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From the Editor

It was a pleasure to put together the wide-ranging material in this volume, which reflects the strength and depth of current numismatic research. We welcome back two senior contributors, Robert Tye and Dilip Rajgor. Robert takes a detailed look at the weight systems underpinning ancient Indian coinage, while Dilip provides an important analysis of a recent hoard of punch-marked coins.

Our coverage of Central Asian coinage in this volume is particularly strong, with an article on newly-discovered Sogdian coins by Shinji Hirano and an article on the Yarkand Khanate by Wolfgang Schuster. And finally, we have an in-depth look by Deepak Bansal at the half rupees issued by George VI in British India.

Karan Singh

COINS, WEIGHTS, AND THE *ARTHASHASTRA*

Robert Tye

The ancient Indian text, the *Arthashastra*, deals with smaller primary ancient Indian weight standards in just eight sentences, (2.19.1-8).[1] The result is terse, and apparently garbled. That, so to speak, is the bad news. The good news is that in its ancient objects, the coins and weights, ancient Indian metrology is so elegant and precise that it is, I claim, not difficult to untangle the matter, if only we make as our starting point a practical consideration of the objects themselves. Here are the facts about objects I have in mind:

1) More than 1,500 weights have been excavated from Indus Valley sites, buried between c. 2,600 BCE and 1500 BCE. Their weight standard was analysed by Hemmy.[2] He found a primary unit of 13.71 g, establishing a standard which hardly varied for more than 1,000 years. The denomination structure of the weights is mostly binary up to 4 units, but decimal above that, thus: 1/16, 1/8, 1/6, 1/4, 1/2, 1, 2, 4, 10, 20, 40, 50, 100, 200, 500, 800.

2) Marshall analysed a group of 54 stone weights found at Sirkap,[3] from deposits formed in the last centuries BCE or first century CE. Twenty five of these stone balls came from a single find, buried under a shop along with a mass of jewellery, perhaps hidden just ahead of the Kushan conquest. The calculated standard unit of these later stone weights was 13.705 g, with the set from the jeweller's shop showing a denomination structure of: 1/4, 1/2, 1, 2, 4, 16, 32. Clearly, both in magnitude and method of division, these later weights fit the Indus Valley pieces very closely, yielding a system that persisted for around 2,500 years.

3) As Marshall pointed out in his report on Sirkap, the quarter unit in this system, at 3.426 g, is very close indeed to the weight of the Imperial Magadhan and Mauryan standard silver punch-marked coin (henceforward 'PMC'). I tested this myself and found ten such coins in mint state (all GH 566, perhaps 200 BCE) averaged 3.39 g. Ten earlier coins (GH Series I, various types, c. 400 BCE) in mint state averaged 3.43 g.

4) The post-Mauryan text *Manusmriti* (the Laws of Manu) contains this statement: "two *krishnalas*, weighed together, must be considered one *mashaka* of silver. Sixteen of those make a silver *dharana*, or *purana*" (Chapter VIII, 135-6).[4] Now, *purana* means old, and has been taken to mean 'old coin' in this context, that is to say, the PMC, which we know to be c. 3.43 g. If so, the text states that such coins weigh 32 *krishnalas*, also known as *ratti* seeds.

5) I have a packet of ratti seeds and newly weighed (different lots of) 32 of them. The results are: 3.40 g, 3.57 g, 3.52 g, 3.55 g, 3.54 g and 3.58 g. (Oddly, the first lot is a random pull I weighed for Michael Mitchiner some years back, at 3.39 g on a different scale). Thus, the sample of *rattis* I happen to own is (just) 3% out from the PMC theoretical, since 32 weigh on average 3.52 g. The minor discrepancy could be explained in many different ways. What we can reasonably assume is that we have interpreted the *Manusmriti* text correctly. The PMC weighed 32 notional *rattis*, i.e. 3.426/ 32 = 0.107 g.

6) If we turn now to a much later coin issue still, the early Shahi bull and horseman coins of c. 800 CE, I found 29 selected pieces also weighed on average 3.43 g. This tallies closely with MacDowall's finding (3.4 g to 3.5 g), and matches the Mauryan standard of 1,000 years earlier. One might attempt to dismiss this fact as a freak accident, were it not for a text of Alberuni,[5] written around 1030 CE, just after the terminus of the Shahi bull and horseman issues.

7) Alberuni was the leading scientist of his age, a highly numerate empiricist. However, around 1020 CE, he inhabited an Indian world which, apparently by long popular tradition, used their coins as weights, and lacked small weights independent of the coinage. Alberuni lived at just the time when the coinage itself was being thrown into confusion by the recent Ghaznavid invasions. He went to considerable lengths to determine the correct standard of a weight called a *suvarna*, used in his day for weighing gold. A *suvarna* weight also figures prominently in the *Arthashastra*. For that reason, we shall investigate the matter further. Alberuni also mentions a widely-used *tola* weight,[6] not mentioned in the *Arthashastra*. His attempts to determine the absolute value of *suvarna* weight led to a number of varying definitions.[7] I will not reprise them all here; they seem to suggest a *suvarna* perhaps weighed c. 11.88 g, c. 13.5 g, or c. 13.3 g. However, Alberuni seems to prefer this final set of definitions: 60 *suvarna* = 15 *pala* = 1 *mana* (= 180 *dirhems*).

   Alberuni says this is "generally agreed". I judge what he means is that at this wholesale end of the market, physical weights were being used yielding an adequate degree of constancy, for both the Hindu *pala* and the Islamic *mann*. He deduces from the relationship that Hindu Indian informants were conflating the *dirhem* and the *mithcal*, and that the *suvarna* was not 3 *dirhems* but 3 *mithcals*; thus perhaps 3 x 4.25 g = 12.75 g. We can attempt to go further, since if we follow Hinz the Islamic *mann* was reasonably consistently defined in Alberuni's day,[8] in the range of 812 g to 833 g. This would give us a range for the *suvarna* of 13.53 g to 13.88 g. Thus, hidden from Alberuni, but revealed to us via archaeological objects, is that Alberuni's *suvarna* is at basis (very probably) four Shahi bull and horsemen coins, which is also four PMCs and also Hemmy's 13.7 g unit, of both Sirkap and Indus Valley, in a weight system by then about 3,600 years old. Although it does not concern us here, Codrington tracked the use of that same weight system in South India down to the 19th century. The archaeologist Kenoyer states quite baldly that the Indus Valley System is still in use today,[9] after more than 4,600 years.

8) The final fact I take here is the ancient formal definition, at *Manusmriti* VIII 134, of the notional 'white mustard seed': "Six grains of white mustard are one middle-sized barley-corn, and three barley-corns one krishnala (ratti)…"

We are now in a position to discuss the stanzas from *Arthashastra* in turn (I quote Kangle):[10]

2.19.2 "Ten masha beans make one mashaka of gold, or 5 rattis"

Taking our *ratti* at 0.107 g, this gives a gold *mashaka* of 0.535 g (since 1,000 modern seeds of the *vigna mungo* weigh close to 50 g, such a reading of "*masha* bean" tallies). However, this is not the *mashaka* of silver mentioned in the *Manusmriti* text cited above, that being two *rattis*, thus 0.214 g.

2.19.3 "Sixteen of these make one Suvarna, or karsha"

This gives a *suvarna* (of gold) as 16 x 0.535 = 8.56 g. Clearly not the *suvarna* of Alberuni, but just as clearly a very good fit indeed for what are very likely the first gold coins to widely circulate in the Indian economy, the Attic standard gold staters (didrachms) of the Bactrian-Greeks. The Vaisali (Bihar) find of c. 2000 showed such coins had probably penetrated deep into India soon after 200 BCE, if not earlier. It has long been known there were (apparently early) Indian gold issues, and Kulkarni has recently greatly extended our knowledge of these types, and shown they apparently weighed close to 2.15 g.[11] Thus, they were probably carefully calibrated to the Attic system (as half drachms).

2.19.4 "A pala is equivalent to four karshas"
Since a *karsha* has been defined as a *suvarna*, this exactly replicates the definition found in Alberuni around one thousand years later, but importantly, the *suvarna* in question here is not the c. 13.7 g unit of the Indus Valley system and of Alberuni, rather it is (very likely) the Attic didrachm, c. 8.6 g.

2.19.5 "eighty-eight white mustard-seeds make one mashaka of silver"
A second kind of *mashaka* is defined here, presented as a silver *mashaka*. According to the definition of the 'white mustard seed' in the *Manusmriti* given above, 90 would equal 5 *Rattis*. Thus, this definition would be very slightly less than the gold *mashaka*, at 88/90 x 5 = 4.89 *rattis* (i.e. c. 0.52 g). The reason for this slight difference is not clear to me. But importantly, notice that this stanza flatly contradicts *Manusmriti* VIII 135, which states that a silver *mashaka* is two *rattis*. Thus, the *Arthashastra* makes the silver *mashaka* a rather trivial version of the gold *mashaka*, and at a stroke turns its back on the Indus Valley system which Alberuni, Hemmy, Codrington,[12] and Kenoyer take as fundamental.

2.19.6 "sixteen of these make one dharana, or 20 simba beans"
Setting aside the "*simba*" reference, which is obscure to me, this is correct enough if we are talking about a gold *suvarna*, pitched at c. 8.6 g or perhaps a little below, but only if the *dharana* is equated to a gold *suvarna*. But if that is the case, why call the weight by this (third) different name *dharana*? If instead we follow the definition given in the *Manusmriti*, as we have seen, it yields a silver *dharana* of 16 silver *mashakas*. Thus, the well-known 32 *ratti* weight: the standard c. 3.43 g coin of both the Mauryans and the Shahis. My own feeling is we are looking at a rather clumsy re-write, which still contains elements left over from an early text, which was probably more similar to that retained in the *Manusmriti*.

2.19.7 "A dharana of diamond weight 20 rice grains"
This is specifically a detail from a particular trade, apparently using its own different fundamental unit. It seems a side issue, which throws no light on the coin and bullion weight systems being discussed here.

2.19.8 "A half mashaka, a mashaka, two, four, eight mashakas, a suvarna, two, four, eight suvarnas, also ten, twenty thirty forty and 100 (suvarnas)"
This definition, of a nomenclature and associated structure, immediately brings to mind the physical weights of the Indus Valley system, with its standards binary below its 128-*ratti* (13.7 g) *suvarna* unit, then increasingly turning to decimal multiples above. But if we look more closely, and follow the *Manusmriti*, making the associated half *mashaka* a ratti, we get the wrong result, this 'suvarna' would be only 32 *rattis* (c. 3.43 g) in this definition. Kangle states in a footnote here, without qualification, that the *mashaka* is "also referred to as masha".[13] Well, that seems true of the *Arthashastra* text, but it contradicts the very second sentence of Codrington's earlier (near 300 page) book.[14] Crucially and fundamentally, back in 1924, Codrington distinguished a gold *masha* of c. 0.58 g (5 *rattis*) from a silver *masha* of c. 0.23 g (two *rattis*). So, the *Arthashastra* text is correct as it stands, but only because its author is fixing exclusively on a gold *mashaka* of 5 *rattis*, yielding the 80-*ratti* gold *suvarna*. Both in nomenclature and structure, the later gold weight system seems to have been constructed to misleadingly resemble the pre-existing Indus Valley or silver weight system. Two different *mashakas* yielding two different *suvarnas*. Interestingly, when we turn to Alberuni, this whole c. 8.6 g gold *suvarna* system seems completely forgotten. Whether he defines his *suvarna* in terms of a *tola* (x 4/3), a *yava* = grain (x 256), a *mithcal* (x 3) or, as we have preferred above, a *mann*, we always get a high figure, closer to 13.7 g. However, anyone who has read Alberuni's 4-page commentary on 'Hindu metrology' will know that it is peppered with rants about the confusions within the systems as explained to him, often citing anonymous sources such as "a man from Somnath". Alberuni himself puts these confusions down to people "indulging in wild conjecture and mingling together different theories in an uncritical manner". A thousand years on, its seems we can better put our finger on the source of the "different theories" that were in play. For instance, early in Alberuni's account we find him defining the "*andi*" as four barley grains (*yava*).[15] If we take the *andi* to be a *ratti*, this doubles any reasonable estimate of a traditional *ratti*, according to the Islamic or indeed any reasonable estimate of the barley grain. Elsewhere, we find a *suvarna* erroneously pitched far too low at 2 *dirhems*, each of 32 *rattis*.[16] Alberuni suggests we dismiss such as being the mingling together of different theories in an uncritical manner. He appears to be correct. If we try to slavishly preserve a stanza like *Arthashastra* 2.19.8, but still yield a c. 13.7 g *suvarna*, then to create a double size *mashaka* or a half size *suvarna* is as good a way to get it wrong as any. These are the sort of erroneous solutions you end up with, if you try to give a literary text, such as this 2.19.8 stanza, priority over physical objects like coins and weights.

Chronological conclusions
Since before 2000 BCE, a primary pre-Islamic Indian weight system, rooted in practice, was generated from a '*suvarna*' unit of c. 13.7 g. It was divided in a binary way into 128 notional *rattis*, with heavy multiples instead generated in a decimal fashion. Such an initially oral tradition may well have been subsequently represented in a now lost text, pre-dating both the *Arthashastra* and *Manusmriti*, but associated with the early Magadhan regime and its c. 3.43 g PMC. Both the *Arthashastra* and *Manusmriti* were written after India entered a gold phase, defined in terms of a new gold *suvarna*, very probably the Attic didrachm. This surely happened after Alexander c. 323 BCE, but very probably after the Bactrian-Greek gold issues of c. 250 BCE. Manu makes an attempt to represent the old and new systems side by side, naming parallel silver and gold systems respectively. The *Arthashastra* is probably an attempt to amend the matter further, to represent the (officially authorised?) gold standard system alone, while giving merely the appearance of maintaining a separate silver system.

Alberuni mentions the *tola* of 12 *masha*, thus 96 *rattis*, being very widely used by c. 1030 CE, as it has been ever since in India (note that this *masha* of 8 *rattis* is not the "*masha* bean" of the *Arthashastra* cited above, being 16 times heavier). Alberuni cannot be referring to the heavy *tankas* and *rupees* called *tolas* by Sultanate, Mughal and British officials, and by modern coin collectors. He predates all such developments. There is no mention of the *tola* in the *Arthashastra* or *Manusmriti*, nor is there any trace of the duodecimal structure that it represents in either. There is only one clear candidate for the origin of this *tola* denomination of weight, and that is the denomination coin collectors today associate with the Indo-Greek tetradrachm. At c. 9.68 g the coin weighs a little less than the canonical *ratti* would suggest, since 96 x 0.107 = 10.27 g. However, note that a notional 'Mauryan payment *tola*' would surely use three c. 75% pure PMCs and thus would likely incorporate an intrinsic seigniorage of about 25% got by debasement. The Indo-Greek preference for pure silver issues would obviate that approach to seigniorage collection. It seems most likely that seigniorage was got instead by reducing the nominal weight of the 'coin *ratti*' to c. 0.1 g, yielding a seigniorage charge of about 1/16th or c. 6%. We know Akbar would do something similar, more than 1,500 years later. Thus, we importantly notice that the *Arthashastra* text mentions a gold standard, of probably post-c. 250 BCE, but does not mention a later *tola* unit of probably post-c. 160 BCE. I suggest two ways to understand this fact:

Scenario I

The gold *suvarna* very probably derives from the Attic standard gold didrachms of the Bactrian Greeks, thus post c. 250 BCE. Neither the *Arthashastra* nor *Manusmriti* mention any *tola* matter, nor the associated duodecimal 96-ratti/ 12-*masha* system, which dominated coin issue under the Indo-Greeks, Indo-Scythians, Indo-Parthians, and Western Satraps. This suggests the simplest possibility, that both texts reached a final form in the period 250-160 BCE. However, we should recall that pre-160 BCE finds of gold coins, both imported from Bactria and locally produced, seem rare. It might be thought difficult to explain the prominence of this new 80-*ratti* gold *suvarna* standard in official documents in association with so little apparent usage of coined gold. Thus, I will outline a second scenario which meets that criticism, while being regrettably more complex.

Scenario II

Gold standard coinage apparently only becomes the norm in India under the Great Kushans, post c. 113 CE. That is the period in which official documents promoting an 80-*ratti* gold *suvarna* would most easily fit. However, that position forces other compromises upon us. Firstly, the authors would be seen to turn a blind eye to structural Indo-Greek *tola*/duodecimal developments that had dominated coin issue in much of North India from 160 BCE onwards. Secondly, and rather contradicting this first point, the Kushan gold unit at 8.0 g is surely best explained as a gold *suvarna* pitched not at the fundamental rate for the *ratti* of c. 0.107 g (of Indus Valley, Magadha and the Shahis), but at 80 of a reduced Indo-Greek *ratti* of c. 0.1g.

Both the positions demand compromise. The reader may choose.

Cultural conclusions

Let us step back now from the close detail of ancient Indian events and think about this matter in the context of human metrological systems in general. I would hope to have at least some readers enough steeped in English historical metrology to have noticed a rather profound similarity to what is accounted above. England, over about the last 10 centuries, has had two parallel pounds, and two parallel pennies. A troy pound of 240 troy pennies, and a sterling pound of 240 sterling pennies. The troy pound is a bullion pound, and its penny comprises 32 troy-wheat grains. The sterling pound is rather a currency pound, comprising physical pennies of a least notionally 30 troy-wheat grains. Many see the two as linked, with the mint striking 256 sterling pennies from a troy pound, but retaining 16 of them as a kind of tax. If so, the creation of two exactly parallel but different pounds, of two different pennies, starts to look like a kind of ploy. If we misunderstand and conflate the two systems, and imagine it comprises just one pound of 240 physical pennies, the tax is hidden from understanding.

In the Science Museum HMSO account of English metrology in 1987, Connor points to something very like this going on. Probably the most important medieval English document defining weight standards is the *Tracatus de Ponderibus et Mensuris*. It openly defines the English silver penny as 32 wheat grains, which, as Connor states, "is simply not true".[17] In this major official document, troy and sterling pennies were conflated, the tax hidden.

I hope I am not alone is seeing something broadly similar in the presentation of the gold *suvarna* metrology of the *Arthashastra*. As explained above, in both its nomenclature and its structure, it tends to mirror and thus conflate two very different *suvarnas*, its own *suvarna* with the much older and more fundamental unit of the Indus Valley and the Mauryas. At this distance in time, it is hard to guess why that happened. However, matters to do with the exchange rate of silver to gold, at the time the currency switched to a gold standard under the Kushans, would be an obvious place to look.

Unfortunately, there are reasons to fear that such avenues of research will not be pursued. In the English case, Connor was mysteriously persuaded to retract his position, in his 2004 book on Scottish weight standards.[18] I say mysteriously because the grounds for the retraction were unconvincing and merely literary, involving the use of the word 'troy'. His physical evidence from coins and weights, detailed at length in the earlier work, and indeed by others elsewhere, was brushed under the carpet.

In the present matter concerning ancient Indian weight standards, matters have taken a yet more troubling turn. In his new translation of the *Arthashastra*, Prof. Patrick Olivelle declines to explicate the metrological texts in question in the *Arthashastra* in any way at all.[19] Not in the text, not the footnotes, nor the appropriate appendix. His grounds are given thus:

> "all measurements of weight, length, and distance are left in the original Sanskrit. The reason for this choice is that, most frequently, the numbers attached to measurements have connotations that are lost when converting them into grams or metres, much like when someone says she walked a mile, but the connotation is lost when one translates it as having walked 1.609 kilometres" (Page xiii)

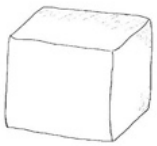
Primary meanings are sacrificed in favour of connotations! In 1620, Francis Bacon opened the doors of the English Enlightenment with the publication of his *Novum Organum*. That intellectual revolution surely inspired, in the very next generation, the first Englishman to study Oriental coins, John Greaves, who traversed the Mediterranean Sea in 1638-40, mapping the weight standards of the ancient world, specifically by weighing old coins. Bacon's advice was clear and specific: he urged the rejection of "tribal idols". He paved the way to enlightened scientific objectivity, holding that

> "words manifestly force the understanding, throw everything into confusion, and lead mankind into vain and innumerable controversies and fallacies", and "we must bring men to particulars and their regular series and order, and they must for a while renounce their notions, and begin to form an acquaintance with things."[20]

Twenty generations after Bacon, surely that old tradition was continued by another dedicated student of things, the coin collector Michael Broome, when he formed the ONS? Olivelle's doctrine is the nemesis of all, of Bacon, Greaves, and Broome.

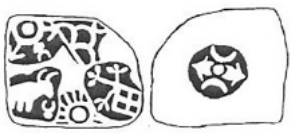
Key proposals about ancient Indian coin weights arising in the preceding text:

Indus Valley system



The Indus Valley weight system appeared before 2000 BCE. Multiple lines of evidence suggest it was the system subsequently applied by Magadha/ Mauryas and the Shahis, and that it remained in use in South India into the 19th century CE. The chief unit, of c. 13.7 g, seems to be called a *suvarna* in much later texts. Divisions below the unit were binary, establishing this '*suvarna*' as 128 rattis and thus a ratti of c. 0.107 g. Note this '*ratti*' is a product of the fixing of the '*suvarna*' standard, not vice versa.

Magadha/ Mauryan PMCs



Multiple lines of evidence indicate the Magadhan/ Mauryan 5-mark coins all adhere to the same Indus Valley system, the coins weighing a quarter '*suvarna*' of c. 3.43 g, thus a 32-*ratti* standard with the *ratti* of c. 0.107 g.

Note that the metal was about 75% fine, suggesting that seigniorage was quite likely taken via debasement.

First Indian gold coins

The Indo-Bactrians introduced gold staters to an Attic standard around 250 BCE, theoretically perhaps c. 8.6 g (actually achieving about 8.3 g). Rather by chance, an Attic stater is a good fit for 80 Indus Valley/ Mauryan *rattis*, since 80 x 0.107 = 8.56 g. The very first Indian gold coinage is rare, but seems to adhere to this standard, since most weigh in the region of 2.14 g = 20 *rattis*. Thus, the first appearance of an Indian 'gold s*uvarna*' of 80 *rattis* most probably arose via the Indo-Bactrian gold stater issue.

Indo-Greek *ratti*

The Indo-Greeks radically revised Indian silver currency, raising its fineness to pure silver, but cutting the weight of the standard coin to a 'drachm' of c. 2.42 g. This weight has no precedent in the Greek world, nor is it an exact fit for the prior value of the *ratti*. However, if we cut the weight of the prior *ratti* by 1/16th to c. 0.1 g, it makes the 'drachm' a 24 *ratti* piece. That in turn would make the so-called Indo-Greek 'tetradrachm' a 96-*ratti* piece. A 96-*ratti* unit has no place in the Indus Valley system, but as a '*tola*' it became paramount within later Indian metrology and was already long established when Alberuni wrote around 1030 CE. Thus, the *tola* probably arose via the Indo-Greek silver reformation, alongside a reformed *ratti* of c. 0.1g, itself introduced in order to take 1/16th seigniorage by weight.

Kushan gold *suvarna*

The Great Kushan gold *suvarnas* (also called dinaras or staters) weigh very close to 8.0 g. The origin of this standard seems immediately apparent if we adopt the above. It is the 'gold *suvarna*' of 80 *rattis*, figured in reduced Indo-Greek *rattis*.

Postscript

In line with the "essential core" of ONS activity as conceived by Michael Broome, I would be keen to exchange thoughts on this and related matters. If you wish, find me at: https://groups.io/g/numismet.

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DUMRAON HOARD OF MAGADHA PUNCH-MARKED COINS: A CONNECTING LINK BETWEEN *VIMSHATIKA* COINS OF SERIES 0 AND *KARSHAPANA* COINS OF SERIES I (C. 550-430 BCE)

Dilip Rajgor

A hoard of early Magadha punch-marked silver coins was found in July 2019 on the outskirts of a small town called Dumraon, in the district of Buxar in the modern Indian state of Bihar. The hoard contained 25+ silver coins with an average weight of 3.5g each. Most of the coins had four symbols punched on the obverse and ancillary bankers' marks on the reverse (Series 0 of Gupta & Hardaker 2014; Series 11 of Rajgor 2001). A few interesting coins were of the five symbols series, generally referred to as Series 1 (Gupta & Hardaker 2014; Series 12 of Rajgor 2001).

Fig. 1. The four major symbols on the coins of the Dumraon Hoard

Fig. 2. Map of find spots of Series 0 and Series I coin hoards in Bihar and Uttar Pradesh (modified after Gupta & Hardaker 2014)

Catalogue of coins

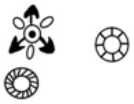
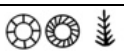
The Dumraon Hoard contained 25+ *karshapana* coins of two types: 4-symbols and 5-symbols. The 4-symbol type coins are 19 in number (Table A), whereas the 5-symbol coins are six in number (Table B). However, 24 out of the 25 coins discussed hereunder have a new combination of four symbols: a six-armed symbol, a sun symbol with oblique rays, a triangle with three dots placed at every inside corner, and, finally, a new symbol of a fish with two big eyes.

Table A. Hoard coins with 4 symbols (Series 0)

Coin no.	Obverse symbols	Reverse symbols	Reference
1			G&H Series I, #5; Rajgor Series 11, #49
2		+ 1 indistinct	Unpublished
3			Unpublished
4			Unpublished
5		+ 1 indistinct	Unpublished
6			Unpublished
7			Unpublished
8			Unpublished
9			Unpublished
10			Unpublished
11		+1	Unpublished
12			Unpublished
13			Unpublished
14			Unpublished
15			Unpublished
16			Unpublished
17	+ bankers' mark		Unpublished
18	+ bankers' marks		Unpublished
19	+ bankers' mark		Unpublished

Out of the 19 coins with 4-symbols, only one coin is of an earlier known type (Coin 1), with a six-armed symbol, a sun symbol with oblique rays, an elephant standing to left, and a plough placed on a stand (G&H Series I, #5; Rajgor Series 11, #49). The remaining 18 coins are of the fish type with 4-symbols.

Table B. Hoard coins with 5 symbols (Series I)

Coin no.	Obverse symbols	Reverse symbols	Reference
20			Unpublished
21			Unpublished
22		 + 1 indistinct	Unpublished
23			Unpublished
24			Unpublished
25	 + bankers' mark 		Unpublished

In the six coins reported with 5-symbol coins, the first four symbols are the same as the previously described fish type coins, with the addition of a fifth symbol which varies on all six coins. The fifth symbol is either a two retrograde S-type symbols (Coin 20), a star with a solid dot in the centre (Coin 21), six small solid triangles placed around a central circle (Coin 22), eight small solid circles placed around a central circle (Coin 23), a triskeles with three dots in each orb (Coin 24), or an elephant standing to the left (Coin 25).

Most of the coins in the hoard have small bankers' marks on the reverse. The two most common marks found are sun-like symbols  and  .

An interesting fact is also emerging from these coins. Coins of the 4-symbol type (#1-19) start with the four distinct symbols punched on the face of the coins, with or without bankers' marks on the back. But at a certain point of time, the 4-symbol series evolved into the 5-symbol series. It is possible that this progression of 4 to 5 symbols may have caused confusion among the public. In order to convey this change in number of symbols as an official measure, the mint apparently re-confirmed some of the coins by punching another official symbol on the reverse of the coins. As a result, one finds that on Coin 20, a six-armed symbol has been punched as an official symbol on the reverse of the coin. Similarly, on the Coin 21, another official symbol of a triangle with three dots has been punched on the reverse of the coin. This assurance provided by an extra official symbol on the reverse, with 5 symbols on the obverse, is a clear sign of the evolution of the 4-symbol series into the 5-symbol series among the *karshapana* coins of Magadha.

A connecting link between Series 0 and Series I

Gupta and Hardaker have listed all their early *karshapana* coins of 5-symbol type as Series I. They have also included some of the 4-symbol type coins in the same series of 5-symbols (Gupta & Hardaker 1985, 2014: Series I, Types 3, 5, 6, 7b, 7c, 9, 16 and 19). Moreover, they have clubbed all the earlier heavy weight coins of Magadha as Series 0 (Gupta & Hardaker 2014: Types 1-29).

However, no coins of 3.5 g *karshapana* weight standard with 4-symbols of Series 0 were classified separately by Gupta and Hardaker in the first edition of their book (1985). Later, I classified the 4-symbol 3.5 g *karshapana* coins as a separate series and named it Series 11 (Rajgor 2001: #47-59). These Series 11 coins were analysed and grouped separately based on their 4 symbols, rather than the 5-symbol type of Series 12 (Rajgor 2001) or Series I (Gupta & Hardaker 1985).

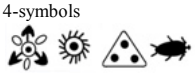
Interestingly, no subsequent authors recognised the 4-symbol *karshapana* coins as a separate type. Moreover, Gupta and Hardaker in their second edition (2014), continued with their old classification and ignored the analysis behind my grouping the 4-symbol *karshapana* coins as a separate series (2001: Series 11).

However, it is now clear that the 5-symbol type coins did originate as a 4-symbol type (Rajgor 2001: Series 11, # 47-59), and the 4-symbol type coins, in turn, evolved from the heavy weight *vimshatika* coins of 5.5 g (Rajgor Series 10; Gupta & Hardaker Series 0, #9-25). My classification of 4-symbol *karshapana* coins (Rajgor 2001: Series 11) is therefore an important missing link between the 4-symbol heavy weight coins and 5-symbol light weight coins.

I had also recorded an earlier heavy weight series with 4-symbols, with an average weight of 5.5 g, separately as Series 10 (Rajgor 2001: Series 10, *vimshatika*, #45-46e). These coins were later grouped with other coins as Series 0 by Gupta & Hardaker (2014: #9-25).

Consequently, with the present discovery of 4-symbol *karshapana* coins in the Dumraon Hoard, along with the evidence of the Series 10 coins of Rajgor (2001), a clear chronological link is now established between the different types of Magadha. Hence, it can be summarised that the 4-symbol heavy weight series (5.5 g) coins evolved into 4-symbol light weight series coins (3.5 g), which further evolved into 5-symbol light weight series *karshapana* coins (3.5 g). This evolution of different coin types is summarised below:

Table C. Evolution of the early coins of Magadha

Number of Symbols	Weight/ metal	Rajgor 2001	G&H 2014
1-symbol 	5.1 g, electrum	Series 7, #41-42	--
1-symbol 	7.6 g, silver	--	Series 0, Type #1
1-symbol 	5.5 g, silver	Series 8, #43	Series 0, Type #6 (listed as error)
2-symbols 	5.5 g, silver	Series 9, #44	Series 0, #4
3-symbols  + 1	5.4 g, silver	--	Series 0, Types #7-8
4-symbols 	5.4 g, silver *vimshatika*	Series 10, Types 45-46e	Series 0, Types #9-25
4-symbols 	4.5 g, silver *vimshatika*	--	Series 0, Type #26-29*
4-symbols 	3.5 g, silver *karshapana*	Series 11, Types #47-59; Dumraon #1-19	Not classified separately
5-symbols 	3.5 g, silver *karshapana*	Series 12, Types #60-323; Dumraon #20-25	Series I, Types #1-264

** Only 2 coins of this weight are reported (G&H #26-27). The weight of the third coin has not been recorded by Gupta and Hardaker (G&H #28). The fourth coin is a clipped coin, with the available weight of 3.92 g (G&H #29)*

Conclusion

The Dumraon Hoard of silver *karshapana* coins is attributable to the Magadha *mahajanapada* and datable to 550-500 BCE. The hoard is an important connecting link between the 5.5 g *vimshatika* coins with 4 symbols of Series 0, and the 3.5 g *karshapana* coins with 5 symbols of Series I. The coins found in this hoard fit perfectly between Series 0 and Series I, and seem to be a transitory phase between the two series. This reflects the transition of a local heavy weight, 4-symbol series (5.5 g) into a light weight 4-symbol series (3.5 g), which further evolves into a 5-symbol series (3.5 g), the latter being the wider in circulation when Magadha started conquering adjoining *janapadas* and began issuing the 5-symbol Series I coins for circulation across its empire.

Coins of the Hoard

Coin 1

Coin 2

Coin 3

Coin 4

Coin 5

Coin 6

Coin 7

Coin 8

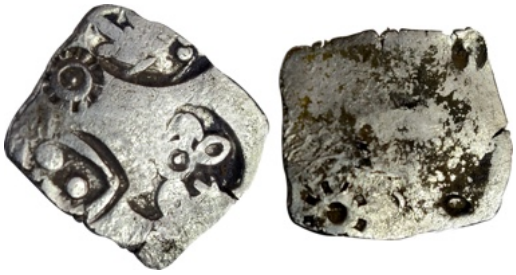
Coin 9

Coin 10

Coin 11

Coin 12

Coin 13



Coin 14

Coin 15

Coin 16

Coin 17

Coin 18

Coin 19

Coin 20

Coin 21

Coin 22

Coin 23

Coin 24

Coin 25

Acknowledgements

My sincere gratitude to Ranvijay Singh for bringing this hoard to light and for sharing vital details about the find spot. I am also thankful to Karan Dodlawar for his help in photographing the coins.

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SOME NOVEL PRE-ISLAMIC SOGDIAN COINS OF CENTRAL ASIA

Shinji Hirano

A large number of rulers have issued various types of coins throughout the history of central Asia. In the few past years, I have encountered and published some novel coins of the pre-Islamic era (Hirano 2007, 2011, 2016). Here I report some more unpublished Sogdian coins in order to better understand the history of this region.

1. A new type of early silver coin with a Chach *tamgha*

Fig. 1. Silver coin, 1.3 g

Obverse: A bearded portrait of the ruler
Reverse: *Tamgha* and corrupt legends

This coin has reportedly come from the Samarkand region, along with another specimen. The obverse has a bearded portrait that is reminiscent of some silver coins that imitated Antiochos, whereas the reverse has a *tamgha* of early Chach bronze coins (see for example, Shagarov & Kuznestov 2006: Group 1). The legend is corrupt and unable to read. As the style of the reverse coincides with the Chach coins of Group 1, Period 2 or later types, the present coin was probably issued in Chach around the 3rd-4th century CE.

2. Novel coins from Otrar

The four unpublished copper coins in Fig. 2 are said to have been unearthed in Otrar. The obverse appears to have a ruler's portrait without a crown. The legend on reverse seems to be Sogdian and may be read as *nw-δyβ*.

a b
2.7 g 2.4 g

c d
2.9 g 2.1 g

Fig. 2. Four copper coins (a-d), with line drawing

Obverse: A bust turned three quarters to the left, with dotted border around
Reverse: *Tamgha* and legend, with dotted border around

The reverse *tamgha* is seen on a few enigmatic specimens (Zeno.ru 56521, 86940, and 269231). The issuers of these coins may belong to the same clan (Figs. 3-4).

Fig. 3. Copper coin with similar reverse tamgha, 2.2 g (Zeno.ru 86940)

Fig. 4. Copper coin with similar reverse tamgha, 4.1 g (Zeno.ru 269231)

It is also possible that the present *tamgha* has a link with that of Kai Yuan Tong Bao of Samarkand (Smirnova, Type 43). It is generally considered that the *tamgha* of Smirnova Type 43 represents Samarkand itself. However, it is distinct from the typical 'Samarkand *tamgha*' of any other Samarkand coins (see Smirnova Type 1, Type 49, Type 101, etc.). Due to the apparent similarity of the present *tamgha* with that of Samarkand Kai Yuan Tong Bao, it is possible that the issuer of the present coins had links with this family or region.

3. A new type of Ustrashana coin

Fig. 5. Copper coin, 2.7 g

Obverse. A crowned bust turned three quarters to the left, all within a dotted border
Reverse: *Tamgha* and legends, with dotted border around

The ruler is shown wearing a crown characteristic of Ustrushana ruler *stcry* (Satachari II), while the *tamgha* is not recorded so far. The legend can possibly be read as *'yny ''p''y pny* ('This is a coin of Apay'). The provenance is unknown. It is possible that this may be an unofficial issue.

4. A thin copper coin with a bold portrait

Fig. 6. Copper coin, 1.5 g

Obverse: A crowned portrait turned three quarters to the left, all within a circular border
Reverse: *Tamgha* and legends, within a circular border

The present copper coin is broad, but very thin like a typical Hunnic coin. A ruler's portrait with long hair can be seen on the obverse, and the reverse has a *tamgha* and Sogdian legends. A similar *tamgha* is seen on some Chach coins (see Shagarov & Kuznetsov 2006: Group 7). This may provide a link between Shagarov & Kuznetsov's Group 3 and Group 7.

The legend contains the word *xwβ* (ruler or king) and another word with the tentative reading *pntryk* (Editor's note: An alternative reading can be *p'styc*). This could be the name of the region or ruler. Thus, the legend may mean 'ruler of Pantar' or 'Ruler Pantaric'. The provenance is unknown.

Acknowledgements
I am grateful to Honorary Professor Yutaka Yoshida who kindly tried to read the Sogdian legends on these coins. Please note that some of his readings here are tentative, and not his final readings.

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AN UNPUBLISHED SILVER TANKA OF ILTUTMISH

S. M. Iftekhar Alam

The coin being discussed here was discovered in Rajshahi division of Bangladesh in 2003; shortly afterwards, it surfaced in the coin market at Dhaka through a dealer. It was purchased by an anonymous collector of Dhaka and remained undisclosed until 2019, when it changed hands (Fig. 1).

Fig. 1. Silver tanka of Iltutmish, 10.76 g, 29.5 mm (Private collection, Canada)

Obverse: Arabic legend in a double square, surrounded by a circle:

السلطان الأعظم
شمس الدنيا و الدين
أبو المظفر
إلتتمش السلطان
(The great sultan, sun of the world and the religion, father of the victor, Iltutmish, the sultan)

There is a dot in each segment, between the circle and the outer square.
The circular legend in the margin, starting from 2 o'clock and read anti-clockwise:

من خر(اج)---- شهور سنة ثلث و ثلثين و ستمائة
(From the land tax of ------- months of the year six hundred and thirty three)

Reverse: Arabic legend in a double square, surrounded by a circle:

في عهد الامام
المستنصر أمير
المؤمنين
(During the time of the leader, Al-Mustansir, commander of the faithful)

There are three dots in each segment, between the circle and the outer square.
The circular legend in the margin:

--- الفضة في شهور سنة ثلث و ---
(--- this silver in the months of the year --- three.)

In Fig. 1, the reverse legend that falls outside the flan (between 4 and 12 o'clock) should be:

ثلثين و ستمائة ضرب هذا

So, the complete legend in the reverse margin can be reconstructed as:

(ضرب هذا) الفضة في شهور سنة ثلث و (ثلثين و ستمائة)
(This silver has been struck during the months of the year six hundred and thirty three)

There does not appear to be any space available on the reverse margin to accommodate a mint name. Hence, this coin was issued without a mint name.

A close examination reveals that similar obverse dies have been used for Fig. 1 and the plate coins of type B49 and D37 of *The Coins of the Indian Sultanates* (Figs. 2-3).

Fig. 2. Silver tanka of Iltutmish (G&G B49)

Fig. 3. Silver tanka of Iltutmish, 10.7 g (G&G D37)

In the obverse margin of D37 (Fig. 3), من (*min*) is clearly visible and خراج (*kharaj*) is partially visible between 12 and 2 o'clock. Again, فات of مضافات is also visible on the reverse margin of D37 just before the word دهلي (*Dehli*). Interestingly, *dal* of *Dehli* is fully visible while *ha* is partially visible on the reverse margin of B49 (Fig. 2). By combining the legends visible on the reverse margins of B49 and D37, we get:

ضرب هذا الفضة في لكنوتي مضافات دهلي
(This silver has been struck in Laknauti (which is) annexed to Dehli)

Thus, B49 and D37 actually belong to one single type struck in AH 633, the first date for the appearance of *Laknauti* (i.e. Lakhnauti) mint in any coin of the Bengal Sultanate period. At the same time, B49 and D37 (which are basically the same type) introduce *Laknauti* as a place annexed to *Dehli* (i.e. Lakhnauti taken under Delhi's administration).

The present coin in Fig. 1, despite having the same obverse as B49 and D37, does not bear any mint name; instead it has the date of AH 633 on both the obverse and reverse margins. All three coins are stylistically similar and, therefore, the coin in Fig. 1 must have been struck at a Bengal mint, if not at Lakhnauti specifically.

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A COIN OF SHIRVANSHAH SHAIKH IBRAHIM II, MINTED IN AH 912

S.A. Bogatyy, E.J. Mychka, and R.J. Savosta

In AH 911-912 (1505-1506 CE), Shirvan witnessed events that changed its coin-minting process. An analysis of Shirvan's treasures discovered in 2015 (Bogatyy and Shabanov 2018), confirms that the minting at the turn of AH 911-912 had undergone some changes. Ali Recebli published a coin of Shirvanshah Shaikh Ibrahim II from Bughurd mint (Recebli 1997: 102, no. 108), that showed that in AH 912, Shirvanshah, together with his administration, was forced to leave his capital Shamakhi for the well-protected fortress of Kale-i-Bughurd. In this article we present a specimen of a new coin type that can be dated to AH 912 (Fig. 1). Its attribution is based on the coins described earlier by E.A. Pakhomov in 1941.

Fig. 1. Silver coin of Shaikh Ibrahim II, 1.18 g

Obverse: The Kalima written in four lines, separated by linear lines
Reverse: Braided line at the top with Arabic legend *Qa'i* below

Even though the date is not visible on this coin, its obverse is similar to that of Zlobin Types 083-085, which were minted in AH 912-913. Moreover, we have found nine more specimens with the same obverse die. A reconstruction of this die allows us to determine the date of this issue: AH 912 (Fig. 2).

Fig. 2. Reconstruction of the dies

For a long time, the inscribed coins of Shirvanshah Shaikh Ibrahim II were not known with the year AH 912. It appears that he was toppled from the throne for nearly two years: "…the absence of coins with Shirvanshah's name minted on them for almost two years (911-912 A.H./ 1505/6-1506/7) suggests that after the defeat of Kizilbashes at the fortress of Gulistan, Shaikh Shah continued to rule in Shirvan only after the recognition of the Supreme power of Shah Ismail. ... from 913 A.H. /1507/8 Shaikh Shah proceeded to mint coins with his name inscribed on them" (Ashurbeyli 1983: 267).

From the numismatic material of recent years, and particularly the present coin, it is now possible to reduce the period of exile of Shirvanshah Shaikh Ibrahim II. We will examine the present coin of AH 912 and the associated coins of this new type (Figs. 4-5, 7-9). The weights of these coins also indicate the minting period was not later than the beginning of AH 913 (Pakhomov 1941: 8, 13). The obverse of this type is known for AH 913 even after the reduction of the weight of these coins following monetary reforms [*idem*: 8]. This fact attests that the coin in Fig. 1 chronologically precedes the following coins, i.e. coins minted in AH 912-913 (Zlobin Types 083.0 and 084.0). Thus, it is this coin that 'bequeaths' the obverse, and not vice versa.

Interestingly, the reverse appears to be a die of the Mamluk ruler Abu'l-Nasir Qa'itbay (AH 873-901), with the braided line typical of Burji Mamluk coinage. The die may be from the Halab mint. It appears that a decade after Qa'itbay's death, the reverse die somehow travelled north and was struck with an obverse die of Shirvanshah Shaikh Ibrahim II. The present coin can therefore be considered a mule. See Fig. 3 for a comparison of the braided line.

Fig. 3. Silver dirham of Abu'l-Nasir Qa'itbay, 1.51 g (Zeno.ru 71948)

It is possible too that the die engraver may have been from the state of Mamluks (from Halab), who, being in Shirvan, cut the die in the mint following his usual pattern. This hypothesis correlates with the compositional proximity of the obverse in Fig. 1 with the typical obverse in Burji Mamluk coinage (Fig. 3).

We will now examine the other nine specimens we have documented with the same obverse die of Shaikh Ibrahim II.

Fig. 4. Silver coins, (a) 1.16 g, (b) 1.13 g (Zlobin Type 084.0; Pakhomov 23)

Obverse: The Kalima and date AH 912
Reverse: partial Arabic legend ('mint.. just Sultan/ Shaikh Ibrahim/ Shamakhi')

Fig. 5. Silver coin, 1.15 g

The coin in Fig. 5 bears traces of double-striking. Both sides were struck by obverse dies of the same type. There is no reason to suggest that this was due to deliberate re-coinage; it was most likely a mint error.

A careful comparison of the remaining parts of the obverse shows that the obverse dies are different. This means that at least two minters worked simultaneously with two obverse dies. We may also suggest that these dies were engraved separately, and not cast from a mould. Thus, it can be assumed that in the

Shamakhi mint in AH 912, the technology of mould cutting and the subsequent casting of dies was not used, despite the need for dies for at least two minters. Recebli (2014: 189-205) wrote about the organisation of coinage in the Safavid state (late period), though he did not discuss the process of die-making, so the question remains open.

Fig. 6. Reconstruction of the obverse die of Shamakhi mint

The reconstruction in Fig. 6 is compiled on the basis of the coin in Fig. 5 and the twelve coins that weigh 1.20, 1.18, 1.18, 1.17, 1.17, 1.17, 1.16, 1.16, 1.16, 1.15, 1.10 and 1.08 g respectively.

The authors examined three more coins of Type 084.0 with double-striking, weighing 1.12, 1.13 and 1.18 g. The surviving elements of the die did not allow a die comparison. On the coin that weighs 1.13, the date AH 912 is preserved. Apparently, on this and another coin the reverse dies were struck twice.

Fig. 7. Silver coin of Shaikh Ibrahim II (Zeno.ru 196111)

The coin in Fig. 7 allowed the reconstructed part of the die to increase significantly. Afterwards it became possible to find five more coins of the same die. Thus, it might be regarded as a link between the first four coins and the five coins below. Due to the poor conditions of the reverse die, the ten coins analysed with the same obverse die do not allow us to make any further die pairings.

Fig. 8. Silver coins, (a) 1.16 g, (b) 1.17 g (Zlobin Type 084.0)

Fig. 9. Silver coins, (a) 1.20 g, (b) 1.14 g, (c) 1.18 g (Zlobin Type 083.0; Pakhomov 15-22)

Acknowledgements
We are grateful to Anna Aksenova for translating this article into English and to the reviewer for indicating the origin of the coin in Fig. 1.

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THE COINAGE OF THE YARKAND KHANATE (LATER PERIOD, 1635-1695)

Wolfgang Schuster

So far the coinage of the Yarkand Khanate has not been included in standard numismatic catalogs, whether Chinese- or English-language publications. Only short articles in Chinese (Chu 1998; Tao 1999; Li and Li 2002 and 2017; Zhang 2004; Du 2005; Li 2011) have documented the currently known types and assigned them to the Yarkand Khanate, but with several containing errors and omissions. The legends were first read and the coins assigned to specific rulers by Chu Huaizhen (1998), and further analysed in articles by Rian Thum (2005 and 2018), where the logic for attributions and a more detailed historical context are explained. However, until now the results of these studies have not been collated into a typological listing.

The publication of the *Catalog of Pre-Modern Central Asian Coins (1680-1923)* in 2017 – the present author being co-author of this catalog – eliminated several blank spaces on the numismatic map of Central Asia, though it was not possible at that time to also include the coinage of the Yarkand Khanate. As a result of extensive research, the missing chapter of the coinage of the Yarkand Khanate will be part of the completely revised and expanded second edition of this catalog on which the authors are currently working. The present article is a preview of the first aggregate listing of the khanate's coinage in a systematic typological arrangement, presenting basic numismatic data, detailed coin descriptions, and images for all known types and subtypes.

Historical background

The Yarkand Khanate (Yarkend Khanate, Mamlakat-i Yarkand, Saʿidiyya Khanate, Chag[h]atai Khanate) was established in 1514 CE by the khan Sultan Saʿid (1514-1533), a descendant of the Eastern Chaghatayid dynasty (Kutlukov 1990). Turkic-speaking Muslims populated the area of Altishah(a)r (meaning 'Six towns') (Moghulistan), a large area of empty deserts and agricultural oases, which today is the southern part of the Xinjiang Uyghur Autonomous Region (XUAR) of the People's Republic of China.

The town of Yarkand (Yarkent, Yerkiyang, Yargiyang, Yerqiang, Shache) was the major town of the Yarkand Khanate, which held an important and influential status exercising control over towns in and around the Tarim Basin like Khotan (Hotan, Hotien, Hetian), Kucha (Kuchar, Kuqa, Kuche), Aqsu (Aksu, Akesu, Acheng), Yangi Hisar (Yengisar, Yingjisha), Turfan (Turpan, Tulufan) and Kashgar (Kashigar, Kashi), and at times briefly occupied parts of the Ferghana Valley (today's Uzbekistan and Kyrgyzstan), Kashmir and Tibet (Mohibbul 2005: 137-145).

The first confirmed, named coins are from ʿAbd Allah (1635-1667), when the state experienced a period of relative stability and prosperity. In the mid-17th century, the khanate became influenced by the Mughals which resulted in economic and political contacts with the Mughal empire. ʿAbd Allah's coinage was modeled on the calligraphy and layout of 17th century Mughal coppers, which confirms the khanate's strong economic and cultural links to Mughal India (Thum 2018: 12-14).

Shortly after the end of ʿAbd Allah's rule the Yarkand Khanate became a vassal state of the Dzungar Khanate, which was located to the north of it. As of 1679, the khans of Yarkand only ruled as puppet khans under Turkic *khojas* (khodzha, khodja, meaning 'master', an honorific title of respect for Muslim men of distinction). These *khojas* (Sufi masters), who had been installed by the Dzungars, were the actual rulers of the khanate (Pilipchuk 2016: 285 ff). It is unclear whether in 1695 the last ruling Yarkand khan was killed or he disappeared, probably to India (Fletcher 1984: 199-200).

Chronology

Below is a tentative list of the khans of the Eastern Chaghatayid or Moghul dynasty (dates are drawn primarily from Fletcher 1984). The chronological list of khans and *khojas* is abridged, as some of the following dates remain controversial, while earlier rulers are omitted.

ʿAbd Allah, AH 1045-1077, 1635-1667 CE

Yolbars (Yulbars), AH 1077-1080, 1667-1670 CE

Ismaʿil, AH 1080-1090, 1670-1679 CE
(actual ruler: Afaq Khoja [installed by the Dzungars], AH 1090-1105, 1679-1694 CE)

ʿAbd al-Rashid (II) (nominally, under Afaq Khoja), AH 1090-1093, 1679-1682 CE

Muhammad Amin (nominally, under Afaq Khoja), AH 1093-1103, 1682-1692 CE

Yahya (nominally, under Afaq Khoja), AH 1103-1105, 1692-1694 CE

Khanim Padishah, AH 1105-1106, 1694-1695 CE
with Khoja Mahdi; AH 1105-1106, 1694-1695 CE

Muhammad Mu'min Aqbash, AH 1106, 1695 CE

Monetary system

All *pul* (*fulus*) coins are of red copper, hammered, with crude legends. Some issues which are also described as rosette types, show a circular design with 5 dots inside ('pomegranate' pattern). This pattern is assumed to derive from copying the designs of some 17th century Mughal coppers. In Chinese articles, this pattern is described as being the *tamgha* of [the royal line at] Yarkand (Zhang 2004; Du 2005). *Tamghas* (elsewhere also mentioned as *damgha* or *tamghu*) are emblems used by Eurasian nomadic tribes or clans, based on livestock branding irons that were used to indicate ownership by hot-branding their horses, cows and camels with such emblems. Most of the population of the Yarkand Khanate in the 17th century did not live a nomadic lifestyle any longer, though there are cases where dynasties kept using the *tamgha* as a kind of 'national' symbol after they had become sedentary, similar to the European coat of arms. In one Chinese article, we find a rather unlikely explanation of the five dots being symbolic of the five daily prayers of Islam (Chu 1998).

The same article reports that, according to a historical text [*Ta'rikh-i Rashidi*], each khan minted his own coins in silver and gold, inscribed with Arabic legends. As the primary source is from 1446 CE, it cannot be applicable to later Yarkand khans. It is certain, however, that the first khan, Sultan Saʿid, minted coins in copper and silver, but only in Kashmir which he briefly occupied (Goron and Goenka 2001: 475).

With the exception of two recently discovered coins with possible date digits (see details in the below type listing), all known specimens are undated. Hence, no coins other than the copper issues in the type listing below can be confirmed for the period under review.

The thick anonymous Yarkand copper coins possibly served as the 'technical' prototype for the Dzungar copper *pul* coins of Tsewang Rabdan (1697-1727) and Galdan Tseren (1727-1745). So far, Yarkand coins have been available in very limited numbers and only on the oriental coin market, possibly because most had been melted down for reminting the Dzungar *pul*.

It can be assumed that silver *tanga* coins of the contemporary Janid Khanate, situated close to the west, possibly circulated as silver currency in the khanate. According to Andrei N. Kozyrev (personal communication), the market ratio at that time was 20-32 copper *pul* to 1 silver *tanga*, the noted fluctuations apparently depending on the silver content in the latter at different times, although this cannot be stated with confidence because no reliable information is available.

Chinese articles assigning various coins to Yarkand contain obvious errors, particularly in the reading of Arabic (Uyghur) legends. Also in open-access media, several crude coppers with Arabic legends are found tentatively ascribed to Yarkand. Due to illegible inscriptions their attribution to Yarkand remains questionable.

One Chinese article (Chu 1998; Li and Li 2002) also describe various anonymous anepigraphic coins, mostly showing plants or animals, and ascribes them to Yarkand. Since no clear information is at our disposal, their attribution to Yarkand remains problematic and such coins cannot as yet be included.

Mint name

ϕ⊗•ιB⊆ *Yarkand* (Yarkand, Yarkend, Yerkiyang, Yargiyang, Yerqiang, Shache)

Yarkand is also known written on the coins as ϕ℘≈•ιB⊆, i.e. with 'decorative *kaf*' composed of the letter *kaf* • in its initial form, separated from its stem that looks like *lam* ≈ connected with the following letter *nun* ⊗. Sometimes in this period the letter *kaf* is written with the oblique line (of letter *kaf*, usually on top) as a separate upward stroke (Rian Thum, personal communication).

Coinage

The named issues (Types 1a/b-3) are followed by undated anonymous issues (Types 4a/b-5).

Type 1a

Fig. 1a. Copper pul (fulus), 4.3 g-6.2 g, 13-18 mm, round flans, thickness 2.4-4.0 mm (Zeno.ru 3783, 53135, 143858; Thum 2018, #1.10)

Obverse: *fulus-i Rahman* (?) around 4-petalled rosette with 5 dots inside
Reverse: *zarb-i Yarkand* (and date) in circle

Tentatively read as *Rahman*, the name cannot be assigned to any Yarkand ruler (Thum 2018: 13). Due to its weight and style, the type is tentatively assigned to the period around ʿAbd Allah's reign (AH 1045-1077, 1635-1667 CE). One specimen is known with possible date digits *57* on the reverse (*idem*); AH [10]57 corresponds to 1647 CE. *Yarkand* also comes with 'decorative *kaf*' looking like ϕ℘≈•ιB⊆ (see under mint name). Varieties exist. For similar specimens with oval flans, see Type 1b.

Type 1b

Fig. 1b. Copper pul (fulus), 5.4-5.9 g, 15.7-18.0 mm, oval flans, thickness 4 mm (Zeno.ru 416, 7576)

Obverse: *fulus-i Rahman* (?) around 4-petalled rosette with 5 dots inside
Reverse: [*zarb-i*] *Yarkand*

As in Type 1a, this name, tentatively read as *Rahman*, cannot be assigned to any Yarkand ruler (Thum 2018: 13). This type is also tentatively assigned to the period around ʿAbd Allah's reign (AH 1045-1077, 1635-1667 CE). For similar specimens with round flans, see Type 1a.

Type 2

Fig. 2. Copper pul (fulus) 5.0-6.7 g, 15-19 mm, round flans, thickness 2.5-4.0 mm (Zeno.ru 53137, 141894; Thum 2005, #1-6; 2018, #1.2-1.4)

Obverse: *fulus-i 'Abd Allah Khan* (and date) in circle
Reverse: *zarb-i Yarkand* in circle

In the name of ʿAbd Allah (AH 1045-1077, 1635-1667 CE). One specimen is known with possible date digits *58* at the top of the obverse (Thum 2018: 58); AH [10]58 corresponds to 1648 CE. Varieties exist, and specimens can show stars or diamond as decorative elements on the reverse.

Type 3

Fig. 3. Copper pul (fulus), 3.0-5.3 g, 16.2-17.4 mm, thickness 3.2 mm (Zeno.ru 141895; Thum 2005, #8-9; 2018, #1.8)

Obverse: [*ful*]*us-i Muhammad A*[*mi*]*n*
Reverse: [*za*]*rb-i Yarkand*; large star

Initially it had been assumed (Thum 2005: 60) that this was an issue of khan Muhammad (AH 998-1018, 1590-1609 CE), but based on recent research (Thum 2018: 13) of its style and weight, this type is now tentatively assigned to Muhammad Amin (AH 1093-1103, 1682-1692 CE) who ruled as puppet khan under Afaq Khoja, who had been installed by the Dzungars. Muhammad Amin attempted to throw off Afaq's control during that period (Fletcher 1984: 165). It is possible that he issued this coin type during his attempted rebellion, but it is also possible that it was issued under Afaq's control, in Muhammad Amin's name. Varieties exist.

Type 4 a/b

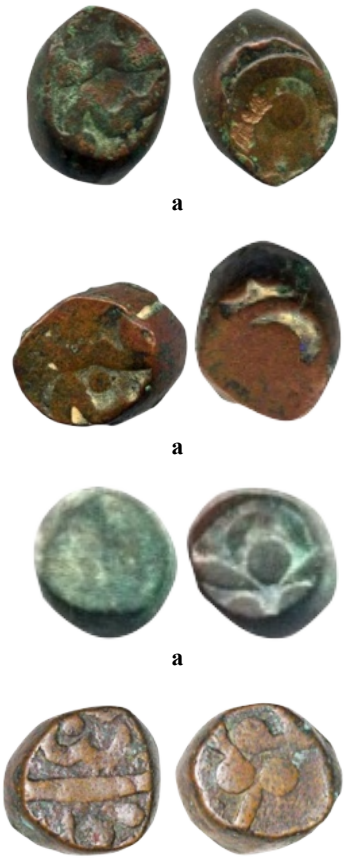

Fig. 4. Copper pul (fulus), 5.0-6.0 g, 10-13 x 7-9 mm, cylindrical flans, thickness 8-9 mm, (Zeno.ru 4415, 186420, 186421; Thum 2018, #1.11)

Obverse: [*Y*]*a*[*r*]*kand*
Reverse: Incomplete rose (?) pattern below a semicircle (Type 4a); floral (?) design (Type 4b)

This is an anonymous issue. Some specimens show parts of *Yarkand* on the obverse. It is assumed to have been struck in the late 17th century, with flans apparently cut from cylindrical copper bars. Due to its distinctive shape, this type is also described as the 'horse hoof' or 'chopstick head' type. Many varieties exist.

Type 5

Fig. 5. Copper pul (fulus) 5.33 g, 17.7.mm, thickness 3 mm (Thum 2005, #7; 2018, #1.9)

Obverse: *zarb-i Yarkand* in circle
Reverse: Intersecting perpendicular lines (?) in circle

An anonymous issue, though the reverse apparently shows an elaborate but illegible inscription. It is assumed to have been struck in the late 17th century, and was possibly an interregnal issue.

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EVOLUTION OF HALF RUPEES OF BRITISH INDIA UNDER KING GEORGE VI

Deepak Bansal

George VI ascended the throne of the British Empire on December 11th 1936 after the controversial abdication of his elder brother Edward VIII, following the demise of their father King George V earlier that year in January. In this paper an attempt is made to document the evolution of designs, and different die-pairings and variations in circulation strikes of half rupees during the reign of King George VI as King Emperor of India.

In March 1937, 3-inch intermediate reduction coin punches bearing the new king's effigy, designed by Percy Metcalfe CVO, RDI, were received at the Calcutta Mint in India, but no actual punches were actually made until 1938 (Pridmore 1980: 83). The dies were worked upon by Albert Pearson Spencer, Artist Engraver (1926-1945) at the Calcutta Mint, after his return from leave in 1937. The specimens for the rupee, half rupee, and quarter rupees were designed using the obverse designs from Metcalfe, paired with a remodelled reverse of the George V coins of these denominations, and were forwarded to England to be subsequently approved in July 1938 (Pridmore 1980: 84).

Section 1: Evolution of the obverse design

Obverse Type A: This obverse design had an excessive high relief and was rejected by the Royal Mint, London, due to its unsuitability for circulation strikes (*idem*). However, due to an oversight these dies reached India. Working dies were prepared at Calcutta Mint and engravers manually corrected the high relief, but the detail was reduced (Fig. 1). Production commenced on 1st November, 1938 with this design and continued through 1939. Barring a few half rupees minted at Calcutta, the dies were sent to Bombay once the Second World War broke out in 1939, and most of the minting happened at Bombay (Stevens & Weir 2012: 308). This obverse design is also commonly referred to as the 'Long Trefoils' type as the trefoils touch the beads at the top of the crown.

Fig. 1. 1939 half rupee using Obverse Type A. Notice the hair details are worn off due to the reduction in high relief. The border teeth pattern is tiny and the teeth are indistinguishably connected in a wave

Obverse Types B and C: In early 1939, a new obverse was designed and supplied by the Royal Mint, London. This design was characteristically different, with a lower relief and noticeable differences in the king's bust (Fig. 2). Coins bearing the dates 1939-1945 feature this obverse. From 1942 onwards, the size of the bust was moderately smaller, with changes in rim details (Fig. 3).

Fig. 2. 1941 Bombay half rupee with Obverse Type B, with a larger head. The border teeth design is now more visible compared to those in Type A. Also notice the trefoils in the crown no longer extend to the beads

Fig. 3. 1944 half rupee with Obverse Type C, with a relatively smaller head. Notice the border design has longer teeth

Concurrently, there were experiments made at the Calcutta Mint in 1939 to reduce the silver content in the coins in order to conserve silver. An amendment was made to the Coinage Act 1906 in March 1940 to reduce silver content in quarter rupees, and later extended to half rupees by an ordinance passed in July that year (Pridmore 1980: 85). The new coins were to be a quaternary alloy: 50% silver, 40% copper and 5% each of zinc and nickel.

The next significant design in the half rupee coin came in 1941 with the introduction of the security edge as a measure against counterfeiting (*idem*). The security edge had already been adopted by the HM Mint at Bombay in 1940 for the rupee coins. All half rupee coins bearing the dates 1941-1945 were minted with a security edge, which Pridmore describes as "consisting of a shallow re-entrant in the center of the grained edge" (Pridmore 1968: 168). Coins with the security edge dated 1942-1945 have a wider margin compared to those in 1941.

Some coins minted in 1943 (Lahore) and 1945 (Bombay and Lahore) have been recorded with a milled/ reeded edge (Kias & Rajgor 2014: 184), but I have not examined any to verify their existence. A small but noticeable distinction in the Lahore half rupees (1943-1945) is an incused dot in the centre of the cross pattern of the crown (Pridmore 1980: 130).

Obverse Type D: By the end of the Second World War, the British government owed nearly 225 million ounces of silver that it had borrowed from the U.S.A. to finance the war (Pridmore 1980: 88). In May 1946, it was decided to suspend the minting of the half and quarter rupees in 50% fineness with immediate effect (*idem*). A new design of the reverse, featuring a tiger, replaced the conventional Saracenic scroll design. The obverse featured a smaller bust of the king, similar to Obverse Type B, and the border toothed design was changed to plain (Fig. 4).

Fig. 4. 1946 half rupee with Obverse Type D obverse. Notice the border design is now plain

The coins were now to be struck with 100% nickel content, but had the same weight as the preceding silver rupee. The milled (reeded) edge was reintroduced for the half and quarter rupees. From 1946 till the independence of India in 1947, the minting of the half rupees featuring this obverse was only conducted in Bombay and is denoted by the presence of a diamond mintmark on the reverse below the date.

Section 2: Evolution of the reverse design

The reverse for the half rupees of George VI was taken from the coinage of his father George V. It consisted of an inner circle with the value *HALF RUPEE* written in English and Persian, along with *INDIA* and the year *19XX*. This inner circle was surrounded by a scroll containing the Tudor rose, thistle and shamrock with a lotus (side view) on the top and a lotus (top view) at the bottom. The flowers were basically the heraldic badges of England (rose), Scotland (thistle) and Ireland (shamrock), with the lotuses representing India (Fig. 5). The scroll was within another circle which had the toothed border.

Fig. 5. The design elements of the reverse, highlighting the flowers within the Saracenic scroll

Most significantly, during 1938-1945, the design included changes to the border tooth size and shape, the lotus at the bottom, and the mintmarks that indicated the three Indian mints in operation. As noted earlier, the transition to nickel coinage in 1946 resulted in a complete redesign of the reverse.

Reverse Type 1: This is observed in half rupees dated 1938-1941 minted at Bombay and Calcutta. In this type the toothed border is close to the edge of the coin. The teeth are small and wavy in 1938-1940 and become more prominent in 1941. The defining feature is, however, the lotus flower at the bottom which has a fully rounded circle in the centre surrounding a bead (Fig. 6).

Reverse Type 1a (1938-1940) Reverse Type 1b (1941)

Fig. 6. Close-up of lotus with rounded inner circle. The petals of the lotus are rounder in Reverse Type 1a. In Reverse Type 1b, the petals are more pointed with a thicker design and the border teeth become more prominent

Reverse Type 2: In the half rupees dated 1942-1945 minted at Bombay and Calcutta, the inner circle of the lotus surrounding the bead is replaced by six scalloped arcs, loosely connected (Fig. 7). Such half rupees were minted at Lahore mint from 1943-1945, after it was established and began operations in October 1943. The border teeth in this type are much longer and detailed than Reverse Type 1.

Fig. 7. Close-ups of half rupees with Reverse Type 2 (1944 Bombay and 1945 Lahore), showing the lotus with six scalloped arcs forming a circle around the bead in the centre. Notice the length of the border teeth. The letters can be with or without serifs

Three die variations are noted in Reverse Type 2:

Variation A - Large vs Normal *5*: A die variation exists for the half rupees minted in 1945 at the Bombay and Lahore mints. The date 1945 could either have a large/ open looped *5* or a regular/ normal *5*. The large/ open *5* variety is only seen in Reverse Type 2 (Fig. 8).

Fig. 8. 1945 half rupee showing a large '5' on reverse, with thinner font and equal-sized horizontal strokes in 'E' of 'RUPEE'

Variation B – Font: The alphabets and numerals can be with or without serifs. In Fig. 9, 1943 Bombay has serifs while 1943 Lahore is without serifs.

Variation C – Round vs Broken *3*: The lower stroke of *3* in 1943 is broken, due to an overlap from the Persian inscription below. This is seen primarily in the Lahore mint, while the *3* is well-rounded at the bottom in the Bombay mint.

1943 Lahore 1943 Bombay

Fig. 9. Close-up showing the broken '3' in the Lahore mint example on the left. Both examples are variations in Reverse Type 2

Reverse Type 3: In the half rupees dated 1943-1944 minted at Bombay, the inner-most circle within the lotus has six conical petals connected to the bead. Also, the alphabets in the centre above are wider and the numerals are with serifs. Notice the wider loop of *9* and serifs in the horizontal stroke of *4* in *1944*. This type with serifs is usually encountered in 1943 Bombay and 1944 Bombay with a diamond mintmark (Fig. 10), instead of the usual dot/ bead identifying Bombay mint.

Fig. 10. Close-up showing the lotus with six conical petals connected to the bead in the centre

Other variations in the tail of the *R* of *RUPEE* (Fig. 11), and the thickness and lower stroke of the *L* mintmark (Fig. 12) are often highlighted, but these are relatively minor to be individually documented or they occur concurrent to the other features already documented as a type/ variety.

Fig. 11. Variations in the 'R' of 'RUPEE'

Fig. 12. Variations in the mintmark of Lahore

Reverse Type 4: The transition to pure nickel coinage in May 1946 initiated a complete redesign of the reverse. The new reverse featured a 'stalking Indian tiger', designed by Patrick W. M. Brindley, who after A.P. Spencer's retirement in June 1945, became the Artist-Engraver for both Calcutta and Bombay mints. As per Pridmore, Spencer may have been involved in the preliminary designs (Pridmore, 1968: 171). The inclusion of the tiger was inspired by the reverse pattern rupee designed in 1901 by F.K. Wezel, the Artist-Engraver at Calcutta mint from 1893 to 1922 (Stevens & Weir 2012: nos. 7.5 and 7.6).

The design has a tiger in the centre, advancing left, with *INDIA* and the year mentioned below. This is surrounded by the value mentioned in English, Hindi and Persian. The previous half rupees of George VI did not have the value inscribed in Hindi. The new half rupees were only minted at Bombay in 1946 and 1947 (Fig. 13).

Fig. 13. 1946 half rupee with the new reverse design featuring the Indian tiger (from Fig. 4). The coin bears the diamond mintmark below the date, indicative of the Bombay mint

Sources of images

All photos are/ were from my personal collection, except Fig. 8 which is courtesy Joseph Kunnappally.

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Table A. Die pairings for the obverses and reverses of half rupees detailed above. This is applicable to only circulation strikes, not proofs or restrikes

Combination Matrix		Reverse Type (Across)				
		1(a)	1(b)	2	3	4
		Rounded Lotus	Rounded Lotus	Scalloped 6 arc Lotus	Six Petal Lotus	Indian Tiger
Obverse Type (Below)		Tiny Teeth or Wavy Border	Medium Teeth Border	Long Teeth Border	Long Teeth Border	Plain Border
A	Long Trefoils - High Relief	1938-39B; 1939C				
B	Short Trefoils - Large Head	1939B & 39C; 40B & 40C	1941B	1942B		
C	Short Trefoils - Smaller Head			1942-45B, 43-45L	1943-44B	
D	Short Trefoils - Plain Border					1946-47B

- The reeded/ milled edge was replaced by security edge from 1941
- Large 5 variants exist with Reverse Type 2 with smaller font size; variations in 3 also exist in Reverse Type 2
- The red font indicates die-parings that are considered mules

Table B. Mintage details and relative rarity of the die pairings

S&W#	Year	Mint	Metal	Obv	Rev	Mintmark	Edge	Variation/Comments	Mintage	Rarity
9.43	1938	B	Silver	A	I(a)	Dot	Reeded		2200000	S
9.47	1939	B	Silver	A	I(a)	Dot	Reeded		10096116	C
9.49	1939	B	Silver	B	I(a)	Dot	Reeded			R
9.44	1939	C	Silver	A	I(a)	None	Reeded		3300000	C
9.46	1939	C	Silver	B	I(a)	None	Reeded			S
9.52	1940	B	Qtr.Alloy	B	I(a)	Dot	Reeded		17811326	C
9.50	1940	C	Qtr.Alloy	B	I(a)	None	Reeded		32897913	C
9.53	1941	B	Qtr.Alloy	B	II	Dot	Reeded	Size of MM, thickness of inner-circle of lotus varies	26100304	C
9.52a	1941	C	Qtr.Alloy	B	II	None	Reeded	Ref: Deepak K. Patawari		R?
9.55	1942	B	Qtr.Alloy	B	II	Dot	Security		61600001	S
9.56	1942	B	Qtr.Alloy	C	II	Dot	Security	Letters with serifs		C
9.58	1943	B	Qtr.Alloy	C	III	Diamond	Security	Round "3"; Letters with Serifs	95400000	C
9.61	1943	L	Qtr.Alloy	C	II	"L" Raised	Security	Broken "3"; Letters without serifs	9000000	S
9.61a	1943	L	Qtr.Alloy	C	II	"L" Raised	Reeded	Broken "3"; Letters w/o serifs. Ref: Kias (GK# 1307)		R?
9.63	1944	B	Qtr.Alloy	C	II	Dot	Security	Letters without serifs	46200000	C
9.62	1944	B	Qtr.Alloy	C	III	Diamond	Security	Letters with serifs		S
9.64	1944	L	Qtr.Alloy	C	II	"L" Raised	Security	Letters without serifs	79100000	C
9.66	1945	B	Qtr.Alloy	C	II	Dot	Security	Normal "5"; Letters with serifs	32722000	C
9.66a	1945	B	Qtr.Alloy	C	II	Dot	Reeded	Normal "5"; Ref: Kias (GK#1315)		R?
9.67	1945	B	Qtr.Alloy	C	II	Dot	Security	Large "5"; Letters without serifs		R
9.68	1945	L	Qtr.Alloy	C	II	"L" Raised	Security	Normal "5"; Letters with serifs	79191939	C
9.68a	1945	L	Qtr.Alloy	C	II	"L" Raised	Reeded	Normal "5"; Ref: Kias (GK#1318)		R?
9.68b	1945	L	Qtr.Alloy	C	II	"L" Raised	Security	Large "5"; Letters without serifs		R
9.72	1946	B	Nickel	D	IV	Diamond	Reeded		47500000	C
9.73	1947	B	Nickel	D	IV	Diamond	Reeded		62724000	C

? Its existence is based on a single specimen; I have not physically examined any

ONS NEWS

Obituary: Esko Tikkanen (1941-2020)

Esko Tikkanen

We regret to inform you that Esko Tikkanen, our member in Finland for more than 20 years, passed away on the 25th of October, 2020 at the age of 79. Esko was an economist and his work took him and his family to many countries (among others Turkey, Bangladesh, Pakistan, India, Africa, China), where he worked on developing aid projects, mostly in the health sector. Outside his work, his passions were history, numismatics, reading, and living in the countryside. He was a very energetic and active person. He was a member of numerous associations: numismatic, charitable and countryside maintenance ones in his home area.

A member of the Finnish Numismatic Society for some 50 years, his interest in coins started when he was a small boy. His first interest was in Finnish coins but, some 20 years later, when working in Turkey, he became interested in Ottoman coins and it was there that he acquired his first silver *tanka* of the Sultans of Delhi. Thus did his interest in the coins of South Asia start and remained with him till the end, by which time he had formed a wide-ranging collection.

Such was his interest that, some 7 years ago, he decided he would write the first book on the coins and history of the Indian sub-continent to be published in Finland. The book would be based on his own collection. The book duly appeared in 2015, in English, with the title *Silver Coins of the Indian Subcontinent from 499 until 1947*. In the preface Esko stated that the main purpose of the book was to identify and register 795 coins from his collection, representing different dynasties and rulers of the Indian sub-continent covering a period of almost 1500 years. He was also pleased to acknowledge the help and inspiration he had received as a member of the ONS.

We extend our sincere condolences to his wife, Sol-Britt, his three children and five grandchildren, by all of whom he is deeply missed, and our thanks to his daughter, Joanna, for providing some of the above information and the photograph.

Stan Goron

AGM Annual Report 2020

Finance

As reported at the last meeting, we have moved our UK bank account to Metro Bank. This has involved transferring money from our previous two banks to this new account and convincing UK members to change their standing orders for subscriptions, from the old bank to the new. This has taken some time, but is now complete. My thanks go to our secretary Paramdip Khera, our past treasurer, Ben Bream, our current treasurer, Ashok Jain, and particularly our past UK secretary, Peter Smith, who all worked together to make this happen.

At the same time, at the last AGM, Ashok Jain was elected to the position of treasurer and during the last year has taken control of our finances and got them into good order, as you will see from his report. I am very pleased to say that our society is in a strong financial position.

I would like to thank Ashok for all his hard work in pulling all this together, and Terry Hayes for advising him in this matter.

Journal

Three more issues of JONS, nos. 236-238, have been published and distributed, with a fourth on its way to members and two more planned for this year. There have been a number of significant changes to the journal under the editorship of Karan Singh. Firstly, an effort has been made to make the journal acceptable to more people in academic positions by ensuring that all papers are peer reviewed, overseen by an editorial board. A second change is the decision to print the journal in colour from the time of our special edition (JONS 238) honouring our past editor, Stan Goron. This issue was spectacular not only in its looks but also the range of subjects covered. These were chosen to represent some of the subjects close to Stan's heart. Special thanks go to Joe Cribb for overseeing the production of this issue, but I would like to thank all of the contributing authors, not only those to this special issue but to all previous issues. The journal is the heart of our society and depends on our authors as well as our editor, Karan, who also deserves our thanks for all his hard work.

Digitisation of old issues of the Journal

Some years ago, the council agreed that we would run a project to upload past journals (more than 3 years old) to our website and make them available to all interested parties. Robert Bracey, with the help of Jan Lingen, initially made good progress with this, but difficulty was encountered when it was realised that some of the journals contained personal data about members and that this would be in breach of the data protection act. This personal data was redacted and some of the journals reloaded. However, Robert found himself too busy with other work to continue, and the whole project fell into abeyance. I am pleased to announce that Mohit Kapoor and Graham Byfield, two of our regional secretaries, have now started work on this matter again and have redone most of Robert's work and started processing more journals. They are still working on a test site but it is hoped that this will be made available to everyone during the coming year.

50th anniversary meeting

Due the pandemic, we had to postpone our 50th anniversary meeting planned for April this year. It is currently postponed until April 2021, but it seems likely that the pandemic will continue past this date and we will have to decide what to do about this in the near future. I would like to express my thanks to the anonymous donor who gave us £3,000 towards the overall cost of the meeting, and the other donor who gave £1,000 towards the cost of the speakers' dinner.

Zoom meetings

One small benefit of the pandemic is that it prompted us to start holding our meetings remotely, using Zoom. We have had two meeting so far this year, limited to members, and these have been very successful, with a number of people who have been unable to attend meetings in the past, able to join. We will continue with these even when the pandemic is over. Two more meetings are planned for this year, jointly with the Mumbai Coin Society, so these should reach a much wider audience.

Constitution

Stan Goron, with the help of Peter Smith, has been working on an updated version of our constitution. This is now ready for submission to the council for their consideration.

South Asia section
Secretary: Mohit Kapoor. 51 members.

No meetings

North America section
Secretary: Pankaj Tandon. 121 members.

As usual, we had our Annual Meeting in January 2020 in conjunction with the New York International Numismatic Convention. We also co-sponsored the annual Kochnev Memorial Seminar at Hofstra University in March.

UK and Ireland section
Regional Secretary: Paramdip Khera. 54 members.

The membership dropped when we switched bank accounts. Several people didn't renew their membership and didn't set up new standing orders despite being reminded several times.

Two meetings were held in London (7th June and 16th August via Zoom as discussed above). One council meeting was held in London on 7th March, 2020.

Europe section
Secretary: Patrick Pasmans. 230 members (we have received payment from 125 members for 2020 so far).

Due to Covid-19, the meetings in Leiden and Tübingen were cancelled. We had a promotional stand with the ONS at the Holland Coin Fair (The Hague, 7-8th February, 2020) and at the International Coin Fair in Utrecht (19th September, 2020).

This year the secretary has set up an online mail system (via Mailchimp) to inform European members more quickly about our activities. To date, 85 members have subscribed to receive these mailings.

Pakistan section
Regional Secretary: Haroon Tareen. 32 members.

Only one meeting was held (over dinner) at the Islamabad Club, prior to the Covid pandemic.

General section
Regional Secretary: Graham Byfield. 13 members.

No meetings held.

Worldwide membership now at c. 501 members
This is considerably down on the last reliable report that I have (about 200 fewer). Apart from the drop in the UK/Ireland section already explained above, the largest fall is in the South Asia section. However, there seems to have been a very large over-reporting of numbers from this section in the past (2017) and this has now been corrected. The present worldwide total appears to be as accurate as we can get it.

Paul Stevens

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