Significant of Primordial, Silver Plates in Gungeria Balaghat, Copper Hoards.

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"The written word is the greatest sacred documentation."
— Lailah Gifty Akita

According to Sir John Evans the Gungeria hoard is "the most impotent discovery of instruments of copper yet recorded in the old world” The locality lies much further south than the others. In 1870 no less than 424 hammered copper implements, made of practically pure metal, weighing collectively 829 pounds; (376.28 gram) and 102 thin silver plates, weighing 80½ tolas (938.93gram) were discovered here. “The copper implements were extremely varied in form, principally consisting of flat celts of many different shapes. There are also many long crowbar-like instruments with an expanded lunette-shaped chisel edge at the lower end, which may be designated as “bar celts” The silver objects are all lamina, about the thickness of ordinary paper, comprising two classes, namely, circular discs and "bulls' heads." “The surprisingly large number in the Gungeria hoard of very distinct implements, adaptable to a great variety of domestic, agricultural, or warlike purposes, affords conclusive evidence that at one time the manufacture of implements of pure copper was conducted of the association of the silver ornaments, but I see no reason to suppose that a race acquainted with the difficult metallurgical processes by which copper is extracted from its ores, should not be equally able to smelt silver too, perhaps from some of the highly argentiferous galenas which are known to occur at some
localities. Again, the high antiquity of metallic silver pieces is proved by their having been met with in very early deposits in Spain and the Mediterranean region.

**Introduction**

1. Uninscribed Punch-Marked coins represent the earliest coinage in India, but surprisingly, we know little about the origin and antiquity of the unstamped metallic currency in the sub-continent. According to Basham, a money economy existed in India from the days of the Buddha only, whereas in Mesopotamia the Babylonians and the Assyrians had invented much earlier the unstamped silver shekels which served as means of exchange\(^1\). However, the emergence of the Punch-Marked coins in India was not a sudden phenomenon; it was preceded by an unstamped metallic currency during the protohistoric times. Besides the recovery of the unstamped silver money from Mohenjodaro\(^2\), the *Rgveda* is replete with references, which allude to the prevalence of metallic currency long before the Punch-Marked coins came into existence. Since no archaeological evidence has yet been adduced to corroborate the literary references, the origin and antiquity of the unstamped metallic money in India, like so much of her early history, remains unfolded. In 1870 a hoard, consisting of 424 copper implements and 102 silver plates, was incidentally discovered at Gungeria in Madhya Pradesh\(^3\). While the copper implements have often attracted the attention of the scholars, the significance of silver plates appears to have escaped their attention.

**Discovery and conjectures**

2. The village Gungeria (approximately, 22°25'N-80°08'E), is situated in the old Mair estate in Balaghat district of Madhya Pradesh. The place lies about (58 km) to the north of Balaghat, and half way in between Mandla and Seoni. The famous hoard was found on the 21st January, 1870 by two cattle grazers in a piece of waste land about (91.43 m) south-west of the village. Nearly 20 years before the discovery, the site had been reclaimed through deforestation for cattle-grazing. The hoard was recovered only a few centimeters below the surface from a 91.5 cm square, and 122 cm deep pit\(^4\).

3. While the copper weighed altogether 414\(^1\)/2 seers (375.96 kg), the silver weighed 80\(^1\)/2 tolas\(^5\) (966 g) only. The copper pieces were found and arranged carefully; the longer pieces laid in alternate transverse layers, and the others in a regular order, one above another. The silver was found in a lump by the side of copper\(^6\). The arrangement of the copper and silver pieces suggests that the silver was presumably kept in a purse, which together with the copper, were buried in a wooden box\(^7\); both purse and box have decayed in due course. The hoard seems to represent the concealed treasure of an unknown merchant\(^8\).

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1) A.L. Basham, *Wonder that was India*, Fontana, 1967, p. 36.
4) Brown, *op. at.*., p. 146.
5) Ibid., p. 146.
6) Ibid., p. 146.
7) V.A. Smith, 'The Copper Age and Prehistoric Bronze implements of India', *Indian Antiquary*, 36, 1905, p. 233
4. As regards the purpose of the hoard, Cockburn had argued, "this curious find had originally been buried for some special object, probably in connection with some religious rite, as the silver ornaments, as was suggested by Dr. Oldham, resemble those used in decorating dedicated cattle. It has also been suggested that the silver objects were "human ornaments, not bovine"\(^9\). He noticed further, "the only instance of a silver ornament worn among savages at the present day is the possibly analogous thin silver plate, worn at the forehead by Mishmi women"\(^10\).

5. Smith, on the other hand, observed, "Both the 'bull's heads' and discs were evidently intended to be attached to larger bodies as ornaments, but it is difficult to guess their exact use. When they were exhibited in Kolkata, one suggestion was made that the 'bull's heads' were designed to serve as ornaments for cattle; similar plates of copper still sometimes being used by Hindus for adornment of dedicated bulls or cows. Another conjecture is that both 'bull's heads' and disks were personal ornaments"\(^11\).

6. In this regard, Gordon has significantly remarked, "The silver plates are not pierced for suspension or attachment, and it is possible that they were some form of ancient coinage, and the horns and a possible connection with cattle values, and the relationship elsewhere between pecus, ox and pecunia money, set up a train of thought which may well have no real justification"\(^12\).

7. From the foregoing it is clear that scholars are divided over the probable use of the silver plates under reference.

**Distribution and typology**

8. Besides the well-known Copper Hoard implements, viz. flat celts, and shouldered celts and bar celts, the hoard consists of a unique copper implement, namely a saw\(^13\). The tools are made of pure copper containing only 0.5 per cent lead, and not of bronze\(^14\). Whereas 22 copper and 12 silver pieces of this hoard are now preserved in the Indian Museum, Kolkata\(^15\), the remaining objects are housed in the British Museum, London\(^16\), the National Museum of Ireland, Dublin\(^17\), and in some other collections. This study of silver plates is mainly based on the material preserved in the Indian Museum, Kolkata and the British Museum, London.

9. The 12 silver plates in the Indian Museum, Kolkata are all laminate, about the thickness of ordinary paper. They broadly fall into two main types: A and B. The 8 type-A plates resemble the front of a cow's head showing a pair of downwardly curved ears, but no horns. Anderson guessed that the little horn cylinders were probably lost in separating the plates from one another\(^18\).

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10) Ibid., p. 136, n.
11) Smith, *op. cit.*, p. 239
12) Gordon, *op. cit.*, p. 142, pi. XXVII, C.
13) Smith, *op. cit.*, p. 233
14) Ibid., p. 233
15) Brown, *op. at.*, pp. 146-152.
17) Smith, *op. cit.*, p. 239, pi. V, 2.
10. They measure 7 to 12 cm in length and 12.6 to 15 cm in width across the ears\(^\text{19}\). The type-A plates are further divisible into two sub-types: A (i) and a (ii). While the type-A (i) plates show a little curvature over the 'cow's head' (Plate I, II & III), the type-A (ii) plates do not bear this feature (Plate I, II & III). Both the sub-varieties: A (i)\(^\text{20}\) and A (ii)\(^\text{21}\) are represented by 4 examples each. The 6 'cow's heads' of the sub-type A (i) (Plates IV & V) and A (ii) (Plates IV & V) are also preserved in the British Museum, London\(^\text{22}\). Both the sub-types are represented by 3 examples each. Their width varies from 11.8 to 13.6 cm. One specimen of the sub-type A (ii) now housed in the National Museum of Ireland was illustrated by Smith\(^\text{23}\).

11. The 4 type-B plates preserved in the Indian Museum, Kolkata are circular in shape, measuring 11.6 to 13.4 cm in diameter. They are also divisible into two sub-types: B (i) and B (ii). The discs of the sub-type B (i) are slightly convex and display a simple rope ornament round the edge. While the border of the solitary disc of the sub-type B (ii) is stamped with a line of small dots. The former sub-variety is represented by 3 examples\(^\text{24}\) (Plates II & III), whereas the latter is

Plate I. Silver plates of Gungeria hoard. (Courtesy Indian Museum Kolkata).

\(^{19}\) Brown, *op. at.*, p. 151.
\(^{22}\) Read, *op. at.*, p. 183, fig. 194 (British Museum Nos. 1873 11-3 33 * 34).
\(^{23}\) Smith, *op. at.*, p. 239, pi. V, 2.
Plate II. Silver plates of Gungeria hoard. (Courtesy Indian Museum Kolkata).

Plate III. Silver plates of Gungeria hoard. (Courtesy Indian Museum Kolkata).
Plate IV Silver plates of Gungeria hoard. (Courtesy British Museum).

Plate V Silver plates of Gungeria hoard. (Courtesy British Museum).
known by a single fragmentary piece measuring 8.5 cm in length and 7 cm in breadth\textsuperscript{25}. (Plate III), The 4 discs preserved in the British Museum, London are also slightly convex\textsuperscript{26}. Their diameter ranges between 12 and 13.6 cm. They broadly fall into two sub-types: B (i) and B (ii). While the 2 discs of the sub-type B (i) (Plate V) resemble the discs of the sub-type B (i) in the Indian Museum, the sub-type B (ii) represented by 2 specimens (Plate IV) display no ornamentation. If all the silver plates, now housed in different museums, are physically and chemically examined and accurately measured they may reveal some new typological and decorative features, and also yield valuable information about their possible use and the metal contents.

12. The above description of silver plates of the type-B (discs) has shown that their margins are embellished with at least two different motifs: (i) the rope or corded design; and (ii) the dotted line. Significantly, both the patterns also occur on the Ochre Coloured Pottery (hereafter, OCP),—an associated ware of the Copper Hoard culture in Northern India\textsuperscript{27}.

\begin{figure}
\centering
\includegraphics[width=\textwidth]{figure1.png}
\caption{Terracotta discs with corded design. (Courtesy Prof. K.K. Sinha).}
\end{figure}

\textsuperscript{25) Ibid., p. 151 (Indian Museum No. A 21550).}
\textsuperscript{26) Read, op. at., p. 183, fig. 194 (British Museum Nos. 1873. 11-3 31 & 32; 1894. 7-27 53 * 54); Smith, op. at, p. 239}
\textsuperscript{27) B.B. Lai, 'Further Copper Hoards from the Gangetic Basin and a Review of the Problem', Ancient India, 7, 1951, pp. 27 & 37, 'A Note on Excavations at Saipai', Puratattva, 5, 1971-72, pp. 46-49; Suraj Bhan, Excavations at Mitathal(1968) and Other Explorations in the Sutlej-Yamuna Divide, Kurukshetra, 1975, p. 9; R.C. Agrawala and Vijaya Kumar, 'Ganeshwara-Jodhpura Culture: New Traits in Indian Archaeology' in G.L. Possehl (ed.) Harappan Civilization, New Delhi, 1982, pp. 125-34.
13. These motifs have also been noticed on the plain terracotta discs recovered from the Painted Grey Ware phase at Hastinapur; and the Northern Black Polished Ware phase at Prahladpur, Rajghat, Sravasti etc. (Fig. 1). Here, it may be pointed out that in India circular coins with dotted margin have persisted through the ages. This shows that circular coins with dotted margin do not represent a foreign coin-type, but the survival of an old native design.

Economic development

14. Before considering the significance of silver plates from Gungeria, we shall briefly review the various stages that marked the economic development of man from the earliest times down the early historical period. They are as follows:

(i) In the palaeolithic age, man was in a hunting and food-gathering stage. Economically self-sufficient, as he was, there was practically no necessity for the exchange of commodities.

(ii) During the mesolithic period, he had begun manufacturing parallel-sided blades, pottery, beads and other art objects. The dearth of raw material and specialisation in crafts necessitated the exchange of raw material as well as finished products, which most probably arose from the practice of 'mutual propitiation of gifts'. This time honoured practice has remained in vogue till today.

(iii) The barter system did not fulfill the growing economic needs of man. Therefore, certain commodities of general value, e.g. animals, food-grains, ornaments, conch-shells and cowries, etc., were used as the standard media of exchange during the early neolithic epoch. They, however, differed according to social needs; for example, oxen were considered to be the standard value in Rome and Greece, whereas cows were the standard in India. The shells and cowries, supposed to be invested with magical powers, were used as talismen and ornaments, too. They have continued to serve as currency for transactions of smaller values until recently in India.

(iv) In due course, this system was also not found satisfactory. In case of cows or oxen, the variation in age, breed, size and quality created difference in values. Moreover, factors, like the coincidence of mutual requirements for disposable possessions of two parties; fixation of means for sub-division of certain goods, such as cows among several persons, hindered the smooth economic transactions. To remove these obstacles, stone currency was introduced during the late neolithic age. The so-called ring-stones, primarily used as mace-heads, weight for digging-sticks, and cult-objects of the Mother Goddess (Prthvi or Aditi) were only secondarily employed as currency for transactions of higher values.

(v) The stone currency was, however, not found convenient for daily use. It was not only heavy, but also breakable. To provide a portable and convenient standard of value different metals, namely copper, silver and gold were introduced as money during the early Copper-Bronze age. These metals in different forms, viz. rings, discs, bars, pieces, dust-bags, etc., served as the standard media of exchange. The rings and discs were primarily used as ornaments, cult-objects of the Mother Goddess and the Sun God (Surya); only secondarily were they employed to serve as currency for transactions of higher values. They were most probably manufactured by the smiths at the instance of the traders or their guilds for their convenience.

The introduction of metallic currency also proved inadequate to fulfill the growing monetary needs of the society; it created the problem of its measure. Consequently, the use of metallic rings, discs, bars, pieces and dust-bags of desired weight and value was contemplated in the late Copper-Bronze age.

Even this measure did not fully serve the purpose. Gupta has rightly observed, "In spite of the definiteness of the weight of ingots and sheets, there was no guarantee about the exactness of the weight and quality of the metal. To obviate these difficulties, stamping the metallic pieces with mark or device of a responsible authority was thought of as a sign of guarantee of accurate weight and right quality of metal. Thus the coin was born." The oldest Greek coins were stamped with figures of animals. This shows the relationship that originally existed between the animals and coins as units of value. The first coins were also struck by the smiths at the instance of the merchants or their guilds, but finally it became a royal prerogative.

**Significance of silver plates**

15. As noticed above, the birth of coins or stamped metallic currency was preceded by a stage represented by an unstamped metallic currency or money during the Copper-Bronze age. Is there any archaeological evidence pertaining to the prevalence of an unstamped metallic currency in India? To answer this question, scholars frequently refer to the Vedic literature, but they fail to produce any concrete proof. In the light of the following evidence we may, however, conclude that an unstamped metallic currency was definitely prevalent in India during the Copper-Bronze age: (i) The so-called copper 'rings' or 'bangles' reported from different protohistoric sites; (ii) the unstamped silver pieces discovered from a late level at Mohenjodaro; and (iii) the silver plates of Gungeria hoard.

16. The unstamped silver pieces from Mohenjodaro have already been dealt with by Kosambi, who rightly concluded that they represent the 'precursors' of silver Punch-Marked coins. I have discussed the importance of the protohistoric copper rings elsewhere, and suggested that besides serving variously as personal ornaments, cult-objects of the Mother Goddess and fixtures to attach copper shares (the so-called bar celts) to wooden ploughs, they were also used as unstamped metallic currency in the sub-continent. Here we shall examine the monetary significance of silver plates of Gungeria hoard in the light of the Vedic literature.

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31) While gold and copper 'ring money' in ancient Egypt were marked with their fixed stone weights (Cf. J.H. Breasted, *A History of Egypt*, 2nd Edition, pp. 79-98), the Indian protohistoric copper rings do not bear their weights. The study of Indian Copper Hoard objects including rings is beset with basic problem of the lack of proper documentation. There is an urgent need that all copper rings are accurately weighed and measured. Unless many copper rings are found to have similar weight, and rings of different weight-groups fall into a graded scheme, they cannot be labelled as 'ring money'.

32) P.L. Gupta, *Coins*, New Delhi, 1979, p. 5

33) Many, *op. cit.*, p. 13


35) Gupta, *op. at.*, p. 6.

36) Smith, *op. at.*, p. 238.

37) Kosambi, *op. at.*, pp. 395-400

38) Ibid.

39) Krishna Kumar, 'The Indian Copper Hoard Rings: Some Socio-Economic Considerations', to be published in *The Journal of the Economic and Social History of the Orient.*
17. It is well-known that the Rgvedic Aryans followed a mixed pastoral and agricultural economy in which cattle played a significant role. The cattle were their most valued possession, and a cow ('go') also constituted an original sacrificial fee ('dakshina'). Although the exchange of commodities on the principle of simple barter was in vogue, the cow had already come to be regarded as a unit of value. The cow thus assumed the nature of currency, and values were often reckoned in terms of cattle. This is amply testified by the fact that a Rgvedic sage offered an image of Indra for sale for ten cows. Yet, another sage refused to sell his image of Indra even for a hundred or ten thousand cows. In a Rgvedic legend Ajīgarta demanded a hundred cows in exchange of his son, Sunhasepa.

18. There are clear references in the Rgvedic hymns to trade in distant lands. The prayers and oblations offered for "gaining a hundred treasures" are presumably those of the Rgvedic merchants seeking divine aid for success in trade with alien tribes. This shows the existence of a quite extensive inland trade system, but no definite details are available. The increasing volume of trade activity, however, necessitated the introduction of various metals, viz, copper, silver and gold in different forms as money in place of the cow. In the Rgveda we often come across terms like kosa, hiranya-pinda, hiranya-mana, niska, rukma, rayi, etc. Although we are not aware of their real import, the word kosa perhaps signified a purse full of gold or silver pieces, whereas a hiranya-pinda was a lump of gold. The term manas as explained by Macdonell and Keith, denotes 'desirable objects'. Incidentally, it also reminds us of the Babylonian currency, variously called minas, maneh or mana. This testifies the cultural contact that existed between the Rgvedic Aryans and the Babylonians.

19. Originally, niska meant a gold necklace, but subsequently it assumed the nature of money. Macdonell and Keith have opined that niska came to be used as currency even during the Rgvedic age. When a Rgvedic sage celebrates the receipt of a hundred niska with a hundred steed, he could hardly be referring to a hundred necklaces. The use of niska as a means of exchange is also found in the later Vedic literature. The niskas were made of gold and silver both. According to Macdonell and Keith, the word rajala as an adjective with hiranya designates 'silver'.

40) R.C. Majumdar, (ed.) Vedic Age, Bombay, 1971, p. 399
41) Basham, op. at., p. 36.
42) Rgveda, IV.24.10.
43) Rgveda, VIII.1.5
44) Rgveda, 1.24, Aitreya Brahmana, VII.3
45) Rgveda, 1.56.2.
46) Rgveda, III. 18.3
48) Rgveda, VI.47.22-23, Many, op. cit., pp. 18.
49) A.A. Macdonell and A.A. Keith, Vedic Index of Names and Subjects, Delhi, 1967, II, p. 129; Rgveda, VIII.78.2.
50) Kosambi, op. at.
51) Vedic Index, I, p. 430; II, pp. 70, 73, 128 & 129
52) Rgveda, II, 33 10.
53) Vedic Index, I, pp. 454-55
54) Rgveda, 1.126.2.
55) Atharvaveda, XX. 127.3, Latayayana Srauta Sutra, IX.9.20; Satapatha Brahmana, XI.4.1, 1.8; Gopatha Brahmana, 1.3.6.
56) Taittiriya Samhita, X.4; Satapatha Brahmana, XII.4, 4.7, XIII.4.2.10; XIV.1.3 4 etc., Vedic Index, II, p. 505
ornaments rukma, dishes pdtra and coins (niska) made of silver are referred to in the Vedic literature. However, the term rajata-hiranyam, as explained by Gopal, stands for electrum—an alloy of gold and silver.

20. Altekar observed that there existed no silver currency among the Vedic Aryans. Nevertheless, as pointed out by Sircar, the mention of silver mska in the Pancavimsa Brdhmana and silver satamdna in the Kdtyyana-Sraula Sulra renders Altekar's statement unwarranted. Altekar himself referred to this fact in connection with the Vratyas, but explained it away by saying, "the Vratyas used to wear it as an ornament. Vratyas were outlandish people. We can therefore very well assume that there existed no silver currency among the Aryans of the Vedic period. As held rightly by Sircar, the Vratyas were certainly Indians, and it is impossible to prove that they were non-Aryans, although anything may be inferred. This clearly shows that the Vedic Aryans were not only acquainted with silver, but also used silver mska both as ornaments and currency.

21. The term rukma in the Rgveda denotes an ornament, probably of gold, usually worn on the breast. In several Rgvedic passages this word has also been used for the sun; this suggests that the rukma had the form of a disc. In the Brahmanas the term rukma designates a gold plate. The word rukma-pasa in the Satapatha Brdhmana signifies 'the cord' on which 'the gold plate is hung.' These references clearly show that rukma was a gold or silver disc primarily used as an ornament; and like niska it was only secondarily employed to serve as currency. It was also perhaps used as a sun symbol. Incidentally, it may be mentioned that the sun-discs of gold and bronze have been discovered at various sites in England, Ireland and Denmark.

22. According to Macdonell the name 'silver' does not occur in the Rgveda. But, Maity observed that silver coins called niska and rayi were in vogue during the Vedic age. He further noticed that a silver rayi is also referred to in the Rgveda.
23. Macdonell and Keith have, however, explained the term *rayi*, as wealth including men and cattle.\(^{77}\) Joshi, on the other hand, has pointed out that gold, silver, copper and bronze are mentioned in the *Rgveda*\(^{78}\). Although the literary evidence attesting to the knowledge of silver to the *Rgvedic* Aryans is quite meager, even then in the light of aforesaid discussions we may guess that in the *Rgveda* the term *niska* and *rukma* represent gold and silver ornaments which were used as currency, too.

24. The question arises: Is there any archaeological evidence relating to the *Rgvedic* ornaments and currency. According to my knowledge, no one has ever tried to answer this question. One of the major hurdles in the proper identification of the *Rgvedic* ornaments and currency is our ignorance of their real shape, size, and weight and metal contents. This is apparent from the divergent views expressed by the scholars. According to Pathak, a *niska* resembled a cowrie in shape.\(^{79}\) Jai Prakash has suggested that gold and silver *niskas* and *satamanas*, etc., were not coins, but money.\(^{80}\) He also observed that these terms represent gold and silver plates, usually of irregular shape and weight and were meant, mainly, to be stored as wealth.\(^{81}\) Some scholars consider that *niskas*, and possibly also *hiranya-pindas*, were medals or medallions of a uniform shape, size, and probably also, weight.\(^{82}\) Another hindrance in the proper identification of the *Rgvedic* ornaments and currency is the lack of adequate documentation of the chance archaeological finds—particularly the minor antiquities discovered in the past.

25. Thus in the present state of our knowledge it is not possible to identify accurately the silver plates from Gungeria with a particular *Rgvedic* ornament or currency. But, on the basis of the circumstantial evidence discussed here we may assume that the silver plates of type-A and type-B described above possibly represent the *Rgvedic* silver *niska* and *rukma*, respectively. Strictly speaking, like other *Rgvedic* units of value, the silver plates from Gungeria were not coins, but money or wealth, which were used both as ornaments and currency. The disc of type-B in addition probably served as symbol for sun-worship. Since these plates were originally kept in a purse, collectively they may also represent a *kosa* referred to in the *Rgveda*.

26. In this context it is also worth mentioning that the type-A silver plates from Gungeria bear some resemblance with the cow’s heads. This shows that the origin of silver plates of type-A ('cow's head') lies in the early *Rgvedic* practice of using cow ('go') as currency or a unit of value. It is quite natural that during the late *Rgvedic* age, when the Aryans first introduced silver currency to replace the traditional cow as a unit of value, they fashioned it after the cow's head. It also recalls the oldest Greek coins stamped with animal figures.\(^{83}\) Since catties were counted by their heads, each silver plate of type-A ('cow's head') was possibly equivalent to a cow ('go') in value.

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78) S.D Joshi, *History of Indian Metal Founding in Indian Sub-Continent since Ancient Times*, Bombay, 1973, p. 25
In the course of time it was probably realised that neither was it feasible to manufacture the silver plates of type-A ('cow's heads') in large numbers nor to handle them as currency. Therefore, the pair of drooping ears of the silver 'cow's heads' were subsequently dropped, and the remnants were converted into the plates of type-B ('discs'). The type-B silver plates ('discs') thus represent a simplified version of the type-A plates ('cow's heads'). Both types, however, remained in use simultaneously. The development of currency in the Rgvedic society is thus broadly divisible into the following three stages: (i) the cow ('go') as a unit of value; (ii) the silver 'cow's heads' as a currency; and (iii) the silver 'discs' as money.

Like the Rgvedic silver niska and rukma the silver plates from Gungeria were possibly used as ornaments and currency. Although they are not perforated, the type-A plates ('cow's heads') could have served as necklets either by piercing for suspension or attachment or by tying a cord around the muzzle and the drooping ears (Figure 2). The type-B plates ('discs') were intended either to be pierced or to be framed in a skin- or cloth-ribbon and hung on a cord ('rukma-pasa') (Figure 3). Secondarily, they could also serve as sun-discs or the cult-objects of Sun-worship. The manifold use of silver currency during the Rgvedic age need not surprise us. Until recently, the gold and silver coins were commonly used as necklaces in India. With the dearth of gold and silver coins, garlands of paper currency notes are now being used by bridegrooms in marriage processions. During the Deepawali festival, Goddess Sri or Lakshmi is worshipped by an offer of gold or silver coins. These modern practices testify the continuity of age-old traditions.

Figure. 2. Possible use of a silver cow's head as a necklace.

**Source of silver**

The archaeological evidence, thus, clearly shows that besides the Harappans, silver was also known to the Copper Hoard people, who used it both for ornament and currency. The Harappans,
living at Mohenjodaro and Harappa, employed silver for making vessels, ornaments\textsuperscript{84}, and also for currency at a later phase\textsuperscript{85}. A silver bracelet, alloyed with lead, was found along with copper arrow-heads in Baluchistan\textsuperscript{86}. The admixture of lead probably being ascribable to the fact that silver was commonly extracted from galena or lead sulphide ore. Silver frequently occurs in small quantities in conjunction with lead at a few places in Rajasthan, Himachal Pradesh, Bihar, Orissa, Madhya Pradesh and Tamilnadu\textsuperscript{87}. Gold mixed with a high percentage of silver is found in Karnataka and Tamilnadu\textsuperscript{88}. Therefore, we may conclude that during protohistoric times, Indians procured their silver mainly from the indigenous sources. Marshall\textsuperscript{89} and Rao\textsuperscript{90} have suggested Zawar (Rajasthan) and Kolar (Karnataka) mines as the possible source of the Harappan silver.

The metal of Gunderia silver is pure with traces of gold amounting to 0.37 per cent\textsuperscript{91}. Much of the gold for Mohenjodaro and Harappa contains substantial amount of silver, and the native alloy (‘electrum’, as it is commonly known) is found in gold fields of Kolar in Karnataka and Anantpur in Tamilnadu\textsuperscript{92}.

Figure. 3 Possible use of a silver disc as a necklace.

\textsuperscript{85} Kosambi, \textit{op. at.},
\textsuperscript{86} Smith, \textit{op. at.}, p. 240
\textsuperscript{87} Marshall, \textit{op. at.}, p. 675
\textsuperscript{88} Ibid., p. 675
\textsuperscript{89} Ibid., p. 675
\textsuperscript{91} Smith, \textit{op. cit.}, p. 233
\textsuperscript{92} Marshall, \textit{op. at.}, pp. 30-31.
Therefore, we may reasonably guess that the Copper Hoard people possibly procured their silver from the South Indian mines either directly or through the Harappans, who had already mastered the technique of extracting silver from gold.

**Authorship and date**

The aforesaid discussions have shown that the silver plates from Gungeria most probably represent silver ornaments and unstamped currency of the Rgvedic age. As these plates were found in association with Copper Hoard implements, it lends further support to the hypothesis that the Rgvedic Aryans were the authors of the so-called Copper Hoard-cum-OCP culture. Doubts have been cast on the extreme antiquity of the Gungeria hoard, because of the association of silver plates, but according to Brown the high antiquity of the silver pieces is proved by their having been met with in very early deposits in Spain and the Mediterranean region. On the strength of the European data, Smith has ascribed a time around 1800 or 2000 B.C. to the silver plates from Gungeria.

Although with our present state of knowledge, it is not possible to date precisely the Indian Copper Hoards and the associated material, the available T.L. dates for the various OCP sites in the Ganga valley have indicated a date-bracket of circa 2000-900 B.C. for the Copper Hoard-cum-OCP culture. In view of the fact that the Copper Hoard-cum-OCP Culture had spread from west to east in the Gahga valley, the Copper Hoards in the eastern zone are comparatively later than those belonging to the western zone. Therefore, the silver plates from Gungeria may be roughly assigned towards the middle of the second millennium B.C. As mentioned earlier, the silver plates of type A (the 'cow's heads') are typologically a little earlier than the plates of type B (the 'discs').

**Conclusions**

Finally, we may derive at the following conclusions. The antiquity of the unstamped metallic currency or money in India goes back to the Copper-Bronze age. The silver plates of Gungeria hoard most probably represent the unstamped currency of the Copper-Hoard/OCP people, who used them both as ornaments and money. The type-B plates ('discs') could have also served as the cult-objects of Sun-worship. The outline of the type-A plates ('cow's heads') suggests that their origin possible lies in the Rgvedic practice of using cow (‘go’) as a unit of value or currency. The silver plates of the type-A and B may be identified with the Rgvedic silver niska and rukma, respectively. The authorship of the Copper Hoard-cum-OCP culture together with silver plates of the Gungeria hoard may be attributed to the Rgvedic Aryans. The source of silver for the Copper Hoard/OCP people was indigenous. The silver of the Gungeria hoard probably came from South Indian mines. The silver plates from Gungeria may be broadly assigned towards the middle of the second millennium B.C.

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93) I have briefly dealt with the Rgvedic Aryan authorship of the Copper Hoard/OCP culture in my article awaiting publication in K.V Soundara Rajan Felicitation Volume.
94) Read, *op. cit.*, p. 183
95) Brown, *op. at.*, p. 11.
96) Smith, *op. at.*, p. 239
### APPENDIX


<table>
<thead>
<tr>
<th>Serial No.</th>
<th>Year</th>
<th>Date</th>
<th>Accession No.</th>
<th>Description</th>
<th>Plate No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1873</td>
<td>11-3</td>
<td>31</td>
<td>Disc, slightly convex, plain, 13.6 cm diameter.</td>
<td>IV</td>
</tr>
<tr>
<td>ii</td>
<td>1873</td>
<td>11-3</td>
<td>32</td>
<td>Disc, slightly convex, simple rope pattern round the edge, 12.4 cm diameter</td>
<td>IV</td>
</tr>
<tr>
<td>iii</td>
<td>1873</td>
<td>11-3</td>
<td>33</td>
<td>Bull's head plaque, little curvature over the head, 13.6 cm width.</td>
<td>IV</td>
</tr>
<tr>
<td>IV</td>
<td>1873</td>
<td>11-3</td>
<td>34</td>
<td>Bull's head plaque, no curvature over the head, 12.2 cm width.</td>
<td>IV</td>
</tr>
<tr>
<td>V</td>
<td>1894</td>
<td>7-27</td>
<td>53</td>
<td>Disc, slightly convex, plain, 13 cm diameter.</td>
<td>V</td>
</tr>
<tr>
<td>Vi</td>
<td>1894</td>
<td>7-27</td>
<td>54</td>
<td>Disc, slightly convex, plain, 12 cm diameter.</td>
<td>V</td>
</tr>
<tr>
<td>vii</td>
<td>1894</td>
<td>7-27</td>
<td>55</td>
<td>Bull's head plaque, little curvature over the head, damaged, 12.7 cm width.</td>
<td>V</td>
</tr>
<tr>
<td>viii</td>
<td>1894</td>
<td>7-27</td>
<td>56</td>
<td>Bull's head plaque, no curvature over the head, 13.3 cm width.</td>
<td>V</td>
</tr>
<tr>
<td>IX</td>
<td>1894</td>
<td>7-27</td>
<td>57</td>
<td>Bull's head plaque, little curvature over head, 11.8 cm width.</td>
<td>V</td>
</tr>
<tr>
<td>X</td>
<td>1894</td>
<td>7-27</td>
<td>58</td>
<td>Bull's head plaque, no curvature over the head, 12 cm width.</td>
<td>V</td>
</tr>
</tbody>
</table>