

Glimpses of Seventeenth Century Currency and Mensuration in Siam

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Siam occupied a special position in the trade of the seventeenth century due to its strong commercial links with Japan and China. In fact, Europeans initially gravitated towards Siam not so much on account of the attractions of the articles indigenous to the country but because of its entrepôt trade.

There was considerable European attention to the system of currency and mensuration prevalent in Siam particularly during the reign of King Narai (1657–1688), when foreigners received a generous welcome in the country. European interests were not, however, confined to Siam alone. They endeavoured to evolve a common terminology to cover the different units of value, weights and measures with which they had to cope in the course of their commercial operations over the entire region. Asians encountered little difficulty in this field, as they were quite familiar with all the variations operative in these markets. It was left to the Europeans to record the units which they found. This was all the more necessary not only because Asiatic trade was by its nature essentially a carrying one, but also because of the many different currencies and scales of mensuration that were found in operation in any market at a given point of time.

The Siamese system reflected the various streams which had entered into the cultural heritage of the country. R. Carnac Temple mentions three dominating influences: the Chinese decimal scale absorbed from Burma; the quaternary scale which may either have been indigenous or have been adopted from Khmer civilization; and the ancient Indian literary scale of 320 raktikas to the pala.¹ To this were added several rough and ready market variants quaintly described by the seventeenth century French visitor to the Siamese court, Simon de la Loubère. Richard Carnac Temple mentions that in the East separate scales of value to measure different kinds of commodities were not too much in evidence, and the distinctions categorised in Europe by the systems of troy and avoirdupois measurements were not as noticeable in the East.

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The division between currency and weights and measures was, at best, blurred. This, however, had the advantage of preventing any major changes in the rates of exchange, despite the fact that the intrusion of European demands must have had some effect on conditions in the Asian markets at that time. Prices of individual commodities may have increased or diminished from time to time but the rates of exchange remained, on the whole, remarkably stable. The three tables that follow show the manner in which the South-East Asian system of currency and mensuration can be linked with the scale which had been evolved in India since early times. The material for these charts obtained from published by Sir Richard Carnac Temple as indicated below the charts. Terms have not been italicised on stylistic grounds because of frequency usage.

Table I*

Equivalence in Terminology

Burmese	Siamese	Cambodian	Shan	Malay	Indian	European
mu	fuang	fuang	-	kupong	-	copang
mat	salung	chi, salung	lat, chi	mayam	masha	mace
kyat	bat	bat	bat	tahil, tail- jambal	karsha, a rupee in weight	tical
tuang	tamlung	tamlung	tamlung	tael bungkal	pala	tael
pekha soi	chang	neal	chang	cati	cati	cati / vis
-	hap	hap	picul	-	-	picul
-	phra	-	-	bhara	bahar	bahar
-	wat	-	-	ukurat	-	any measure
-	fuang	-	-	suqaian	-	measure of capacity
-	met- khau- fang	-	-	padi	-	a grain of unhusked rice
-	klam	-	-	saga	-	a rati
-	phai	-	-	saku- kondari	-	1/4 candareen

* This Table incorporates material found in *I.A.*, 1898, R.C. Temple, "Currency and Coinage among the Burmese", pp. 1,14,46.

Table II

Equivalence in terms of *Adenantha Pavonia* or double *Abrus Precatorius*, the standard seeds of the Ancient Indian Literary Scale as described by R.C. Temple.

Indian	Siamese	Malayan
1 raktika (<i>Adenantha Pavonia</i>) -	1 hun 5 phai 2 fuang	1 candareen 5 kupong
5 masha	2 salung	4 mayam
16 karsha	4 bat	4 tahlil
4 pala	4 tamlung	4 bungkal
Total 320	Total 320	Total 320²

The above Tables should be read as ff: taking the Indian Table on the extreme left, it would read:

5 raktikas	=	1 masha
16 mashas	=	1 karsha
4 karshas	=	1 pala

Table III

Relative values of the units in Table II in terms of *Adenantha Pavonia* Seeds³

India	raktika	} =1 seed
Siam	hun	
Malay	kundari	
India	masha	} =5 seeds
Siam	phai	
Malay	kupong	
Siam	fuang	=10 seeds

Siam	salung	
Malay	mayam	=20 seeds
India	Karsha	
Siam	bat	=80 seeds
Malay	tahil	
India	pala	
Siam	tamlung	=320 seeds
Malay	bungkal	

Siamese currency and weights in use during the seventeenth century can be traced to the measures introduced by the Thai dynasty established at Ayuthia in A.D.1355. At this time an amalgam was forged between Indian measures and Khmer units. The chang, a variant of the Indian vis, was made equal to 100 bats, the bat being of Khmer origin. Other Khmer units absorbed were the damleng or tamlung, the sleng or salung, and the phai.

In central Thailand bullet shaped lumps of silver with a weight of 1/4 tamlung were issued, while in the north, another unit having the same weight as the tamlung was released. This latter currency was called kakin.⁴

Siamese Currency

400 cowries = 1 phai = 2 klams = 24 grains rice.⁵

The value of the cowrie, dependent upon the factor of supply and breakage, was subject to considerable fluctuation. The conversion of the phai and klam in terms of grains of rice was also variable, but these differences at the lower portion of the scale did not affect the higher units in any substantial manner.

2 phai = 1 songphai
 2 songphai = 4 phais = 1 fuang = 3 sols 9 deniers (Dutch)
 2 fuang = 1 salung = 7 1/2 Dutch sols
 4 salungs = 1 bat = 30 Dutch sols or 37 1/2 French sols⁶

Currency weights

1 bat weighed half a French crown or 768 grains of rice.

4 bats = 1 tamlung = 16 salungs. As the Javanese unit, mas or mace, was also 1/16 of a tael, Europeans used the mace as a synonym for the salung.

20 tamlungs = 1 chang = 80 bats

In 1616, 80 bats or 1 chang equalled 100 Indian pagodas.

1chang in silver = 144 Dutch livres = 50 French ecus.

1 Dutch livre or pound was equal to 0.494 kilograms.

80 bats = 1 Chinese cati

50 changs = 1 hap = 4,000 bats

Cowries were used as small change in Siam.

Salung, fuang and song phai were silver coins. On occasion, however, the fuang was issued in gold when it was worth 8 bats.

Much of the silver was brought in from Japan, but the silver content of the Spanish rial of eight was considered superior to that of the Japanese coin. A letter written by the French agent in Siam, Boureau Deslandes, dated 26 December 1682, states that silver coins such as the Indian rupee and the Persian abbasi could only be exchanged at loss in Siam.⁷

Bullion—Transactions

The ratio of silver to gold was 12:1.

Siamese Weights

The Siamese system of weights was built up around units of the bat weighing 230 grains or 15 grammes. It was through the units of the bat, tamlung, chang, and hap, that the system of coinage was linked to that of weights and measures. Equivalence at the level of grains of rice was not always uniform. The system of weights was as follows:

1 tamlungs =	1 bat	=	20 oz.	=	60 gm.
20 tamlungs =	1 chang	=	80 bats	=	2 2/3 lb. or 1.2 kg.

According to Dutch records the chang as a unit of measurement was put to particular use in all transactions pertaining to silk and pepper.

1 hap = 50 changs = 4,000 bats = 133 1/2 lb. or 60 kg.

Gabriel Ferrand and Richard Carnac Temple also refer to the system of coinage-cum-weights prevalent in Junkceylon or Phuket. Since Junkceylon, despite its remoteness and isolation, was included within the Kingdom of Siam, the system prevalent there must have had wider connotations.

The system was as follows:

1 small putta (a small lump of tin) = 3 pence sterling
circa 1670.

Stevens⁸ refers to the putta (from Malay patah or fragment) as punchorfs or pichis. This may have been a local variant of the Javanese coin, the pitge, or the Chinese cash to which references are made in Dutch archival records. Unlike the small putta which appears to have been made entirely of tin, the Javanese pitge was made of an alloy consisting of four parts of lead to one part of tin.

Weights

2 1/2 small putta = 1 great putta = 7 1/2 pence sterling
1 copang = 1/10 Spanish dollar = 37.5 marvedies⁹
4 great putta = 1 chang (viece, vis)
15 chang = 1 copang (cupine)
8 copangs = 1 bahar = 400 to 420 pounds
circa 1670, and 476 pounds *circa* 1770.

Siamese weights for the measurement of rice

Rice was measured by the kwian, corrupted to coyan, or the cartload.

1 kwian = 30 hap = 4,000 lb.

A cartload was taken to consist of 80 baskets each weighing 50 pounds.¹⁰

Siamese Measures for Wine and Grains other than Rice

In this context the information given by La Loubère is of considerable interest.

The coconut shell appears to have been used in such transactions. As sizes of shells varied they were graded in accordance with their cowry holding capacities.

The bazar weight for corn was a bamboo basket of one bushel capacity called the sat. For liquor there was a pitcher of stated capacity called the canan.

The customer usually brought his own coconut to market and having filled this with water or grain he would first satisfy himself with regard to the capacity of the particular sat or canan in usage while making his purchase.

Liquid measure

4 leengs = 1 canan = approximately 1 litre

Measures of capacity

40 sats = 1 seste = 100 changs = 225 pounds

40 sestis = 1 cohi

In this context Gabriel Ferrand offers further clarification. There were three Siamese units of liquid measure, the tan, kanahn and the cank. The kanahn was taken to be the standard coconut shell which contained 830 grains of tamarind. The table read as follows:

4 cank = 1 kanahan

20 kanahan = 1 tan¹¹

Linear Measure

8 grains unhusked rice = 1 paed met-khau-fang = 1 finger breadth = 1 niw

La Loubère appears to be equating unhusked rice (Indian *dhan*) with barley corn (Indian *yava*) as 8 yavas in India were taken to equal 1 angula (finger) measuring $3/4$ inch.¹²

12 finger breadths or the space between thumb and middle finger

(the *tala* mentioned by Alberuni) = 1 khueb

2 khuebs = 1 sok (distance from the elbow to the ends of fingers)

2 soks = 1 khaen or cubit (distance from the ends of fingers to mid breast) .

2 khaens = 1 fathom or wa = 75. $2/3$ inches

This unit was used for land surveying and for the measurement of building and roads.

20 wa or fathoms = 1 sen

100 sen = 1 luk (roeneng according to La Loubère)

= French league (a French league was $2\ 3/4$ English miles)

4 roe nenge = 8,000 was = 400 sens = 1 jod¹³

Notes

1. For further details see *infra* Table II, also *Indian Antiquary (I.A.)*, 1898, R.C. Temple, "Currency and Coinage among the Burmese", pp. 35; Simon de la Loubère, *The Kingdom of Siam*, Singapore, 1969, p. 165. For the quarternary scale of Indian origin see E. Thomas, *The Chronicles of the Pathan Kings of Delhi*, Delhi, 1967, p. 4.
2. See *I.A.*, 1898, R.C. Temple, article cited, p. 47. According to the scale cited by Temple, 320 raktikas = 1 pala. For further information see E. Thomas *Ancient Indian Weights*, reprint, Varanasi, 1970, pp. 12-13.
3. *I.A.*, 1898, R.C. Temple, article cited, pp. 47-48.
4. *The Siam Society Fiftieth Anniversary Commemorative Publication*, II, J. de Campos, The Origin of the Tical, pp. 99-105, 110; E.W. Hutchinson, *Adventurers in Siam in the Seventeenth Century*, London, 1940, p. 217. In the mid-seventeenth century, the relation between the chang and the bat was 1: 80.
5. La Loubère, *op. cit.*, p. 164. Cf. the scale of cowries prevalent in the Mughal suba of Bengal as described in *Medieval Indian Quarterly*, IV, 1961, I. Habib, "Currency System of the Mughals", p. 13 notes 4, 5.
6. La Loubère, *op. cit.*, p. 164; *I.A.*, 1897, R.C. Temple, Currency and Coinage among the Burmese p. 253. cf. J.A. Decourdemanche, *Traité des monnaies, mesures et poids anciens et modernes de l'Inde et de la Chine*, Paris, 1913, pp. 165-166. For Dutch and French coinage see L. Varadarajan, *India of the Seventeenth Century*, II, Part II, Delhi, 1985, pp. 1609-1614.
7. Bibliothèque Nationale, Nouvelles Acquisitions, 9380 (131).
8. Stevens, *Guide to East India Trade*, quoted by R.C. Temple in *Indian Antiquary*, 1902, "Kobang, the Malay coin and weight", p. 51.
9. For the contemporary Spanish system of currency see A Justice, *A General Treatise of Monies and Exchanges*, London, 1707, pp. 168-169.
10. Hutchinson, *op.cit.*, p. 218. A graphic description of European computations of loads carried by animals is to be found in Tavernier's account. (See W. Crooke, ed., *Travels in India by Jean Baptiste Tavernier*, 2nd edition, 1925, II, p. 32, n. 3. Quoting from J.L. Kipling (*Beast and Man in India*, 1892, p. 239), it is stated that a normal load for a fair sized elephant was 800 pounds, which would make such an animal equal to 8 ponies, small mules or asses, to five stout pack mules or bullocks, and to three and a third camels.
11. Cf. *Journal Asiatique*, 1920, G. Ferrand, Les Poids Mesures et monnaies des mers du Sud en XVI et XVII siecles, pp. 98-99.
12. *Journal of the Royal Asiatic Society of Bengal*, 1834, Appendix, Prinsep, Useful Tables, p. 87.
13. La Loubère (*op. cit.*, p. 165) uses the terms vouas or fadom for the term wa. In this context it is of interest to note that Francis Buchanan (*A Journey from Madras through the Countries of Mysore, Cannara and Malabar*, London, 1807, II, p. 279) refers to the *vaum* or *fadom* in his description of the Coimbatore district, India. The term *roe neng* used by La Loubère also presents certain difficulties. The context suggests that the *roe neng* was the same as the term *luk*, meaning a league during the Ratanakosin or Bangkok period. The term *ranaeng*, in use during the same period, had the connotation of approximately 1 1/2 inches. For *angula*, *hasta* and *vitasti*, from which Siamese units of measurement such as *new*, *sok* and *khaen* appear to have been derived, see S. Srinivasan, *Mensuration in Ancient India*, Delhi 1979, pp. 8-21; *Epigraphia Indica*, VI, F. Kielhorn, Chebrolu Inscription of Jaya, S. S. 1157, p. 39.

