

Addenda to „The Copper Hoards of the Indian Subcontinent: Preliminaries for an Interpretation“¹

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The above-cited study on the copper hoards and the archaeometallurgy of the Subcontinent went to press in 1987, is dated 1989, and appeared in 1992 abroad. It builds on my book of 1985 regarding this same thematic area. Thus, I completed the catalogue of finds and of sites (particularly those of Orissa), mapped the findspots, including those of the culturally related Ochre Coloured Pottery, and those of copper ore deposits, listed for the first time the spectroscopic analyses of large numbers of hoard artefacts, and provided new interpretative models to explain the importance and origin of the hoards. The following notes are intended to complement my study and less so to justify it. While at first glance the foregoing publication seems largely unknown in India, careful scrutiny reveals several studies which it spawned (for example cf. K. Kumar 1992 and C. Gupta 1997). If one raises the question, whether the role of the hoards has become unfashionable as a topic and therefore is unrepresentatively treated in the literature, the answer is clearly „no“.

Two recent relevant publications subsequent to my study of 1989/1992 command our attention - first V. Tripathi's edited monograph on the *Archaeometallurgy in India* of 1998 deals with aspects of archaeometallurgy and related studies too numerous to mention. D.K. Chakrabarti and N. Lahiri's *Copper and its Alloys in Ancient India* of 1996 summarizes and comments critically on the archaeometallurgy of India and contains current data tables of quantitative analyses of metal artefacts. In reply to the latter authors, my typology of 1985 and 1992 is by no means too detailed: This instrument provides a more precise definition of the artefactual composition for the different regions. Needless to say, an artefactual type (especially simple ones) can occur in more than one geographical area. Important is these

authors' recognition of the close relation of the hoard finds from South Haryana/North Rajasthan with the artefacts of the so-called Ganeshwar culture in Rajasthan (p. 83) which are related morphologically. Excavated in the early 1980s, the finds from Ganeshwar and nearby associated sites unfortunately have never been properly documented and the appearance of the constituent finds is still hardly known. The four regional/typological groupings of hoard finds (1 North Rajasthan/South Haryana, 2 Doab, 3 Chota Nagpur, 4 Madhya Pradesh) remain viable (M. Lal 1983, 65-77). Worthy of discussion and research is Chakrabarti and Lahiri's possible connection (p. 86) of the eastern hoards with the iron age Asura horizon for chronological purposes. A further study attempts to integrate the eastern hoards into a more general archaeological cultural matrix (D.K. Chakrabarti 1993, 39, 60, 81, 112, 137, 172, 212) so that they are not mere antiquarian curiosities. With this welcome development the hoards do not comprise an obsolete topic in the archaeology of India, giving way to new sites/cultures made fashionable owing to their better documentation and later date of discovery.

Relatively recent studies on the hoards include those of S.P. Gupta (1989, 91-93) and M.K. Dhavalikar (1997, 251-260). The first seems to have been in press for several years before appearing, out of range of mid 1980s sources. The second renowned author was unaware of recent work and relies mainly on that of B.B. Lal of 1953. Dhavalikar's dating of 1700-1400 BC (p. 259) for the hoards is simply a rough estimate. Both ends of the chronology are particularly problematic (see below).

Following the issuing of the subject of this essay, other aspects of the metalwork of prehistoric India appeared in publications and require at least brief mention. These include several additions to the catalogue of finds including two striking new morphological types/variants: One is a humped bull in the style of the eastern hoards (that is, a zoomorph). The other is a variant of a type I anthropomorph (Yule 1985, 51-52 for this

¹ Man in Environment 26.2, 2001, 117-120 . This note supplements the author's book-length „The Copper Hoards of the Indian Subcontinent: Preliminaries for an Interpretation“ with appendices by Andreas Hauptmann and Michael J. Hughes, published in the Jahrbuch des Römisch-Germanischen Zentralmuseums Mainz, 36, 1989 [1992]. It updates the information about the Copper Hoards.

definition) said to come from Madarpur, which differs from the known ones in that one of the arms turns upward and the other downward.

A further development dealing with the hoards is their continued robbing, illegal export, and appearance on local and international art markets.

The published AAS analyses of the material reveal a different chemical composition for the different hoards corresponding with the composition of their ores. Thus the finds from the Ghangaria hoard and from the eastern hoards normally contain less arsenic than the others (usually beneath the measuring threshold). The data do not support D.P. Agrawal's belief about the arsenical alloying of hoard objects (D.P. Agrawal 2000, 226), owing to the insignificant amount of the arsenic, which in such concentration would have no practical effect on the hardness. The arsenic occurs naturally in the ore. Nor does the writer concur with him, in light of the location and date of the findspots of OCP (Ochre Coloured Pottery), that, „no definite archaeological assemblages have been associated...“ [with the hoards] (p. 226).

Whether or not it is correct to designate the copper hoards as a „culture“, as some do, is a moot question. Given the above-mentioned connection between the doab hoards and the OCP, perhaps for this group an option would be the designation „doab hoard-OCP culture“. This would put the definition on a broader basis than simply by virtue of a single industry. But this matter is more complex for the hoards from South Haryana-North Rajasthan, from eastern India, not to forget those from Madhya Pradesh, since associated finds there are of disputed and/or of uncertain origin, are few, or are missing which would complement the picture of these artefactual assemblages.

D.P. Sharma's and B. Singh's reanimation of the broken anthropomorph from Lothal as an „axe“ is only possible if one ignores the published cross section (Yule no. 22), size, surface decoration, and other aspects of the object (Sharma 1998, 293; Singh 1995, 171 fig. 31). This fragment is important since it raises the date of the hoards by means of its reported context to the beginning of the 2nd millennium BC. Singh further confuses matters by attributing a hoard anthropomorph to Mohenjo Daro (1995, 164 fig. 24.4).

The idea that the anthropomorphs were designed to be thrown is not new. This was suggested for the artefact itself (D.P. Agrawal 1982: 200), perhaps with the help of a handle (T.K. Das Gupta 1975, 75-81), or more recently by means of a cord (H. Falk 1994, 196). Another notion of this ilk is that the „bar celts“ and/or „bar celt-ingots“ are bludgeons. To such suggestions, the old adage comes to mind, „form follows function“. One can use any stout object to strike or throw, but ancients and moderns alike usually optimize the form to suit a special use, for example to overtrump particular kinds of weapons used by opponents. While the author can

only hypothesize or propose models about the ergological function of the different hoards or their constituent artefactual types, most types do not appear to be functional tools because, as previously stated, they are unsuitable for a variety of reasons (interpretation confirmed partially by M.P. Joshi 1995-96, 26-27).

Random thoughts: D.K. Chakrabarti suggests that for whatever reason, hoards have come to light in the immediate vicinity to important routes (personal communication). This is true, for example of the Ghangaria hoard, as noted previously by D.H. Gordon. The problem of manufacture remains obscure owing to dearth of sources. Clearly the hoards were manufactured by settled people and not by hunter-gatherers.

Lastly, in my main studies on the hoards of 1985 and 1992 I avoided the issue of alleged Indo-Aryan authorship, in an attempt to deconstruct or simply ignore it. This theory arose at a time when only the doab hoards, urban, as well as post urban Harappa Cultures in northern India were known. It is based on the assumption of the date of the vedas and that of the hoards *during* the post urban Harappa Culture. But if the earliest veda, the Rigveda, is at home in Panjab (G. Erdosy 1995, 85), then the hoards hardly reflect early Indo-Aryan origins there in terms of their geographical distribution since they occur in different areas and not first in Punjab/Haryana. Nor does the unclear chronology of the hoards establish this attribution, despite unfounded allusions to the „late phases of the Copper Hoard Culture“ (Parpola 1995, 362). Linking the hoards with linguistic or radially distributed tribal groups has no anchoring points - it is just a theory coinciding with a time slot and one with little more than this to recommend it. The fewness and poor quality of the archaeological contexts containing hoards and the resultant chronological aporie guarantees impunity for the launch of virtually any theory as to origin. It is perhaps for this reason that in a recent essay regarding the end of Harappan urbanism that one author sovereignly ignores the existence of the hoards in second millennium North India (Allchin 1995, 26-40).

The provenances of the following addenda to the corpus best can be described as „said to come from...“ and can neither be verified from the finders nor otherwise documented.

Eastern Chota Nagpur and Periphery

Axe-ingots II (x6), zoomorphic „ingot“ in the shape of a zebu.- P.S. Khajraveri, Dist. Midnapur, W.B. (c. 22°26'N; c. 87°20'E).- found by local villages while digging for *murum*. In all, 7 artefacts were acquired by the Calcutta Circle of the ASI.- Anon. 1990-91 [1995], pl. 43a-d ; 44a-c, p. 92

Ganges Yamuna Doab and Periphery

Anthropomorph I.- Madapur, Dist. Moradabad, U.P. (c. 28°50'N; c. 78°47'E).- On exhibition in the National Museum Delhi

Anthropomorph I, harpoon II, sword II.- „North India“.- P. Yule 1998, 23-31

Anthropomorph I?.- „Basel“.- M.P. Joshi 1995-96, 25

Anthropomorphs I (x2).- Nurpur, Dist. Bijnor, U.P. (29°09'N; 78°25'E).- M. Sharma/D.P. Sharma 1998, pl. 65 and 66, p. 288 citing D.P. Sharma 1991, 8. Pl. 66 in the 1998 article is incorrectly identified as from Dist. Manbhum, Bi. (=Yule no. 539)

Anthropomorph of uncertain type.- Haldwani, Dist. Nainital, U.P. (29°21'N; 79°51'E).- Amar Ujala 8 May 1986, 3; D.P. Agrawal 2000, 107

Anthropomorph of uncertain type.- „Gangetic valley“.- D.P. Agrawal 2000, 108 misquoting J.P. Joshi 1990, 14

„Anthropomorph“ of uncertain type.- Chokhopani, Dist. Mustang, Nepal (c. 28°55'N; c. 83°55'E).- M.P. Joshi 1995-96, 25

Axes.- Madnapur, Dist. Shahjahanpur, U.P. (27°52'N; 79°41'E).- Hoard of 9 „shouldered axes“ and a „flat celt“.- A. Ghosh 1989, 263 (citing S. Asthana); P. Yule 1985, 110

Axe, misc.- Mohamadabad near Sitapur, Dist. Sitapur, U.P. (c. 27°34'N; c. 80°41'E).- D.P. Sharma 1998, 292, pl. 68 (cf. Yule no. 798 „Katmandu valley“)

Axe misc.- Kanpur-Unnao border area, U.P.- D.P. Sharma 1998, 292, pl. 69 (cf. Yule no. 798 „Katmandu valley“)

Axe misc.- Sidhauri, Dist. Sitapur, U.P. (27°17'N; 80°50'E).- The GeoNET names server (www.nima.mil) names this place twice; thus its position is unclear. - D.P. Sharma 1998, 292 citing S.B./S.D. Singh 1972, no page cited.- (comparable to Yule no. 798 „Katmandu valley“?)

Madhya Pradesh

Balance II, Axe VII.- Temani, Dist. Chhindwada,

M.P. (19°50'N; 73°51'E).- Reportedly found by Shyamrao Deshmukh together in 1989 while ploughing in a field at this locality.- C. Gupta 1997, 221 fig. 4b; 222 fig. 5; 223

Attribution unclear to a Hoard Group

Anthropomorphs of uncertain type (x8).- Bankot, tehsil Berinag, Dist Pithoragarh, U.P. (29°45'N; 79°52'E).- In March 1989 eight anthropomorphs were uncovered while digging a stone quarry close to the Bankot Inter College. Details of the find are unknown. Six hoard objects reportedly are kept with Shri Chanchal Singh Bankoti at Bankot, and one is with the Govind Ballabh Pant Government Museum in Almora. Weight range: 2.15 to 3.45 kg (D.P. Agrawal 2000, 108). Agrawal describes them as, „lugged type anthropomorphs“. Joshi, however: „...cast in a tray-like single, open mould as is evident from the flat surface on one face and which in some examples has wrinkled skin...“ The description of the pieces suggests that they actually belong to the miscellaneous type of anthropomorph such as that from the Dist. Manbhum (cf. Yule no. 539) of the eastern hoards, (M.P. Joshi 1995-96, 25).- M.P. Joshi 1993-4 [1994] 87; D.P. Agrawal 1999, 195; D.P. Agrawal/J.S. Kharakawal 1998, 123-130, pl. 4.1

Hoard of Artefacts of the Indus Culture

129 objects presumably of copper alloy.- Excavated from Surkotada, Dist. Kutch, Guj. (23°35'N; 70°00'E).- J.P. Joshi 1990, 266, pl. 46

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Anon. Copper Hoard, Khajraveri, District Midnapur.- IAR 1990-91 [1995] pl. 43a-d ; pl. 44a-c, p. 92

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