

The Presentation of Gold in the Reliefs of the Eastern Staircase of the Apadana in Persepolis

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Delegations of the various satrapies of the Achaemenid Empire are depicted bringing presents to the king on the reliefs of the Apadana in the palace of Persepolis. Among these presents are two which most likely contained gold. One of the members of the Indian delegation carries a pole over his shoulders from which two baskets are hanging filled with two bags each. From the degree of bending of the pole and the size of the bags it can be concluded that the latter contained a granular material with a bulk density of about 6.25 kg/liters. Because of this weight, the material can only have been fine-grained gold, probably the gold “stolen” by the Indians from the Giant Ants to the north of India as reported by Herodotus.

The Ethiopian delegation consists of three young boys before the age of puberty. The middle one carries a cylindrical vessel with a volume of about 1.1 liters, equivalent to approximately one choinix, an Attic measure for e.g. grain. It is suggested here that the vessel must have contained something very valuable, most probably granular gold. The choinix would then represent half of the quantity presented by Ethiopian tribes to the king every three years according to Herodotus

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Introduction

Ever since their excavation in the 1930's the reliefs of the eastern staircase of the Apadana in Persepolis have intrigued scholars not only because of their artistic merit but also as a picture book of the various peoples of the Achaemenid Empire. The reliefs depict delegations from the various satrapies bringing presents to the king on the occasion of the celebration of the Persian New Year. Physiognomy and attire of the men are rendered in such remarkable detail that their tribal affiliations can largely be identified. It is the purpose of this paper to draw attention to two aspects of the reliefs which appear to have escaped notice so far.

The Indian delegation

The first aspect of this paper deals with the Indian delegation. There is general consensus that delegation XVIII represents Indians hailing from the satrapy Hindus which is largely equivalent to modern-day Pakistan west of the Indus (Schmidt

1953; Walser 1961). In this five-men delegation the second man following the Median nobleman leading the group is of particular note (Fig. 1). Over his shoulder he carries a pole as a yoke with a basket hanging from either end, each basket containing two woven bags closed with string at the top. Whereas some authors suspected that these bags contained gold (Schmidt 1953: 154), others maintained that the strict protocol prevailing at oriental courts would not have allowed the presentation of unwrought gold to a king (Walser 1961: 95). For presentation the metal would have had to be made into ornaments, vessels or jewellery objects.

The bags therefore rather would have contained gemstones, pearls or spices. Against this could be held that gemstones or pearls would certainly have been presented in “unpacked” form for the recipient to admire, and for spices the quantity would have been rather meagre. Ground rhinoceros horn, a potentially valuable light-weight material, had probably not yet been introduced at the time as a pseudo-aphrodisiac. Additionally, in view of the great care which the reliefs have been executed with the degree of bending of the pole must have been

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Fig.1: The Indian gold bearer from the eastern staircase of the Apadana in Persepolis (electronically enhanced photo by Richard Stone).

rather notable. It would be too much for something as light as spices.

That unwrought gold could indeed be presented in antiquity to kings and other dignitaries is illustrated by numerous Egyptian murals like those in the tomb of vice-king Huy of Nubia (Fig. 2) from the time of Tutenchamun (ca. 1350 BC). Three of the presents shown can be clearly identified as gold from the accompanying hieroglyph nub. These are 1) gold nuggets, 2) bags filled with gold dust probably

concentrated from river sands, representing *nub-en-mu*, i.e. “gold of the water” (Störk and Gundlach 1975:736), and 3) gold rings most probably cast from refined gold from quartz veins, the *nub-en-set* or “gold of the mountain” (Störk and Gundlach 1975: 739). It was known to the ancient Egyptians that the ‘gold of the water’ was purer than the ‘gold of the mountains’. The former thus must have been of particular value and consequently could also be presented in the raw form, albeit in bags.



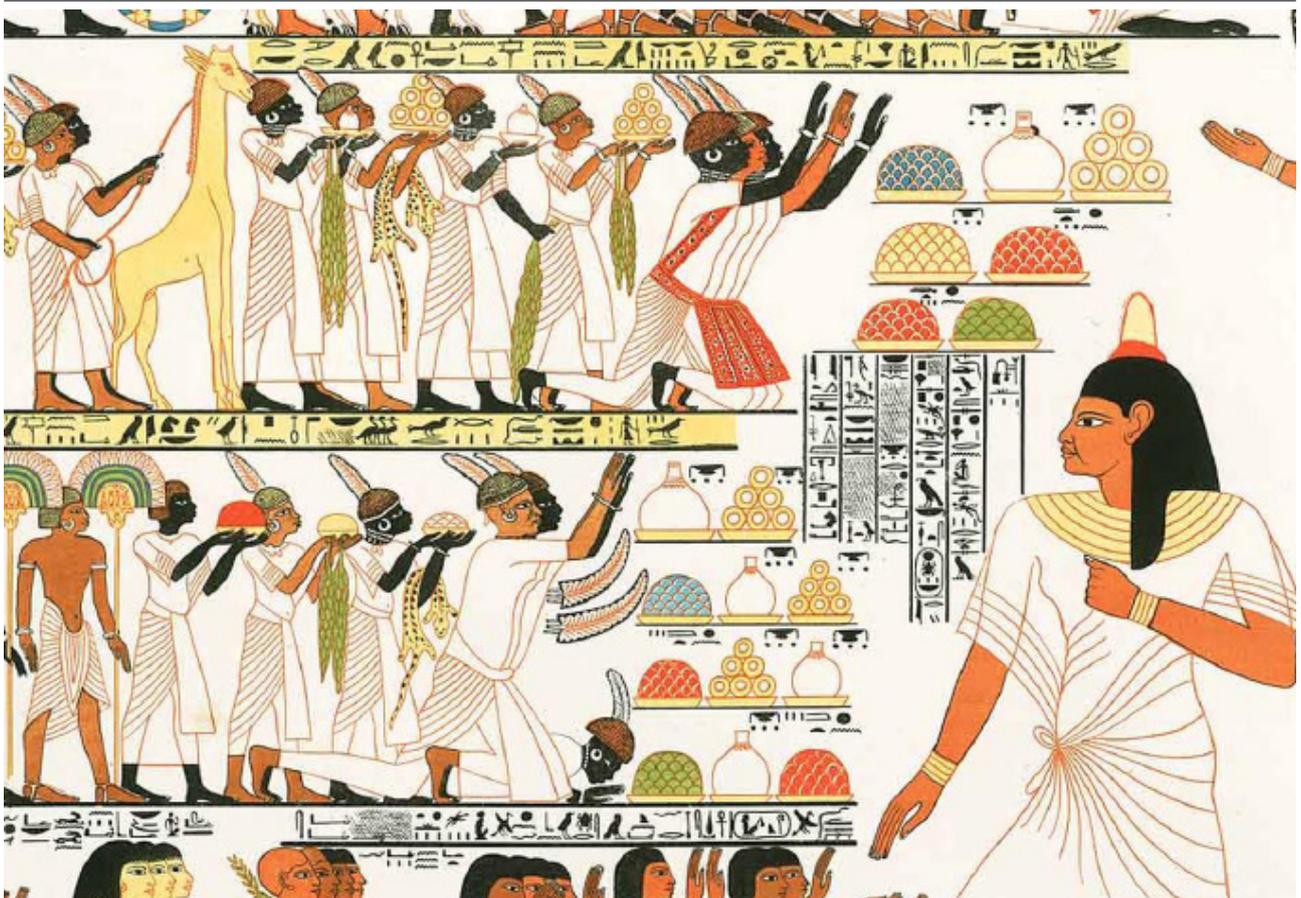


Fig. 2: Gold in the form of nuggets, dust (in bags) and cast rings, from murals in the grave of vice-king Huy (18. dynasty)(After: Lepsius 1845, *Abt. III, Bd. IV, Pl. 117.*

The artists creating the reliefs of the eastern staircase in Persepolis went to work with such diligence that one must suspect that they had prepared detailed sketches of actual participants of the procession onto the stone panels (e.g. Walser 1980: T. 124). With this in mind, it is possible to make certain assumptions. If we assume a height of the Indian of about 1.70 m then the pole he carries is 1 m long and has a diameter of 1.5 – 2.0 cm. The ends of the pole are deflected downwards by about 6 cm against the horizontal (Fig. 1). From these data the weight of the baskets can be calculated with the aid of a structural load programme. Although it is not known which type of wood was used for the pole one can assume that it was a hardwood probably similar to beech. Consequently, the physical properties of this wood were used in the calculation.

To deflect such a 1.8 cm thick pole by 6 cm each of the baskets must weighed about 13.5 kg. If about

1 kg is deducted for the weight of the ropes, the basket and the two bags themselves then the material in each bag weighed about 6.25 kg. Because of the use of bags, their contents must have been fine-grained or dust-like. And as the volume of each bag can be calculated as about 1 litre, this material had a bulk density of 6.25 kg/litre. This clearly illustrates that the bags must indeed have contained gold dust as no other granular material available to man in the 5th century B.C. could have had such a high bulk density. The Indian shown thus carried about 25 kg of gold over his shoulders.

The Indian delegation shown on the northern staircase of the Apadana additionally includes a man who carries in each of his outstretched hands a basket with two bags similar to the ones carried by the Indian described from the eastern staircase. Even for a modern muscular athlete it would be extremely difficult to carry a weight of 12.5 kg



with an outstretched arm for any extended period of time. The Indian with the baskets in his hands on the northern staircase thus was included most likely later as a ‘filler motif’ by an artist who had not seen the original procession.

The bulk density reconstructed for the Indian gold dust could be confirmed with the aid of a set of seven small cylindrical bronze containers which were excavated by Petri *et. al* (1896: 67 and pl.LXXIX) at Naqada in Upper Egypt (Fig. 3). Because of the minute size of the smallest of these vessels, the authors suspected that they were used for measuring a highly valuable fine-grained material like gold dust. When they determined the quantities of gold dust that could be filled into these vessels in piled or struck condition they observed that the piled quantity of gold dust in a certain vessel was about double that in the next-smaller vessel, a clear indication of a weighing system with binary divisions. This furthermore supported their initial contention that the set was used for measuring gold dust. Using the dimensions in Fig. 3 and the respective gold quantities given by F Petrie *et. al* (1896: 67) the bulk density of the gold dust used by them may be calculated as about 6.5 kg/litre which is in close agreement with the value found for the Indian gold above.

It can thus be concluded that the Indian delegation did present gold dust to the king. In his ‘tribute list’ of the Achaemenid Empire, Herodotus remarked III 102 that the majority of the 360 talents of gold delivered by the Indian satrapy were derived from northern India where it had been ‘stolen’ from the gold-digging ants. As this gold received such a prominent position among the presents brought before the king it is highly likely that the gold of the Indian delegation was indeed something special, namely the gold ‘stolen’ from these mysterious ants. And did the king not possess such dangerous animals in his animal collection (Herodotus III 102)? The story of the huge ants is a typical scare story by which gold diggers from the desert highlands of western Tibet tried to keep away competitors. The respective gold deposits had initially been discovered around the burrows of marmots and the diggers tried to keep them as secret as possible. Alexander the Great’s admiral Nearchos

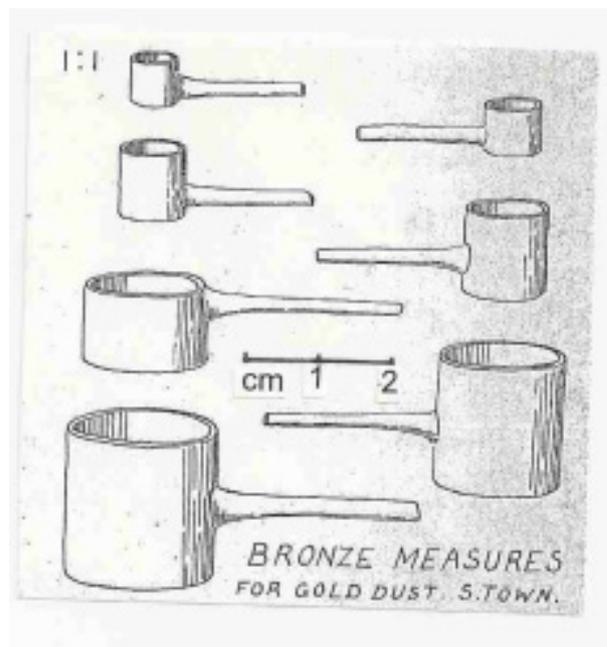


Fig. 3: Set of Egyptian bronze vessels for measuring gold (After: Flinders *et al* 1896: 67, scale added by the author).

(Strabo’s *Geographica* XV 1,44) reported that the skins of these ants which were sold to the Greek soldiers as souvenirs were like those of panthers. From this note, the marmot species in question can be identified as the Golden Marmot (*Marmota caudata ssp. aurea*). These marmots grow up to 60 cm length (without the tail) and are thus – as stated by Herodotus – “larger than foxes, but smaller than dogs”. In the story they were transformed into large ants, animals which for the ancient Persians were creations of the devil Ahriman coming straight out of hell.

Of the Ethiopian Delegation

The second aspect of this paper deals with the Ethiopian delegation (no. XXIII) shown at the bottom end of the eastern staircase (Fig. 4). The Ethiopians were not subject to the Persian kings but Herodotus III, 96 reports that since the times of king Kambyses “these two Ethiopian tribes sent – and they do it still today – every three years a present of two choinix of unwrought gold, two hundred trunks of ebony wood, five Ethiopian boys and twenty large elephant tusks”. The choinix was an Attic measure equivalent to the volume of grain





Fig. 4: The Ethiopian delegation on the eastern staircase of the Apadana in Persepolis (electronically enhanced photo by Richard Stone).

necessary to feed one man for one day. It was 1/48 of a medimnon (52.5 litres) and thus measured about 1.1 litres.

The relief in question shows three small males ushered by a Median nobleman, the last one leading an antelope on a leash. All three may be identified as Africans because of their curly hair. However, their lips are not clearly negroid and they thus more likely could belong to dark-skinned hamitic tribes of the Sudan and Ethiopia. They are furthermore young boys before the age of puberty because they do not yet have beards. In this, they differ from all other persons depicted in Persepolis except for a 'normal-sized' servant carrying towels and an oil flask in the palace of Darius (Walser 1980: T. 108). The beardless state of this man may be ascribed to him being a eunuch.

How can one relate this delegation to Herodotus' report? As in all other delegations, the first member does not carry anything nor does he lead an animal.

However, it is quite conceivable that he himself is part of the present, standing for the 'five boys' mentioned by Herodotus. The last one carries a large curved object, clearly an elephant tusk, representing the 'twenty large elephant tusks'. The animal led by him on the leash is usually interpreted as a young giraffe although it is sometimes identified as an okapi (Hampe 2001: 209). The animal most probably was something unique for the king's animal collection. The two hundred ebony trunks are not represented on the reliefs because of space limitations and because they were not 'showy' enough. So the only present not immediately discernible is the gold.

However, in this context the middle boy who carries in his hand a cylindrical container with a slightly domed lid is of particular interest. The volume of this container can be reconstructed in proportion to the height of the boy of about 1.35 m. The container then would have an inner volume of about 1.1 litres corresponding to a choinix. It is thus conceivable that the boy carried one choinix of gold



or half of the quantity presented to the king every three years by the Ethiopian tribes. With the 6.5 kg/litre bulk density of gold dust given the choinix would have weighed about 7 kg and could well have been carried by the boy in the position shown.

Conclusions

It is shown by circumstantial evidence that the presentation of gold to king Darius is depicted in two instances on the Persepolis reliefs. The first case is that of the Indian delegation. One of its members carries over his shoulder a pole from which two baskets, each weighing about 13.5 kg, are hanging. From the degree of bending of the pole it can be concluded that the bags in the two baskets must have contained a heavy granular material. With a reconstructed bulk density of about 6.25 kg/litre this can only have been gold. As the respective gold bearer is depicted in the reliefs, the gold must have been something rather special, i.e. most probably the gold "stolen from the ants" in desert areas of the mountain ranges to the north of India.

One of the members of the Ethiopian delegation carries in his hand a cylindrical container measuring about one choinix (ca. 1.1 l) which most probably also contained gold. This vessel thus apparently contained half of the quantity presented by the Ethiopians to the king every three years. The other presents of the Ethiopian delegation mentioned by Herodotus, viz. boys and elephant tusks, are also shown. This agreement between the "tribute list" of Herodotus and the Persepolis reliefs shows clearly that during his travels in Mesopotamia Herodotus had indeed acquired quite detailed first-hand information down to the official tribute list.



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