'drive' (with loss only of PT l from the cluster *khl). There are two agreements of Sukhothai and White Thai for which I have not found PT, 'thing' and 'mountain'; and one more word, 'tamarind', without PT, but showing disagreement between White Thai and Sukhothai. The correspondences appear random, and a postulation of Sukhothai spelling as a reflex of either PT or PSWT unity is impossible. Li's evidence also indicates that *kh

and *x had merged at the proto-P level, for in each language of the group they are all either *x* or *kh* (Chamberlain 1975 and Li 193-8, 207-13).

With respect to PT* *g,*- White Thai x,- Sukhothai *g,* the correspondences are more regular, particularly if the evidence of inscriptions nos. 2 and 3 are allowed along with RK. The correspondences are perfect for 'cover,' 'hammer,' 'neck,' 'night' (2), 'shin,' 'trade,' and 'subject;' but not for 'word,' which is a doublet of 'subject', nor 'float,' and possibly not 'person.' The weight of the evidence here, in contrast to that for *kh,* and in contrast to the view of Burnay and Coedès, would seem to be in favor of Sukhothai *g* as a reflex of PSWT, PSCT or PT *g, still distinct when a Thai writing system was devised. We may conclude already that the inscriptions of Lithai must be accepted as equally valid as RK for the old Sukhothai language, that there was not deterioration from a more perfect system, and that in old Sukhothai *kh* >*x at least was not phonemic.

Li's evidence for Chamberlain's P group of SWT shows some maintenance of distinctions between the reflexes of PT *g/*g, which in various languages are /kh, k/ or /x, k/. In Black Tai, however, they have merged as /k/. Since, however, devoicing had already occurred, the phonetic distinction in Sukhothai, if real, would also have been between sounds of the /kh-k-x/ type; and since by late Sukhothai times *g had merged with *g, pronounced /kh/ (assuming a PH language), corresponding to /k/ in the P languages, we are forced to postulate that *g* *g had been /k/ in Sukhothai. That is the reflexes of PT *g/*g in Sukhothai were the opposite of the P languages. This seems quite unlikely, since the only relevant language in which PT *g> /k/ is Black Thai in which *that* consonant represents a merger of PT *g/g; and Sukhothai is quite distinct from Black Thai in other features. The other possibility is that Sukhothai was really a P language of the Yuan (Chiang Mai-Lanna) type where PT *g> /k/, and where *g must have become /kh/. Li's evidence does not include Yuan, but shows its close relatives Ahom and Shan with the expected distinction between k<*g and kh<*g (Li, pp. 198, 214-16); and Brown (1965) shows the same distinctions for the modern Yuan dialects of Chiang Mai, Chiang Rai, Phrae and Nan, the

last two still, and probably in Sukhothai times, on the migration route from the northeast to the Sukhothai plain.

Thus for a P language like Yuan/Khammöang the distinction in Sukhothai script between (ค) <PT *g and (ค) <PT *g corresponds to a real difference in pronunciation which has been maintained to the present. The distinction is also seen in no. 62 (AD 1371) in Lamphun, as well as in later northern inscriptions, and in the native Tham script of Lanna. This accounts for Bradley's remarks about the greater logic of Thai script in relation to 'Lao,' but he mistakenly gave letter *gh* the place of *g* (ค).

Although *kho khon* seems to have represented a true distinction in 13th-14th century Thai, even if only in the P languages, not in Sukhothai, there is a strong possibility that *kho khvad*, used quite randomly, was a meaningless allograph.

Since the *g/g* distinction was not maintained in Sukhothai writing, it was probably not a P language, and probably the distinction was in the script only, not in the language. This would mean that the Sukhothai alphabet had been taken from another Thai language, one of the P type.

We will recall that Finot, Coedès, Burnay, now followed by Chamberlain, all have maintained that there was a Thai writing system before RK, and that it was based on 'Eastern Lao,' or a Black Tai type of script. And the latter in particular shows the type of consonant symbol confusion which Sukhothai tone marks suggest.

From wherever the Thai borrowed their script, they did not make full use of the possibilities of an Indic script as used in Khmer or Mon. In those scripts each class of consonants, velar (k), palatal (c), alveolar (t), dental (t), labial (p) contains 4 symbols for (1) voiceless unaspirated, (2) voiceless aspirated, (3) voiced unaspirated, (4) voiced aspirated *(k-kh-g-gh)*.

When this type of script was taken over by Thai, however, the fourth member of each series seems to have been reserved for Sanskrit and Pali words, as they still are today in general,

and were not utilized to help represent the several consonant features of Thai.

This manner of utilizing Indic symbols suggests first that the original Thai adaptation was by a language with high-mid-low series, whether or not the last had devoiced, and where PT *g* and *g* had merged. This could mean either a PH language like Chamberlain's Lao or Neua-Phuan-Ayutthaya, or among the P group Black Thai, for the other main P languages show maintenance of distinctions between their reflexes of PT *g* and *g*.[35] Therefore only three of the four symbols in each Indic series were required.

This is why those languages, such as Khammöang, which have maintained a quadruple distinction of low and high /k/ as well as low and high /kh/ have had to devise a new symbol.[36]

The incomplete Indic script then spread to another P language in which *g*/*g distinctions were maintained and a new symbol modelled on (ค) had to be devised; and *then* it was adapted by Sukhothai, where the new symbol, not required, gradually dropped from consistent use. If it had been maintained we would be forced to conclude that Sukhothai had been a P language.

The RK inscription, on this evidence, not only does not represent the invention of Thai writing, but even if genuine it is a third stage adaptation within the community of Thai languages.

This evidence on borrowing should be related to the tone-mark problem. The sign for *g*<*g (ค) was obviously fashioned after the sign for g<*g (ค), and this is true also for Chiang Mai Tham script. There would have been a period between the first Thai borrowing of Indic script and the invention of the new symbol. One device to mark needed distinctions could have been a mark added to the original consonant.

Evidence of such a hypothetical development is lacking in the velar series, but it is present among the labials. Of course the symbol for /p/ is easily recognizable as deriving from that for /b/; but the two letters for high and low /ph/ (ผ, พ) also show a relationship, and the two for /f/ seem derived one from the other

and both from a /ph/ character. When the first Thai borrowing
from Indic occurred, they seem to have neglected not only the
fourth member of the labial series (Khmer: ᩁ ᨮ ᨯ ᨰ , and
very similar in the old script), but also the third, for both Thai
symbols for /ph/ are clearly related to Khmer ᨯ The Thai took
it and from it produced another /ph/ character and both signs for
high and low /f/. The same relationships are characteristic of
Black Tai script. We will recall that in the Sukhothai inscriptions
one of the words most frequently marked with *mai tho* (+) was
*ph*u+.

One possible reason for neglecting useful Khmer/Indic
possibilities may have been different degrees of devoicing in
Thai and Khmer; or, taking up Chamberlain's suggestion that
Cham was the source of Thai script, we should note that Cham
lacks some aspirated consonants, and therefore some of the
original Indic and Khmer consonants may not have been
available.[37]

The dental series (Khmer: ᨮ ᨯ ᨰ ᨱ) shows similar
development. In both modern and Sukhothai Thai the character
for /t/ (ต) is clearly from that for /d/ (ด), and the latter is obviously
related to Khmer *t* (ᨮ). But in Black Tai the sign for /t/ (Thai
ต) has evolved from *d*<*d (voiceless unaspirated in Black Tai),
and the last appears to have evolved from the Khmer
monumental *d*. Here also a distinction between low and high
class /t/ had to be devised, and dav+ (ท้าว) is another of the
words most frequently marked with+ in early Sukhothai.

The case of *cau*+ is equally interesting. In P languages *j
(ช) and *c (จ) have coalesced as unaspirated and voiceless. The
letter for *j* (ช) is one of the most mysterious in Thai with respect
to form. It does not resemble either Khmer or Mon. In Black
Tai neither of those symbols resembles Khmer, but they show a
mutual resemblance, as though one could have been made from
the other by changing the direction of the tail.[38] Of course they
are phonetically identical low/high.

The Content of RK

Several years ago when I commented summarily on some of the anomalies of the RK inscription I gave particular attention to Epilogue 2 on face 4. I also drew some comparisons between the story of RK and that of inscription no. 2, which consensus now dates to about 1360, in the reign of King Lithai.[39] For lack of space I must refer those interested to that earlier publication.

Also of interest in the comparison of RK and no. 2 is the unwarlike description of Rāmarāj in no. 2, "wise and well versed in the Dharma, [who] built a Brah Sri Rattanadhatu in Sri Sajanalai," identical to the description of Dharmaraja, apparently Löthai, "well versed in merit and the Dharma, possesses most excellent and unutterable wisdom," and whom scholars have considered to be precisely that, a scholarly, religious, incompetent ruler.[40]

The argument which Piriya Krairiksh advanced against the authenticity of RK was that it showed ignorance of what must have been the architectural and religious setting of Sukhothai in the late 13th century; and in particular that there is no evidence in the architectural and artistic remains of Sukhothai for the importation of Sihala Buddhism via Nakhon Sri Thammarat with a Mahāthera Sáṅgharāja whom the inscription says Ram Khamhaeng invited to Sukhothai. Instead Sihala Buddhism came to Sukhothai via the Martaban area of lower Burma with a Mahāsāmî Sáṅgharāja (no. 4, 5)/Samtec Brah Mahāthera (no. 4) whom Lithai invited to Sukhothai in 1361.

References to notable monks bringing Sihala Buddhism to Sukhothai in the 14th century are also found in several northern chronicles in contexts which are not perfectly easy to reconcile one with another; and in my earlier article I showed that they should be interpreted as referring to the events of 1360-1361. One of the arguments, which I took from A.B. Griswold, and related to the dating of no. 2, was that had its hero, Sri Raddhā, already returned to Sukhothai, it would have been unnecessary for Lithai to invite more missionaries to inculcate Sihala Buddhism.

Now with the story of the arrival of Sihala Buddhism securely set in 1360-1361, we may take up again Griswold's reasoning. If an important teacher had already introduced Sihala Buddhism to Sukhothai, why would it be necessary to invite another one to do the same thing? That is, if a Mahāthera had come from Nakhon Si Thammarat bearing Sihala Buddhism in the late 13th century, as related by RK, why did Sukhothai rulers find it necessary to restart the whole process in the middle of the following century? To the answer that perhaps there had been a serious decline in the religion in the interim, as a result or destructive warfare or disruptive political problems, one may object that some reference to it should be found in Lithai's inscriptions, since they show, if RK is genuine, that in Lithai's time RK was assiduously studied.

Let us now compare some of the details of the two stories, using as a basis the translations of Griswold and Prasert (EHS 9 and 11-1). The more detailed and orderly is the account in nos. 4 and 5 of Lithai's invitation to a Mahāsāmî/Mahāthera Sángharāja.

The latter had resided in Sri Laṅka, and had "studied the Three Pitakas in their entirety" (ryan cap brah pitakatraya [no. 4], rū brah pitakatray [no. 5]. He came to Sukhothai from Nagar Bann, believed to be at, or near, Martaban, via Chot, Chiang Thong, Bang Chandr, Bang Pan, all places along a rather direct route from Tak and Kamphaeng Phet to Sukhothai.

To receive him King Lithai had a monastery built in the Mango Grove to the west of Sukhothai. The Mahāsāmî arrived at the beginning of the rainy season, went into retreat for three months, and when he came out great celebrations were arranged. Gifts from the king included large amounts of gold and silver, 10 million cowries, 2 million areca nuts, plus 400 sets of monks' robes and supplies.

In the RK inscription we find a Mahāthera Sángharāja "who has studied the scriptures from beginning to end" (ryan cab pitakatray). He had come from "Möang Sri Dharmmarāja", presumably Nakhon Si Thammarat. As his residence the inscrip-

tion says "west of this city of Sukhothai is the Araññika, built
by King Ram Khamhaeng as a gift to the Mahāthera Sanghara-
ja." In an earlier passage the Araññika is first mentioned as a
place where "everyone goes...for the recitation of the Kathina,"
at the end of the rainy season. The Kathina gifts included "heaps
(bnam) of cowries, heaps of areca," monks' accessories, all worth
"two million each year."

The parallelisms in these two stories are obvious, and of
course both are plausible, but there is no reason at all to doubt
the veracity of nos. 4 and 5, the story of which is confirmed in
parts by nos. 6 and 7, no. 6 representing a composition by the
Mahasami/Mahathera mentioned at the end of no.4. In particular,
all four inscriptions refer to the Mango Grove and its monastery,
a site whose name has remained current and identifiable up to
the present,[41] whereas the identification of Wat Saphan Hin with
the Araññika of RK seems to date only from the turn of the
century when it was finally realized that Ram Khamhaeng and
the 'Kamrateng At' (Lithai) were different persons, not at all
contemporaries.

Two details of terminology are interesting in that RK
resembles the *Khmer* no. 4 more than the Thai no. 5. Thus the
monk invited by Ram Khamhaeng is called a Mahāthera, while
the one invited by Lithai is called Mahāsāmî in no. 5, but in
no. 4 he is also twice called Mahāthera. More startling is the
language describing his/their thorough knowledge of the Buddhist
scriptures. In no. 5 it is quite ordinary Thai, *rū brah: pitakatray,*
but RK contains language *(ryan cab pitakatray)* almost identical
to Lithai's Khmer *(ryan cap brah pitakatraya),* an identity
concealed by the different translations of Griswold and Prasert.
Even if the RK phrase is permissible in Thai, it has a definitely
Khmer flavor, and if the influence of one of these passages on
the other were to be decided on strictly objective grounds, primacy
would have to be given to no. 4.

In Lithai's inscriptions the term 'kathina' is not used,
although the great celebration at the end of the rainy season
was obviously such. Interestingly the value of Ram Khamhaeng's
gifts, two million [cowries], was considerably less than those of

Lithai, and it contains some very strange terminology in the 'heaps' of cowries, areca, etc. The word *bnam* is Khmer for 'hill,' 'mountain', and could conceivably have a metaphorical usage as 'heap,' but it apparently did not until RK was deciphered. Bradley, whose knowledge of Thai must have been unparalleled, and who had contact with the Thai scholars of his day, was totally at loss to explain it, something only accomplished by Coedès with his knowledge of Khmer.[42]

This is not only a misused bit of Khmerism, but it is materially wrong. The inscriptions of Sukhothai, and of northern Thailand, in the 14th-15th centuries contain many references to cowries, from which it is certain that cowries were not just ornamental, but were a currency used for purchase and sale, as well as serving as a store of wealth. They are always mentioned in precise quantities, as in nos. 4 and 5, never in 'heaps,' or even 'large quantities.' This passage of RK seems to indicate a person unfamiliar with Sukhothai economic life.[43]

Another crucial point with respect to this story in RK is whether Nakhon Sri Thammarat at that time was likely to have been a center of Theravada Buddhism of the Sinhalese variety. Space limitation does not permit discussion of the evidence here, but archaeological and art historical investigation seem to show that it was not.[44]

The comparison above suggests that the author of RK had read the other Sukhothai inscriptions and the northern chronicles, and then devised his story of RK inviting a monk versed in Sinhala Buddhism from Nakhon Sri Thammarat about 80 years too early. This in itself should be enough to discredit RK; at least it adds weight to inferences from evidence which is less certain.

Another possible serious anachronism relates to the walls of Sukhothai. The first scholars, both Thai and foreign, who studied RK read the passage about the wall in face 2, lines 7-8 as "...ròb möaṅ sukkhodai ni tir ( ) p (ai)t [t(ai)] sām bann śi ròy vā," and interpreted it as "around this city of Sukhothai [the circuit] reaches to three thousand four hundred fathoms" (Bradley, pp. 33, 43).

Such was also the way RK was read by Prince Vajiravudh when he visited Sukhothai in 1907; and he therefore had no qualms about stating, "observation of the whole indicates that the inner wall was the 'real wall' " in Sukhothai times, while "the middle and outer walls must have been added later." His measurement of the inner wall was 3280 *va*, which he considered close enough to the 3400 *va* of RK (*Thiev*, p. 34).

Prince Vajiravudh continued with a remark on the four fortresses shielding the gates and built into the center wall; and Prince Damrong's comment to this is "the construction of two sets of earthen ramparts outside the wall has its origin in the chronicle story in which one can conclude that they were built when Ayutthaya was capital in the reign of Maha Chakra-phathiraj, when he prepared for war with Hansavati, for this was when there was artillery and Portuguese fighting for Ayutthaya," that is in the 16th century (*Thiev,* pp. 34, 43).

This conclusion by Prince Damrong that the outer two walls of Sukhothai were built in the 16th century, is particularly interesting, for in 1923 George Coedès had discovered the word *tripun (=tripura)* in the inscription of Wat Chiang Man in Chiang Mai with "the indubitable meaning 'wall of enclosure' ".

As long as *tripura* was unknown all the objective and historical evidence suggested that only one wall dated from as early as the 13th century, and the outer two walls were much later. If so, the RK description of triple walls means the ins-cription was not produced until long after the time of 'Ram Khamhaeng.' Some new objective evidence to support this inference may have been discovered. The most recent archae-ological excavations at Sukhothai by Fine Arts Department Archaeologist Mr. Bovornvet Rungruchi in 1977-1982 have indicated that "only the inner town-ramparts was constructed" in the Sukhothai period, while "the two outer town-ramparts were built" when Sukhothai was a "vassal state...under Ayudhya from 1438 onwards."[44]

In addition to the broad parallels between the stories of RK and inscription no. 2 which I discussed above, there are

numerous other passages in RK which are very similar, if not
nearly identical to passages in nos. 3 and 5, and occasionally
even no. 4 in Khmer, all of the reign of Lithai and dated 1357
(no. 3) and 1361 (nos. 4 and 5). One of them has already been
emphasized by scholars to show Lithai's fidelity to the ideas
of Ram Khamhaeng. In no. 3, 2/32 there is *brai fā khā dai khi
röa pai gā khi mā pai (khāy),* "the people ride boats go trade ride
horses go sell," which as Griswold and Prasert wrote is "a sort
of echo of Rama Gamhen's statement" in line 1/19-20, *böan
cuň vau pai gā+ khi mā+ pai khāy,* which Griswold and Prasert
translated, "they lead their cattle to trade or ride their horses to
sell" (EHS 9, p. 206).

There is indeed a 'sort of echo,' but which is the original,
which the echo? The certain sense of no. 3 is that both boats
and horses were means of transport for traders, while in RK it
seems rather that the cattle being *led* were the objects of trade,
and the situation of the horses is uncertain; and the supposed
masterwork is much vaguer than the assumed copy.

Space limitation prevents further discussion of the content
of RK here, but many more passages and individual words are
either anomalous or suspiciously similar to parts of other
inscriptions, and their full analysis is required before the
authenticity of RK may be assumed.

TABLE OF TONE MARK USAGE IN SUKHOTHAI INSCRIPTIONS

English	Siam	PT	White Tai	I 1361	II 1361	III 1361	V 1359+	VIII	Misc.
(title)	khun		kh/x (?)	khun	khun	khun	khun		khun (107.15)
axe	khva:n	*xw							khva:n (jat396)
break	kha:t	*kh	xat			*kha:t* kha:t			kha:t (107)
to cross	kha:m²	*x	xam		kham		kha:m+		kha:m+
drive	khab	*khl	chap	khabb					
dub			ju'	khĭm+		khĭ:n jï:	khĭn jï		
egg	khai1	*khr (Li,229)	chai						
tamarind	kha:m		kham	*kha:m*					
fur	khon	*kh	xun						
goad, hook	khò	*x	khò						

English	Siam	PT	White Tai	I 1361	II 1361	III 1361	V 1359+	VIII	Misc.
go in	khau²	*x	xau	khau+	khau	khau	khau		khau+ (106)
go up	khün²	*x	xun	khün+	khi:n	khün	khün	khin	khin (15) khin (106)
hang	khveen	*xw	xwen	khveen					
I	(khòy)	*x	xòy						
mountain	khau		*xau	khau	khau khau (?)	khau			khau (15)
place	kòk							khòk	
request	khò	*khr	chò						
respond	kha:n	*x	xan			kha:n			
rice	khav²	*x	khao	khau+		khau	khau		khau (107) khau+ (106) khau+ (102)
ride	khii'	*kh	khi	khi:'					
right	khva:	*khw	xwa:	khva					

English	Siam	PT	White Tai	I 1361	II 1361	III 1361	V 1359+	VIII	Misc.
sell	kha:y	*kh	xa:y	kha:y		*kha:y* (?)			kha:y (15) kha:y (jat398)
sing	khab	*kh	xap	*khabb*					
slave	kha:²	*khl	sa	*kha:+*	kha:+	kha:	kha:		kha:+(102, 106) kha: (jat 397)
soldier	kha² çök			kha:+ söak			kha: sök *kha*+sök		kha: sik (jat 401)
thing	khòŋ		xòŋ			*khòŋ*	khòŋ		
they	khau	*khl	chau		khau	khau			
white	kha:v	*x	xao		kha:v				*kha:v* (14) kha:v (15)
year				khau+	khau	khau+	khau	khau	
branch	ga:'								ga : (11)
cover	gum²	*g	xum (Lü)	gu:m+					
float	gva:ŋ²	*gw	kwa:ŋ		gva:ŋ				

English	Siam	PT	White Tai	I 1361	II 1361	III 1361	V 1359+	VIII	Misc.
gold	ga:º·	*g	xam		ga·º				ga⁰ (15) ga·⁰ (102)
hammer	gòn²	*g	xòn+		gòn+				
mahout	gva:n				gva:n				
neck	gò	*g	xo		gò				
night	ga:º·	*g	xam		ga·º	ga·º			ga:0 (102)
night	gïn	*g	xïn		g/gïn	gï:n			
person	gon	*g/g	kun	gon	gon			gon	
price	ga:'	*g	ka						ga:' (14, 102)
restore	gïn				gï:n				
shin	kheeŋ²	*g	xeŋ		geeŋ				
stream	gvae			gvae	gvae	gvee			
things	grüaŋ	*gr	ceŋ						

English	Siam	PT	White Tai	I 1361	II 1361	III 1361	V 1359+	VIII	Misc.
time	ga:b					ga:b	ga:b		
trade	ga:^{2}	*g	ka	ga:+				kha:'	
want	grai''	*gr	caï	graï	graï		graï''		graï (38, 40)
subject	gva:m	*gw	xam	gva:m		gva:m			gva:m (14)
word	ga:^{0}		xam		ga:^{0}	ga:^{0}			

Note : *Jat*= Jataka inscription of Wat Sri Jum. Transliteration is 'graphic', with *g*= *kho hkon*, *kh*=*kho hkuat*, *v* for low class /f/ (ว) and *z* for low class /s/ (ช) of standard Thai, and * g for *gamma* designating a reconstructed PT voiced velar fricative

DIAGRAMS

The charts below, which I have taken from Chamberlain 1975 and Hartmann, illustrate (1) Chamberlain's classification of Southwest Thai development from PSWT, (2) high-mid-low initial consonants combined with Proto-Thai tones, from Hartmann, and (3) the way such tone combinations have evolved in four types of modern Thai languages, as shown by Chamberlain.

The chart below illustrates the SWT classification.

```
                              PSWT
                  _____/    _____
                 /                                   \
                P                                  PH (*A 1-23-4)
         _____/_____                         ____/|
        /              \                        /     |
   *A 1-23-4      *ABCD 123-4           *BCD 123-4    *BCD-2

                 B=DL                    B=DL         B≠ DL


   Tse Fang       Black Tai

   Tai Mao        Red Tai              Siamese         Lao

   Miang Ka       White Tai            Phu Tai         Southern Thai

                  Lao                  Neua

                  Yuan                 etc.

                  Ahom

                  etc.
```
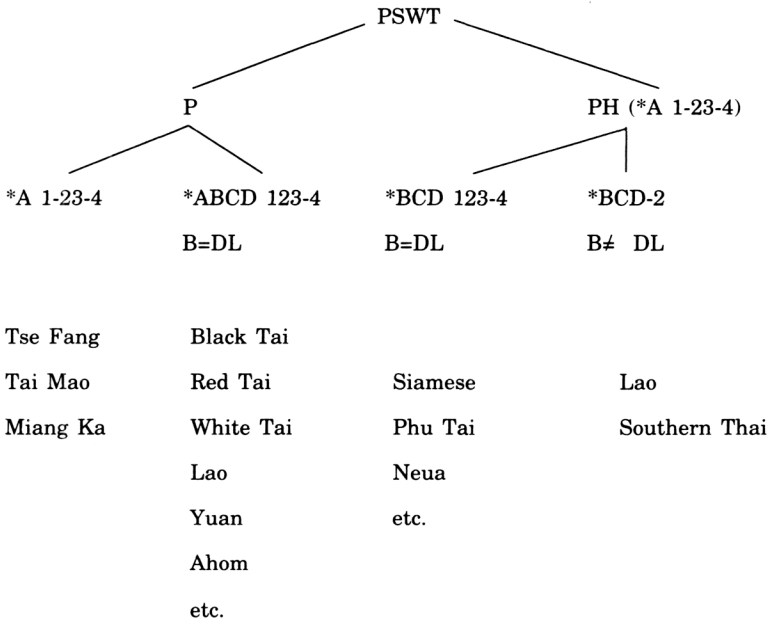
	INITIALS		PROTO-TAI TONES						
		A	B	C	D	D-s	D- 1		
Aspirated voicelessstops *ph-*th-*kn-*ch-*h-	1							....	High
	1								
Voiceless continuants *s-*f-*hm-*h-*n*hñ- *hw*-*hr-*hi-								....	
Unaspirated voiceless stops *p-*t-*k-*c-	2							....	Mid
Glottalized consonants *ʔb-*ʔd-*ʔy-*ʔ	3							....	
Voiced consonants *b-*d-*g-*-j*m-*n- *n- *n-*z-*v-*y-*r-*l*w-*y-	4							....	Low
								....	

Siamese, Nong Khaang
(Hua Phan)

A	B	C	DL	DS
1	1	1	1	1
2	2	2	2	2
3	3	3	3	3
4	4	4	4	4

Vientiane, Lom Sak

A	B	C	DL	DS
1	1	1	1	1
2	2	2	2	2
3	3	3	3	3
4	4	4	4	4

Luang Prabang, Kene Thao,
Dan Sai, Loea, Sisaket, Attapeu

A	B	C	DL	DS
1	1	1	1	1
2	2	2	2	2
3	3	3	3	3
4	4	4	4	4

Black Tai (Muang La)
White Tai (Muang Lai
Muang Yon)

A	B	C	DL	DS
1	1	1	1	1
2	2	2	2	2
3	3	3	3	3
4	4	4	4	4

Notes

1   *Bangkok Post,* 1/4/1978, speech by Gen Saiyud Kerdphol, "Human Rights on the Front Line."

2   G. Coedès. *Les peuples de la péninsule indochinoise,* Paris 1962, p. 137. EHS 9, p. 205.

3   EHS 9, p. 84. Griswold and Prasert were contrasting it with no. 2.

4   Bradley, C.B. 1909

5   Brown 1965.

6   Chand; Vickery 1978.

7   By 1907 the true status was known. See *Thiev.*

8   He was born in 1809, son of Prince Senanurak, Uparaja of the second reign and the only full brother of Rama II. In the 5th reign he became Prince Patriarch; see H.S.H. Prince Chula Chakrabongse, *Lords of Life,* pp. 119, 127, 216, 339. Senanurak died in 1817 aged 37.

9   Carük samay sukhothai, p. 5.

10   See attached diagram. The two series were conventionally designated by Li as A1, B1, C1, D1/A2, B2, C2, D2, which are not to be confused with the ABCD1234 code used below in the discussion of Southwestern Thai. An alternative theory is that tones may have been introduced to pre-Proto-Thai from neighboring Sino-Tibetan, but it would have been earlier than the separation of Proto-Thai from its nearest relatives, and thus does not affect the further arguments below. See Matisoff.

11   Li, p. 27; in PT 'horn,' 'rice,' and 'they,' now all written
     with initial *kh*, were **khau, *xau*, and *khlau*. See Li, pp.
     194, 209, 227.

12   James Chamberlain 1972; 1975.

13   Chamberlain calls Standard Thai 'Siamese', a term which
     I prefer to avoid; and his 'Lao' means, not all languages of
     Laos, but that branch represented by Luang Prabang.
     Vientiane, Attapeu, Sisaket, Udon, Korat, for example. See
     Chamberlain 1975.

14   Chamberlain 1975, pp. 62-63; and Chamberlain 1972, "the
     sound change which caused the high and low consonants to
     fall together must have taken place earlier [than 1292],
     and when the writing system was devised the low class
     consonants were probably voiced," that is, Thai writing was
     devised long before RK.

15   Brown 1965; see for simplicity genealogical tables on pp.
     67-69.

16   Chamberlain has confirmed to me that in general linguists
     have only considered RK in their treatment of Sukhothai.

17   Burnay and Coedès 1927 did assume this in discussion of
     origins of tones and script.

18   Personal observation by Chamberlain and myself; Brown
     is almost certainly wrong that the Sukhothai language died
     out in central Thailand to be replaced by an Ayutthayan
     type language; and it must be assumed that some linguistic
     descendants of old Sukhothai are still present in the rural
     areas of Sukhothai and Sri Satchanalai.

19   Bradley, 18, 17. As 'Lao' Bradley included the Khammöang
     dialects of northern Thailand, Chiang Mai, etc., which
     Chamberlain calls 'Yuan.'

20   Coedès, "Notes critiques," pp. 4, 5, 7; "Nouvelles notes cri-
     tiques," 114-115.

21   J.R. Marr, "Some Manuscripts in Grantha Script in Bang-
     kok," BSOAS *32/3* (1969), 281-322.

22 Finot, pp. 12-13. Note that no such Khmer cursive as suggested by Finot has ever been demonstrated.

23 Coedès and Burnay, 94-95. They did not express doubt about the authenticity of RK, but insisted that it was a claim only to have devised "*this* Thai writing," not the original Thai writing.

24 See EHS 21.

25 Li, p. 213, n. 27, on the secondary lengthening of "*khaau* in Siamese."

26 Coedès, "L'inscription de Nagara Jum," p. 17, line 4 f.b., "menacer, voler le riz, voler des objets;" p. 38, n. 9 "C'est [gu+/ผู้] évidemment une forme ancienne de ผู้, 'menacer' ". This is much more satisfactory than the explanation of Griswold and Prasert, EHS 11-1, pp. 105, n. 100, and 155, n. 20.

27 If the confusion was because the two tones were phonetically close, the argument for ad hoc, rather than systematic use is strengthened.

28 The abbreviation 2/24 means face 2, line 24. My transliteration follows in general standard 'graphic' with changes to illustrate ancient voiced consonants not revealed by that system, in particular *v* for low class /f/ (ฟ) and *z* for low class /s/ (ซ) of standard Thai.

29 See Li, p. 195, no. 3 on the "spurious" Siamese orthography *(gha')*. This spurious orthography was probably devised by an extremist Indologist who wished to derive the Thai word from Pali *ghata*.

30 EHS 4; and Vickery 1978, p. 230.

31 See Li, p. 77-78 on reconstruction of *fán* and 'spurious' Siamese orthography.

32 I use the 'horizontal' and 'vertical' here with respect to the attached diagram of Thai tone categories to mean respectively across consonant series and among high-mid-low syl-

lables. For transliteration I have followed the standard 'graphic' system, with some modifications to show ancient voiced consonants, in particular *v* for low class /f/ (ฟ) and *z* for low class /s/ (ซ) of standard Thai, and *g for *gamma.*

33 Khmer ញ ក Mon/Burmese ၀ ၀

34 EHS 21, JSS 67/1 (Jan 1979), 63-76.

35 White Thai has /x/ and /k/, Khammöang /kh/ and /k/.

36 Bradley, above, was wrong in treating 'Lao' as though it had maintained the original 4 symbols for the 4 true Thai consonants. Finot, table p. 40, made the same error.

37 Particularly in Chamberlain's "Black Thai Chronicle" more clearly than in Finot's examples.

38 Vickery 1978, pp. 193-203, 208.

39 EHS 10, pp. 112, 25; Griswold, "Towards," p. 15, "a pious but ineffectual monarch who lost most of his kingdom."

40 At least apparently. The precise provenance of the four inscriptions was never recorded. On Wat Saphan Hin, see *Thiev,* pp. 45-49.

41 Bradley, p. 52, "it [*bnam*] is quite as much a stumbling block to native scholars as to foreign ones;" Coedès, "Notes critiques," p. 9.

42 I have compiled the data on cowries in an unpublished research paper for the Thai Ceramics Archaeological Project.

43 This is a very tentative statement pending adequate investigation of work on peninsular art and archaeology, but it does not seem to be in conflict with what specialists have been saying. See Krairiksh 1986; Piriya Krairiksh, ประวัติศาสตร์ศิลปในประเทศไทย ฉบับคู่มือนักศึกษา *(History of Art in Thailand, A Student Handbook,* Bangkok 1985; Piriya Krairiksh, *Art Styles in Thailand: A Selection from National Provincial Museums, and an Essay in Conceptualization,* Bangkok 1977; reviews of *Art Styles in Thailand* by

H.G. Quaritch Wales and M.C. Subhadradis Diskul, both of whom, even though critical of Piriya's conceptualizations, nevertheless emphasized the Mahayana and Hindu character of peninsular art well into the 13th century; Stanley J. O'Connor, "*Tambralinga* and the Khmer Empire", JSS 63/1 (January 1975), 161-175.

44 Report by H.S.H. Prince Subhadradis Diskul to The Thirty-First International Conference of Human Sciences in Asia and North Africa, 1983, Tokyo, 31 August–7 September, in the conference proceedings, pp. 80-81. Prince Subhadradis, however, found the new evidence hard to accept, because "it contradicts the first Sukhothai inscription of King Ram Khamhaeng the Great".

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                thaya in 1397 A.D." JSS 57/1 (January 1969), 109-
                148.

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                JSS 59/1 (January 1971), 157-188.

                EHS 8, "The Inscription of Vat Jan Lom," JSS 59/
                (January 1971), 189-208.

                EHS 9, "The Inscription of King Rama Gamhen of
                Sukhodaya," JSS 59/2 (July 1971), 179-228.

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                Contemporaries," JSS 60/1 (January 1972), 21-154.

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                Sukhodaya," JSS 61/1 (January 1973), 71-182.

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                (January 1975), 127-142.

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