

## THE ORIGIN OF THE TICAL

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The relations of Thailand with other countries gave rise to the use of various foreign terms in connection with purely Thai names. One of the most glaring examples is the name of the country itself which foreigners continued to call Siam for at least five centuries, though to the Thai themselves it was known as Muang Thai. Another foreign term still in use in commercial transactions is the *tical* to designate the Thai unit of currency, the *bakt*. Though the term *Siam* has been sufficiently explained as having originated from the Chinese name of the country *Sien* or *Sien-lo*,<sup>1</sup> a generally accepted solution has not been found for the origin of the term *tical*. There have been, as usual, many suggestions and theories though not generally warranted by any historical evidence. It is only by consulting the earliest sources of information and writings which mention the *tical* and by a comparative study of the coinage and weights, with their names, in surrounding territories that one can reach a definite conclusion. Though these sources are few and fragmentary, they are still sufficient to enable one to reject imaginary theories and to adopt positive and concrete views regarding the derivation of the *tical*.

The earliest time when coins were actually used in the lower Menam valley dates back to the first centuries of the Christian Era, when Indian immigrants, chiefly from the south-eastern littoral of India, spread the Buddhist faith as well as Brahmanism in the Golden Peninsula. Flat silver coins have been dug up at Nakon Pathom and places nearby,

<sup>1</sup> In Chinese writings, *Sien* is the name for the northern kingdom that centred round Sukhotai and Sawankalok. *Lo* represents *Lo-hoh*, or *Louco*,—modern Lopburi,—the name for the Thai kingdom with its capital at Ayuthia. Hence the combined name *Sien-lo*. In the supplement to Ma Twan-lin's *Encyclopaedia* is mentioned the country "originally consisted of two kingdoms *Sien* and *Lo-hoh*." Cf. Yule-Cordier, *Marco Polo*, Vol. II., p. 277.

of distinctly south Indian type with the conch-shell of Vishnu on the obverse and the trident of Siva on the reverse.<sup>2</sup> Coins of this type have been found near Sittaung in Pegu and also in the Mekhong valley, and were most certainly brought from India. During the so-called Dvāravatī period between 550 and 1000 A. D. when the central plain of Thailand was dominated by the Indianized Mon, also called Talaings, there is no proof that any coinage was issued. The transactions were either carried on by barter or goods were exchanged for definite weights of gold and silver, while cowrie shells were used for smaller transactions. These weights were presumably of Indian type, judging from the weights used by the Mon established in Pegu and Southern Burma, and by the Khmer in Cambodia during their classic period.<sup>3</sup> Mon domination lasted till the XI century of the Christian Era when the Khmer established their supremacy in the Menam valley, though in Northern Thailand Mon influence, with its centre in Lampun, lasted for two or three centuries longer till the time when the Thai king Mengrai established his kingdom in Chiengmai.

The Khmer themselves had no definite system of coinage separated from that of weights in Cambodia even when the empire rose to its greatest height. At the close of the XIII century Tchou Ta-kouan, the Chinese chronicler who accompanied an embassy to Angkor, says: "In small transactions one paid in rice, cereals and Chinese objects, followed later by cloth; in more important transactions one used gold and silver."<sup>4</sup> This was of course by weight but presumably lumps of gold and silver in definite weights with marks were used as they were in the XV century; during this time silver, was chiefly imported from China in well defined weights of taels called *dambengs* in Cam-

<sup>2</sup> Reginald le May, *The Coinage of Siam*, p. 3. This is the best and the most serious study so far published on the intricate problems of Thai coinage.

<sup>3</sup> G. Groslier, *Recherches sur les Cambodgiens*, p. 28. In the Cambodian inscriptions, a large number of weights with Sanskrit names are mentioned, and Groslier is inclined to think that two systems of weights and measures were followed: one, Hindu, in temple matters, and the other, Chinese, in purely commercial matters. In any case there can be no doubt that the official system of weights and measures, especially used in connection with temple offerings, was Indian until the time when connections with India ceased and trade with China developed, the Chinese system then coming into general use. The weights of Indian origin like the *bahar* and *viss*, are still in use in Burma as they were during Mon supremacy.

<sup>4</sup> P. Pelliot, *Bulletin de l'École Française d'Extrême-Orient*, 1902, Vol. II, p. 167.

bodia and *tamlungs* in Thailand, which with their variants were used for exchange of goods.<sup>5</sup> We know for certain from an inscription dating from 1444 discovered at Angkor in Cambodian script and translated by Aymonier that the *grandmother Bos made a gift of silver to Néang Mol of one damleng, three bat, one sleng and one pey.*<sup>6</sup>

Mr. Groslier leaves the question open as to whether the last three represented coins which are still current in Cambodia or whether they were weights, though there can be no doubt that the *damleng* was a weight. The *bat* and the *sleng* of the inscriptions were in all probability lumps of silver which, though representing certain weights, passed as coinage in the sense of olden days when there was no clear cut distinction between weights and coins. It is mentioned in the inscription that the *sleng* had the mark of a whale on it, and it is to be presumed that the *bat* also had some marks, like the Ayuthian Thai *bahts* which, though representing weights, are considered as coins because they carried marks or had a distinct shape by royal warrant. There can be no doubt that the *damleng*, the *bat*, and the *sleng* were in use in Cambodia, and in Siam under Khmer rule, long before 1444. We know definitely that the *tamlin* or *tamlung* was used by the Khmer as a weight, from a Khmer inscription found in a temple at Jayia in South Siam, dating back to 1183 A. D. or thereabouts, or at any rate during the Khmer rule in Siam, even if the exact date of the inscription is a little doubtful.<sup>7</sup> From this it is safe to conclude that

<sup>5</sup> We know for certain that there were gold and silver coins *maas*, *nipey* and *fon* in Cambodia in 1595 according to the *Relation* of the Dominican Friar Gabriel Quiroga de San Antonio. V. Antoine Cabaton's translation *Relation des Evénements du Cambodge*. But this does not mean that there was no coinage before 1595 or "that up to the close of the XVI century no system of coinage was ever adopted by the Khmer," as le May says in his *Coinage of Siam*, p. 6. Groslier, basing himself on Quiroga, only says we learn with certainty that coins were struck in 1595. But surely there could have been coinage before that year without being recorded. The Portuguese commercial relations with Cambodia were established by 1520 when guns were largely supplied from Malacca during the civil war raging in Cambodia. We have no earlier Portuguese description of Cambodia than that of Fr. Gaspar de Cruz, 1559.

<sup>6</sup> Cf. Aymonier's translation in *Excursions et Reconnaissances*, No. 4, 1880, p. 91., and Groslier, *Recherches* p. 31.

<sup>7</sup> G. Coedès, *Recueil des Inscriptions du Siam*, Vol. II, p. 44. This inscription in Khmer script was found at the base of a statue of Buddha in a temple in Jayia. Coedès thinks its date corresponds to 1105 of the Great Era, that is, 1183 A. D.

the *damheng*, the *bat*, the *steng* and the *pi* represent the Khmer closely connected systems of weights and coins adopted by the Thai, when the latter founded their kingdoms at Sukhotai and later at Ayuthia.

From the earliest times in Southern Burma, the weights adopted were not the Chinese *liang* or *tael* or its variants but the Indian *bahur* and the *viss*, the latter being divided into 100 *ticals*. It is this Burmese *tical*, which was and continues to be in Burma the designation of a definite weight of uncoined silver or its compound, that throws light on the problem of the Thai *tical*. Antonio Nunes writing in 1554 makes it clear that the Burmese *tical* was not a coin but a weight like the *viss*.<sup>8</sup> Both the *viss* and *tical* were round weights made from a metal called by him *frosyleira* and which appears to have been an alloy of silver, copper and tin called *gamsa*. He says that all goods were bought and sold for so many *bissus* or *ticals* of *gamsa*. Sparr de Homberg, whose text of 1681 on coins, weights and measures in the East Indies is published by Gabriel Ferrand, describes *gamsa* as a compound of copper and lead and sometimes of silver *seroni* mixed with tin. He considers both the *viss* and the *tical* as *monnaies*, but Gasparo Balbi who was in Burma in 1585 and Alexander Hamilton as late as 1727 agree with Antonio Nunes in calling them weights rather than coins.<sup>9</sup> It is significant that both the terms *viss* and the *tical* are used by foreigners and that the Burmese themselves have their own names for these weights, presenting an analogy to the Thai *baht* and *tical*. The Burmese name for the *viss* is *peikta* which Sir Henry Yule considered as, probably, a corruption of *visai*.<sup>10</sup> The *tical* weight of uncoined silver is called *kyat* by the Burmese, and Sir A. Phayre suggested that the *tical* is possibly a corruption of *ta* (one) *kyat*, but

<sup>8</sup> *O Livro dos Pesos, Medidas e Moedas*, published in Vol. v. of the *Collecção dos Monumentos Ineditos* and edited by Lima Felner, Lisbon, 1868,

<sup>9</sup> v. The text of de Homberg in Gabriel Ferrand, *Les Poids, Mesures et Monnaies des Mers du sud aux xvi<sup>e</sup> et xvii<sup>e</sup> Siècles* in *Journal Asiatique* Serie II, Vol. xvi, 1920. *Seroni* is the Burmese *Yo-met-ni*, Arakanese *ro-met-ni*, *red leaf*, the technical name of the standard silver of the Burmese ingot currency commonly rendered: *flowered-leaf*. cf. *Hobson-Jobson* s. v. *Rownee*.

Gasparo Balbi, *Viaggio dell' India Orientali*, Venice, 1590, p. 108.

Alexander Hamilton, *A New Account of the East Indies*, 1744, Vol. II, p. 317.

<sup>10</sup> *Hobson-Jobson* s. v. *viss*. *Sa* or *sai* becomes *tha* in Burmese and the initial sound of *p* may be replaced by *r*.

it is more likely, as will be shown below, that the Burmese *kyat* or *ta kyat* replaced an earlier Môn term *tacka* or *tke*, derived from the Indian *tanka*, from which the *tical* originated.

When the Portuguese conquered Malacca in 1511, there were current pewter coins of the Sultans of Malacca called *caixes*, known later as *cash* in Anglo-Indian terminology. The *Commentaries* of Alfonso Albuquerque distinctly mention that silver and gold in Malacca was not made into money but was only used as merchandise.<sup>11</sup> It is important to note that the *Commentaries* say that the Sultan of Malacca obtained permission from the King of China, to strike small pewter coins, which appears to be a strange fact since it is supposed that the Chinese themselves had no system of coinage until comparatively recent times.

It was towards the end of the XIII century that the Thai acquired mastery in Thailand, dispossessing the Khmer in Central Siam and absorbing the Lawa and the Mon in the north. Khmer rule, however, continued in Ayuthia and Lopburi until the middle of the XIV century when a Thai kingdom was established at Ayuthia. The Thai kings adopted the current Khmer weights the *damlong* or *tumlung*, the *baht*, the *sleng* or *salung* and the *pei* but the earliest time when they issued these *bahts* or lumps of silver in definite weights with royal marks is not quite certain. While in Central Thailand these lumps of silver took the shape of 'bullets' of the weight of a quarter of a *tumlung*, in the north the *Kakins*, instead of *bahts*, were issued of the full weight of a *tael*, i. e. about 4 or  $4\frac{1}{2}$  *baht*. In the north another kind of coins or weights, shaped like bracelets with no legends and marks, were issued probably before the time when the *Kakins* were issued. The shape of these bracelets is supposed by Dr. Reginald le May to have been suggested probably by the crescent-like gold and silver lumps used as money in the Pyu kingdom of Burma according to the Chronicles of the Tang Dynasty of China, 618-915 A. D.<sup>12</sup>

The bullet shaped *bahts* are popularly attributed to King Ram Kanheng of Sukhotai, though in his famous stone inscription at Sukhotai (1282 A. D.) he does not refer to any coinage but only

<sup>11</sup> v. Gray Birch's Translation, Hak. Soc., Vol. III, p. 77-8.

<sup>12</sup> v. G. H. Parker's Translation, *Burma with special reference to her relations to China*, Rangoon, 1893. Also Harvey's *History of Burma*, p. 14. This kingdom of Indianized Pyus centred round modern Prome and was known by the Indian name of Srikshetra.

proclaims that *Whoever wants to deal in silver and gold may do so*, which indicates that these metals were used as merchandise. At whatever date they might have been struck, the bullet-shaped *bahls* were current in Ayuthia during the early years of the foundation of the kingdom in the XIV century, and it was during the Ayuthian days that the term *tical* certainly arose. It is important to note that the *bahls* of the Ayuthian period were not always of a fixed standard weight, which may be taken to-day as 233 or 235 grains, but varied between 185 and 245 grains in weight. These *bahls* could not therefore be used as standard coins, in the sense that pieces of money are used to-day for the purchase of goods. They had to be weighed before changing hands in all commercial transactions so as to ascertain their total silver value. In former times there was in fact no clear cut distinction between coins and weights in Burma, Siam, Indo-China and China. A silver bar which could be cut into pieces of required weights for a particular transaction served almost as well as the silver lumps of definite weights issued by royal warrant, which we now call coins. Goods were exchanged for a given weight of silver and not for so many *bahls* as counted but as weighed out.

Sparre de Homberg in his *Memoire*, already referred to, on the *Coins, weights and measures of East Indies*,<sup>13</sup> treats, rather strangely though not quite unreasonably, the *cabbies*, *taels* and *muas* of Siam as *monnaies* and mentions only the *picul* as a weight, thus showing the little distinction that there was between coins and weights. De la Loubère, who visited Siam in 1687-88 as French Ambassador, saw this clearly when he enumerated the actual weights and pieces of money in circulation in Ayuthia towards the end of XVII century, adding that *these names do not represent pieces of money but only values or sums of money just as in France the word livre does not signify money but the value of one pound weight of copper which makes a sum of 20 sols*. The question of values was necessarily relative in different countries. The Italian traveller of the XV century, Nicolo Conti, naively remarks<sup>14</sup> that the Bataks of Sumatra used human skulls as *money* in their transactions, which may be a

<sup>13</sup> *Journal Asiatique*, Ser. xi, 1920, Vol. xvi.

<sup>14</sup> v. Nicolo Conti in Major's *India in the fifteenth Century*, Hak. Soc. Edition, pt. ii, pp. 8-9. "They keep human heads as a valuable property, for when they have captured an enemy they cut off his head and having eaten the flesh store up the skull and use it for money."

gruesome fact for us but was nothing extraordinary for the Batak cannibals who attached a great value to them, and considered them as an important medium of exchange.

Considering that the foreigners gave the name *tical* to the *baht* it is necessary to glance at the foreign commerce of Thailand during the Ayuthian period. In the XIV century up to the beginning of the XVI, when the Portuguese appeared on the scene, the commercial relations of Thailand were chiefly with China; Malaya and Burma. Chinese goods were transported overland from the north, but their maritime trade was more important and was concentrated on the east coast of peninsular Thailand, chiefly Nakhon Sritamarat and Patani. On the west coast the port of Mergui and the town of Tenasserim, then belonging to Thailand, thrived with Indian trade which was largely in the hands of Muhamadan traders of the eastern and the western coasts of India. The traders of Southern Burma and Martaban also pursued a busy trade at Mergui. In Malacca, Thai trade was not important for though the Thai kings claimed sovereignty as far as Malacca, Sultan Mahmud of Malacca and his successors claimed to be independent and had fallen out with Siam.

The possibility of the *tical* having originated from a Chinese or a Malay term may be safely eliminated because there are no such known equivalents in either language. The question arises if the Arabs and Muhamadans originated the term, considering that they certainly saw these bullet-shaped *bahts* in large numbers especially at Mergui and at Tenasserim and used them in their commercial transactions.

In Arabic, *thaqual* means "to weigh," and Dr. Reginald le May and others took it for granted that as the Thai *baht* was generally used more as a weight of silver than as a coin, the Arabs for some reason or the other called it *thaqual* from which we obtained the *tical*.<sup>15</sup> This is plainly a conjecture for there is nothing, apart from phonetic resemblance, to support this theory. It is true we have parallel examples, such as the Indian weight *tola*, thus called from Sanskrit *tula* 'a balance' or *tul* which means 'to weigh or lift up' and the Malay weight the *pikul* of Chinese origin, but naturalized in Malaya, which, in Malay, as a verb, means to carry on the shoulders and as a noun means 'a load.' But in either case the weight and

<sup>15</sup> Le May, *Coinage of Siam*, p. 77, and William A. Doll, *Thailand Today*, January B. E. 2484 (1941). Some Thai-English dictionaries also give this derivation.

its designation are essentially local. In case of the *tical* it happens that a purely local weight of Siam is assumed to have taken haphazardly a foreign name which in Arabic means 'to weigh.' This might have had some justification if Arabs had at any time monopolized the trade with Thailand. The fact is that Arab trade with Thailand was never of any importance even at Mergui where it was carried indirectly through Indian Muhamadan traders, among whom there were Persians and, of course, some Arab settlers. The Arabs traded more extensively with many Indian ports on the Cambay and Malabar coasts and in Malacca, Java and Sumatra and used in their transactions many local weights with local names without ever imposing their own term *thaqwal*, which in the sense of *to weigh* could be applied to any weight. On the contrary, they adopted local weights with their names and even naturalized the Indian *baluar*, from Sanskrit *bhāra*, and spread it all over Malaysia, as far as the Moluccas. In their vast commercial relations with East Africa and Oriental ports, the Arabs, also introduced their own weights particularly the *miscal* or *mithkal* which, owing to its phonetic resemblance to the *tical*, deserves especial consideration.

When the Portuguese rounded the Cape of Good Hope and visited the East African ports, all their transactions in Sofala, Mombasa and Malindi had to be done in *bahars* and *mithkals*, already introduced there by the Arabs. The *mithkal* was also used on the west coast of India and during the days of the Moghul Emperor Akbar silver *mithkals* were struck by royal warrant. The Arabs did not introduce their *mithkal* in Malacca nor in the Archipelago and Further India, but one cannot rule out the possibility that the Arabs or the Portuguese who were accustomed to the *mithkals* might have imposed this term on the Thai *balut* and that from the *mithkal*, by dropping the first syllable, we got the *tical*. In Portuguese writings the *mithkal* is transcribed as *metical* or *matical*, the transition of which to *mitical* and *tical* would not be improbable. This is what I myself believed till recently, relying upon a suggestion of the great Portuguese numismatist Teixeira de Aragão, who has written a classic work on Portuguese numismatics, devoting its third volume entirely to Portuguese coinage in the Orient and to a study of earlier oriental coinage.<sup>16</sup> In an

<sup>16</sup> *Descrição Geral e Historica das Moedas cunhadas em nome dos Reis, Regentes e Governadores de Portugal*, Vol. III, Lisboa, 1880.



introduction to Marques Pereira's *Moedas de Siam*,<sup>17</sup> Aragão expressed the opinion that "the *mithkal*, the *pik* and the *feddan* representing the Egyptian monetary system probably gave rise to the *tical* and *pi* of Siam." The French numismatist J. A. Decourdemanche in his work *Traité des monnaies, mesures et poids anciens et modernes de l'Inde et de la Chine*, 1913, also supports a similar theory and comes to the conclusion that *les éléments métriques babyloniens et perses, en vigueur à l'époque achéménide, ont été transmis dans l'Inde et, de là, chez les trois peuples de l'Extrême-Orient cités—les Chinois, les Siamois et les Cochinchinois*.<sup>18</sup> This theory has not met with general acceptance though many facts pointed out by the author are indisputable.

The basic point of this theory is that the Babylonian and Persian metric elements first came into India and were thence transmitted to the Far East. The conclusion arrived at by the author could not therefore be invoked in favour of the theory that the Arabic or Persian term *thaqual* gave rise to the *tical* for the simple reason that there has never been an Arabic or Persian weight called *thaqual* and neither has this term been connected with any weight or coin of India which might have migrated to this side of Further India. There is no doubt, however, that the Arab or the Persian *mithkal* was introduced into India, though this weight did not find its way to Thailand. The question now arises: Is there any evidence to show that, even if the weight was not adopted, its name might have been applied to the Thai *baht*?

The weight of the Arab *mithkal* was originally that of the Roman *aureus* or the gold *dinar*, that is, about 73 grains. In the course of its introduction in different parts of Africa and in the East the weight of the *mithkal* varied anything between 65 grains at Ormuz to about 95 grains in Sofala. The weight of the *mithkal* did not certainly correspond with that of the *baht* but the African *mithkal* weighed very

<sup>17</sup> Marques Pereira was Portuguese Consul in Thailand from 1875 to 1887 and made a very important collection of Thai gold and silver coins which he presented to Dom Luis I., King of Portugal. His booklet published in 1879 is the earliest attempt to give a systematic account of Thai coinage with drawings of the coins in his collection. This study was followed by that of Joseph Haus, Austrian Vice-Consul in Shanghai, who published in 1880 a pamphlet on *Siamese Coinage*.

<sup>18</sup> Gabriel Ferrand, *Journal Asiatique, ut supra* p. 7.

nearly half a *bahit*. These half *bahits* were issued at Ayuthia some of them weighing 100 grains, corresponding to the 95 grains of African *mithkals*, but to say that the association of half *bahits* with the *mithkals* gave rise to the term *tical* is to carry presumption too far.

The opinion emitted by Teixeira de Aragão, therefore, rests on no more than the phonetic resemblance of the *metical* and *tical*, which is more likely a simple coincidence as in the case of the *thuapual*. The solution of the problem must rest on some positive facts and to obtain these it is necessary to push our enquiry to the earliest times when the word *tical* was used. Unfortunately the Arab writings relating to the Far East mention neither the *tical* nor the *bahit*.<sup>19</sup> There are Portuguese descriptions of Thailand dating back to the time of Duarte Barbosa, who wrote in 1516 a valuable work translated by Longworth Dames for the Hakluyt Society under the title of the *Book of Duarte Barbosa*. He throws no light on the problem of the *tical* though he describes minutely the commerce of Thailand especially in the port of Tenasserim. Nor is an earlier, description of Tenasserim of 1505 by Ludovico Varthema helpful.<sup>20</sup> In a contemporary Portuguese study, *Lembranças das Cousas da India*, which deals with prices, coinage and weights in the East in 1525 there is no mention of the *tical*. Fernão Mendes Pinto in his *Peregrinação* is the first author to mention the *tical* of gold used in Pegu when he was there in 1545 and 1552. A contemporary work entirely devoted to the study of eastern coins and weights in the XVI century is the *Livro dos pesos da India e assim medidas e moedas*, written in 1552 and referred to above. This work treats of the weights, measures and coinage not only of India as the title suggests, but those of Africa, the Red Sea, the Persian Gulf and of the Far East. In this work, just as in the *Peregrinação*, the *tical* is mentioned not in connection with a coin of Thailand but with a weight of Pegu and of other ports of Southern Burma. Nunes records the weights current in five ports of Burma, namely, Pegu, Cosmin, the modern Bassein on the western arm of the Irawaddy, Martaban, Makhau, an old port in the delta, and in Dala opposite modern Rangoon. In all these ports the common

<sup>19</sup> The Arab relations refer essentially to mariners' routes to Siam. v. Gabriel Ferrand, *Relations de Voyages et Textes Geographiques Arabes, Persans et Turks etc.* 2 Vols. Paris, 1913, and Reinaud, *Voyages*, 2 Vols. 1845.

<sup>20</sup> v. G. P. Budger's translation of Ludovico di Varthema's *Travels* published by the Hakluyt Society.

weights were the *bahar*, the *biss* or *viss* and the *tical*. The *bahar* from the Sanskrit *blāra* and the *viss* are distinctly Indian weights, the former being equal to about 400 lbs. but varying to a considerable extent in different ports. The *viss* is a South Indian weight, Tamil *visai*, Sanskrit *vihita*, equal to 3 lbs, 2 ozs. in Madras. In all the five ports mentioned by Nunes, the *bahar* was divided into hundred *ticals* but the weights varied in each of these ports. The *viss* of Pegu weighed 40 ozs., that of Martaban 47½ ozs., and that of Dala 41½ ozs. Hence the weight of the *tical* varied in each of these ports. In Pegu it was about 194.4 grains, in Cosmin 204 grains and in Martaban more closely connected with Siam 235.8 grains. It will be seen from the above that the weight of the Martaban *tical* was almost the same as that of the Thai *baht*. Just as in the case of the Burmese *tical*, the weight of the Thai *baht* also varied in the coinage of not only different Ayuthian kings but apparently during the reign of the same king.<sup>22</sup> It does not follow that either country copied the weight from the other or that there was a direct relation between the Thai *baht* and the Peguan *tical* and between the variations of their weights. The Mon of Pegu obtained the weight of the *tical* by dividing the *viss* into hundred *ticals*, while the Khmer and the Thai obtained the weight of the *baht* by dividing the *tambung* into four *bahts*. The correspondence of the weight of the Burmese *tical* and the Thai *baht* seems to be really coincidental, but this coincidence is significant because it established a connection between the two weights and consequently between the two names. This connection was obviously more intimate at Mergui and Tenasserim where the *tical* was used before the Thai domination. Even during Thai overlordship the Mon and Burmese languages continued to be spoken at Mergui and when the *bahts* were introduced in the port it was natural that the common name *tical* was applied to them especially as their weights coincided. Furthermore the *gansa ticals* were used in commercial transactions just like the silver *bahts* of Thailand, that is, as coins and weights

<sup>21</sup> v. *Peregrinação de Fernão Mendes Pinto*, ch. cxclv. This author was twice in Thailand and gives long descriptions of the country, but does not mention the Thai *tical* nor the *baht*. Both the works *Lembranças das Cousas da Índia* and Antonio Nunes's, *Livro dos Pesos da Índia* etc. are published in Vol. v of *Collecção de Monumentos ineditos of Lisbon*, Academy of Sciences.

<sup>22</sup> Cf. Reginald le May's list of Ayuthian *bahts* with their weights in *Coinage of Siam*, pp. 39-43, also pp. 15-16.

combined. In fact, Sparr de Homberg treats the *viss* and the *tical* of Pegu not as weights but as *monnaies*.<sup>23</sup>

Hence the question of the origin of the term *tical* used in connection with the Thai *bahl* depends largely on the origin of the Peguan *tical* called *kyat* in Burmese. Sir Richard Temple who studied the currency and the weights of the Burmese came to the conclusion that the *tical* represents the Indian stamped silver weight and coin *tanka*, which in Mon usage contracted into *t'ke*, whence the foreigners got the *tical*.<sup>24</sup> Sir Henry Yule inclined himself to this opinion and considering the connections of the Mon settlers in Pegu with India and the fact that the two other weights of Pegu namely the *buhar* and the *viss* and their names are distinctly Indian, there is every probability that the third weight *tical* with its name, also came from India.

In India the Sk. *tanka*, Mahr. *tank*, has been the denomination of a stamped coin and of a weight of silver in use from very early times, though it has varied greatly in its application in different parts of India. This *tanka* is even now in use in Persia and Turkestan where it is applied to a silver coin worth about 7½d. W. Erskine in fact took *tanga* or *tanka* as a term originating from the Turki or Chagatai term *tang* which means white. But this is not accepted by Sir Henry Yule for the obvious derivation is from the Sanskrit *tanka*, *tankaka*.<sup>25</sup> *Tanka* was the popular name of the chief silver coin of the Sultans of Delhi at the time of Mahmud Ghazni in the XI century right down to the time of the Delhi sovereigns of the XIII and XIV centuries. At a later period under Sikander Buhlol, 1488-1517, copper *tangas* were also issued. When the Portuguese came to India they found the *tanka* used on the western coast of India and adopted it, striking coins called *tangas* of silver as well as of copper. In Portuguese India the word *tanga* survives to this day, being applied to an anna or one-sixteenth part of the Indian rupee.

In Bengal the *tanka* took the form of *taka* or *tucka* as the Anglo-Indians wrote it, and is still used there to denote the silver rupee. In fact the peasants of Bengal know no word for the rupee except *taka*. In the north-western province of India *taka* is used to denote aggregates

<sup>23</sup> *Journal Asiatique*, ut supra pp. 113-14.

<sup>24</sup> v. *Indian Antiquary*, Vol. xxvi, p. 253.

<sup>25</sup> *Hobson-Jobson* s. v. *Tanga* Really the Sanskrit, the Persian and the Turki *tanka* appear to have a common origin,

of four or two copper coins called *piec*. On the South-eastern coast of India the word took the form, *tungka* or *tancu*, and it was in this form that the Indian immigrants of Telingana, whence it is supposed they were called Talaings, evidently brought it to Southern Burma when they established themselves in large numbers all over Pegu, particularly south of Henzada. In the Mon language *tungka* still means a coin, but in its application it became *'ke* as Sir Richard Temple believes, and thence came the *tical*. The form *tincaul* used by Fernão Mendes Pinto resembles more closely the Sanskrit and the original Mon term *tanka* and supports Richard Temple's theory of the Indian origin of the *tical*. The Burmese term *kyat*, or *ta kyat* (one *kyat*) if it is not a corruption of the *tical* as Sir A. Phayre suggested, appears to have replaced the Mon *'ke* after the Burmese conquest of Pegu under Tabin Shweti in 1539, particularly during the imperial rule of his successor Bureng Naung, 1551-81, when much that was of Mon or Shan origin was swept away or absorbed into Burmese. Before the establishment of the Burmese in Pegu the earlier term *tical* of the Mon was used by the Portuguese and foreigners and long before them by the Shans who, though rulers of Pegu before the Burmese, had completely identified themselves with the Mon. It is noteworthy that the Burmese King Bureng Naung himself, according to Fernão Mendes Pinto, paid in 1552 a *tincaul* of gold per month to each foreign soldier in his army. There can be no question therefore that the Burmese adopted the earlier *tical* but gave it their own name *kyat*, representing a similar though not identical weight which they had probably used previously.

There are various examples of foreign weights having been naturalized under local names. The Chinese *tael* serves to illustrate this fact and at the same time furnishes a parallel illustration to the development of the *l* sound at the end of *trucku* or *'ke*. The *tael* is the trade name of the Chinese ounce which is one-sixteenth of a *catti*, another Chinese weight. Both these terms are not, however, Chinese but Malay-Javanese: *tahil* and *kati*. These names were first applied by foreigners to the Chinese weights, though the Chinese name for the *catti* is *chin* while for the *tael* it is *liang*. The weight of the Chinese *tael* has varied in different localities but its standard weight in China may be taken to be 580 grains. As Chinese silver was largely imported into Cambodia the Chinese weight was also adopted, taking the name of *dumleng* in Cambodia from which comes the Thai *tam-bung*. These weights both in Cambodia and Thailand are now 37.5

grammes corresponding with the standard Chinese *tael*.<sup>26</sup> The Chinese ounce became the Malay *tahil* or *take*, because among the Malays it was the name of a weight, though it might have not been identical with the Chinese *tael*. J. Crawford held that the Malay name *tahil* came from the Indian *tola* or *tula*, which there is no reason to doubt, in view of the early relations of India with Malaya. It must be noted that the weight *tula* also appears in early Cambodian inscriptions.<sup>27</sup> The two forms *take* and *tahil* are, however, significant in as much as they run parallel with the *lucca* and *tical*. In Champa inscriptions, both the forms *thai* and *thil* as names of weights of gold and silver are found. These two forms are also used in European writings of the XVII century. While the Portuguese usually wrote *tael* in the singular and *taeis* in the plural, we have in the writings of travellers like Saris and Jean Moquet the form *take* or *taie* in the

<sup>26</sup> Though there could be no doubt that the Thai *tambulung* comes from the Khmer *damleng*, I am not aware of any accepted derivation of the term *damleng*. The last syllable *leng* clearly represents the Chinese name of the weight *liang*, called *tael* in Malay countries. The first syllable *dam* is possibly connected with Sanskrit *dramma* which in Champa became the Chau weight *dran*, a subdivision of the *tael* itself, and mentioned in Chau inscriptions of Misou. Finot, *Inscriptions de Mi-son, ut supra*, p. 914. Formerly the Thai *tambulung* appears to have weighed something around 940 grains, while to-day it is standardized at 34.5 grammes or about 580 grains. The *bait* is a quarter of the old *tambulung*.

<sup>27</sup> Aymonier mentions *tul* or *tula* and *jyen* among the weights, *Journal Asiatique* 1883, 8e Serie I, p. 465 et ss. In the inscription in Khmer script transcribed by G. Coedès *Recueil des Inscriptions du Siam* Vol. II, p. 45, the *tula* and *bhuara* are mentioned, which means they were used by the Khmer in Siam. The Indian *tola* now weighs 180 grains but it is not certain what weight the Malay *tahil* represented before the standard Chinese *tael* was adopted. The *bhāra* means 'load' in Sanskrit and was a weight naturalized by the Arabs who under the name *bahar* spread it all over East Africa and in the East as far as Moluccas. It is interesting to note that the Khmer used both the *bhāra* and the *tula* in Cambodia and Siam, though later on, in both these countries, they were given up in favour of weights of Chinese origin—the *picul*, called *hap* in Cambodia, and the *tael*. There is no agreement as to the exact weight which the *tula* represented in Cambodia. Parmentier, Cordier, Finot and others make calculations which are at considerable variance. The present *tola* weight standardized in India, at 180 grs., is comparatively recent but in olden times it was not certainly the same. *Tula* in Sanskrit is 'balance,' *tul* is 'to weigh or lift up.' In *Kawi* of Java *tahil* also means 'to weigh.'

singular.<sup>28</sup> It is suggested in *Hobson-Jobson*<sup>29</sup> that the singular form *tuke* was introduced through the Portuguese by rendering the Portuguese *taeis*, which is the plural of *tael*, into the singular form *taei* or *tuke*. This explanation, however plausible it may be, is superfluous because we find from the inscriptions of the Malayanised kingdom of Champa that both the forms were current among the Chams themselves.<sup>30</sup> The process may explain, however, the evolution of the term *tical* with the final "l" added to the Indian *tacka* or to the Môn term *t'ka*. The Portuguese plural of *tacka*, namely *tacuas*, *tacuaes* which would be generally used in commercial transactions, might have suggested the singular form *tucal* or *tical* and entered into general use among foreigners instead of the real singular *tacka*. Apart from this explanation there are various examples in Portuguese where suffixes of *l* and nasal sounds of *an*, *en* are added in transcription of oriental terms. In this connection it must be pointed out that, according to Sir Richard Temple, the word *tical* in Burma is pronounced *tickle* while here we pronounce it *ticawl*.

After tracing the origin of the Peguan *tical*, the question of the Thai *tical* presents less difficulties. The foreign merchants—Indians, Arabs, Muhamadans and Portuguese—were already accustomed to the *gamsa ticals* of Pegu not only in the Burmese ports but also in the trading relations of Pegu with the east coast of India. On the other hand in Mergui and Tenasserim they handled the Thai *bahts* of silver almost exactly weighing the same as the local *gamsa ticals*. The Thai *bahts* were also transported not only to Martaban and Pegu in commercial transactions but even found their way to the Madras coast. Thomas Bowrey describing the *currant coynes* in the kingdom of Golconda, in 1669-79 quotes the value of the *Syam ticull* in Masulipatam as one and a quarter rupee, which is a proof of some trade between the Thai port of Mergui and Masulipatam.<sup>31</sup> There is nothing unusual therefore that foreign merchants should call the Thai *baht* by the name of *tical* to which they were already accustomed in Pegu taking

<sup>28</sup> *Voyage of Saris to Japan*, Hakluyt Edition. Jean Moquet, *Voyages en Afrique, Asie, Indes orientales et occidentales* Paris 1617.

<sup>29</sup> s. v. *Tael*. cf. E. Huber, *Études indo-chinoises* BEFEO Vol. v. p. 169-70.

<sup>30</sup> v. Finot, *Inscriptions de Mi-son*, BEFEO Vol. iv, 1904, p. 914-915.

<sup>31</sup> *Countries round the Bay of Bengal*, Edited by Sir Richard Temple, Hakluyt Society.

into account especially the fact that the two weights were almost the same. The fact that the Burmese called this weight *kyat* did not prevent foreigners from continuing to call it by the older name *tical*, any more than the local name of *baht* did in the case of the Thai *tical*.

This view derives support from another parallel example in connection with Thai coinage. During the Ayuthian times the name given by foreigners to the Thai *salung* which is one-quarter of a *baht* or one-sixteenth of a *tumbung*, was *maas* or *mayom*. Mandelslo, describing the coins of Siam in 1637, says that they were of three kinds *ticals*, *mases* and *foanghs* and adds that four *mases* made a *tical*.<sup>32</sup> The French ambassador de la Loubère notes that the *tical* and the *mayom* are pieces of silver money and acknowledges that he does not know the origin of these words but that the Siamese call them *baht* and *salung*.<sup>33</sup> Sparr de Homberg also speaks of the *mas* of Siam.<sup>34</sup> Now *maas* is a Malay-Javanese term from Sanskrit *masa* for a weight equal to 1/16th of a *tael*, current in Malacca and Malaysia, and also meaning gold. When the foreigners saw that the Thai *salung* was also equal to 1/16th of a *tael* or *tumbung* they continued to call it *maas*. Fr. Gabriel Quiroga de San Antonio also refers to *maiz* of Cambodia and it appears from his *Relation* that it represented the *sleng*, that is *salung*, which was undoubtedly a Khmer coin and weight. In Thailand there is no doubt that foreigners used the term *maas* in connection with the *salung* owing to the correspondence of the two weights, just as it happened in the case of the Pegu *tical* and the Thai *baht*. It is a curious fact that all the three Thai weights and coins, the *tumbung*, the *baht*, and the *salung* were called by foreign names and mentioned in European writings as *tael*, *tical*, and *maas* respectively.

We have an analogous example in case of the Chinese weight *liang* which was used in Malaysia in connection with Chinese imported silver and was naturalized by the Malays under a local name to which they were already used—*tabil* or *tael*. It was under this Malay name that the Chinese *liang* was spread far and wide outside China.

<sup>32</sup> J. A. Mandelslo, *Voyages and travels into the East Indies*, 1669. Cf. French Ed. 1727 *Voyages aux Indes orientales* p. 329.

<sup>33</sup> *Du Royaume de Siam*, 1691.

<sup>34</sup> *Journal Asiatique*; ut supra p. 98.



These examples show that apart from the migration of names of weights, the migration of weights themselves can take place, either under their original names or taking local names after being adopted in a new country, though in either case the new weight need not exactly correspond with the original weight. On this basis there was something to be said in favour of Aragão's opinion as to the derivation of the *tical* from the Arabic *mithkal*, Portuguese *metical*, if it were not a fact that the *mithkal* weight never came into use in Thailand nor was the *bahit* naturalized in any other country under any name, original or modified.

Considering all the evidence we possess, historical as well as circumstantial, there is little to support any other theory but the one—that the term *tical* used to designate the *bahit*, is connected with the Peguan *tical* which is clearly related with the Indian *tacka*, *tancka*, as has been shown. In view of these facts it is time there was a radical change in the current opinion, with regard to the derivation of the *tical* from Arabic *thaqal* or from the *mithkal*, founded simply on grounds of phonetic resemblance and with no supporting evidence. If such a phonetic similarity were everything, well might 'Alexander the Great' stand for *All-eggs-under-the-grate*, according to the famous gibe of Jonathan Swift. It is obvious that in questions where the available data are not quite complete, it would be rash to be dogmatic. Yet it is to be admitted that all the evidence we possess points to the connection of the term *tical*, through the *tical* of Pegu, with the *tanka* of India.

