

NOSTOI

INDIGENOUS CULTURE, MIGRATION +
INTEGRATION IN THE AEGEAN ISLANDS +
WESTERN ANATOLIA DURING THE LATE BRONZE +
EARLY IRON AGES

EDITED BY

Nicholas Chr. Stampolidis – Çiğdem Maner – Konstantinos Kopanias



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**Profit Oriented Traders in the Aegean and
Anatolia in the 2nd Millennium BC:**

PART 4

CHAPTER 31

**Inter-Cultural Concepts of Measurement
and Value**

ANNA MICHAILIDOU

Abstract

One implication of this passage is that commercial motives made people unafraid of one another. Textual and material evidence indicates that there were no cultural borders for traders who, along with their merchandise, transferred expertise in technologies, new ideas, foreign languages, and even systems of writing. Leaving aside current trends and theories regarding trade activities in general, the present paper will focus only on the so-called profit-oriented trade, since it specifically required media of measurement and means of payment that would be commonly acceptable. It seems that merchants following well-tried long distance maritime and land routes, and engaged in specifically targeted ventures during the Middle and Late Bronze Age periods, were capable of handling equivalences in metric systems and exchange values within the pre-coinage environment of the 2nd millennium Eastern Mediterranean.

Profit-Oriented Traders

For there was no mercantile traffic and the people did not mingle with one another without fear, either on land or by sea, and they each tilled their own land only enough to obtain a livelihood from it, having no surplus of wealth...

THUCYDIDES, A.II. 2

The Art of Exchange

In the above passage, Thucydides emphasizes that the mercantile traffic makes people *unafraid* of one another and he underlines the significance of the accumulation of capital (the surplus of wealth).¹

According to Aristotle (*Politics* I,iii,15), first came the art of exchange, the “μεταβλητική τέχνη”, a process extending to all goods and arising from what is natural, that is from the circumstance whereby some have too little, others too much. We gain only iconographic evidence for the barter exchange from Old Kingdom Egyptian tomb paintings, the so-called ‘market scenes’² where the exchange of the surplus of the producers in open-air local markets is lively pictured: men, sometimes also women, are depicted along with mainly staple produce, accompanied by texts comprising the conversation between them. In general, food is exchanged for food or food is given to artisans for their products. There is no functional distinction between the purchaser and the seller, both are interested in offering what they have got: “*Hand over what you have brought for very sweet sycamore figs,*” says a man seated by the basket of figs to a woman with a child.³ All persons in the Egyptian ‘market scenes’ are engaged in mutual bargaining around baskets full of fruits, herbs and fish, fish in particular being depicted both in dried and in fresh condition, in one occasion being offered in exchange for a pot of beer and a loaf of bread.⁴ Dried and fresh fish are also depicted in New Kingdom scenes, where sailors are offering sacks of grain in return for fish or even beer.⁵ I have suggested the possibility that a similar ‘market scene’ may be reflected in the case of the harbour scene depicted on a small fragment of a wall painting coming from the

1 Gomme 1971 (1945), 92.

2 Hodjash and Berlev 1980; Michailidou 2008, fig. IV.4.

3 James 2003 (1984), 256–7; Michailidou 2008, 205–6.

4 As in the causeway of King Unas at Saqqara, Labrousse, and Moussa 2002, Fig. 36; Michailidou 2008, fig. V.67.

5 Cf. Michailidou 2008, fig. V.5.

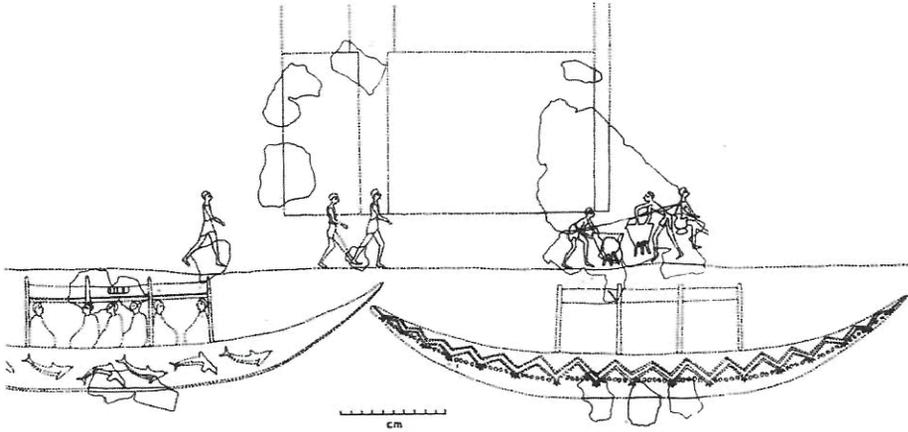


FIG. 1 Detail of the reconstruction of a harbour scene depicted on a wall painting from Ayia Irini on the island of Kea (after Morgan 1990, fig. 2).

settlement of Ayia Irini on the Cycladic island of Kea (FIG. 1), where near the ships some men on shore busy themselves with two cauldrons. The current opinion is that what is meant is a ritual activity but I prefer to see here the preparation of food to be offered to sailors or maritime traders.⁶ Whatever the case, river banks in Egypt and Mesopotamia as well as harbour sites on islands or mainland shores, were the proper places for exchange activities.⁷

The Quantification of Goods Changing Hands

Normally, transactions in periodic markets need not depend on quantification. Things were there for anyone to see and, since the bargain was a face to face activity, each one would decide how much he would give in return. Some of the mere consumable goods, fish, for example, may be counted in items or measured by the capacity of the containers; furthermore, there are cases where fish is measured by weight, as is evidenced by some stone balance weights used in New Kingdom Egypt as counter weights for the portions of dried fish distributed either to the labourers in the mines in the Sinai peninsula or to the artisans in the Deir el-Medina village.⁸

So, what about *codified metric systems*, whether of weight or capacity? Some of the dialogues in the Egyptian market scenes point to an early use of measures

6 Michailidou 2008, 220.

7 As also indicated by the words used for market places in Egypt and the Near East: Michailidou 2008, 220–1.

8 Michailidou 2001, 61–5 with references.

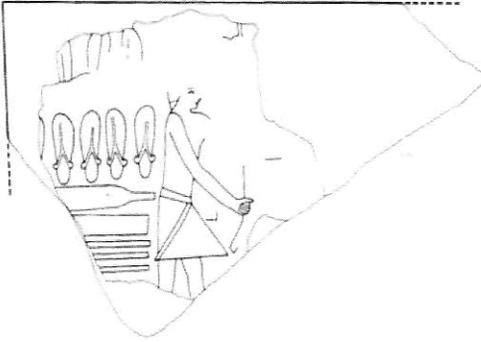


FIG. 2 A slab from the causeway of King Unas, Egypt (after Labrousse and Moussa 2002, fig. 40).

of capacity. For instance, in the following dialogue: “*Here is a very beautiful cane, my friend! A measure of wheat for it,*” to which the customer replies: “*How I like its head.*”⁹ There are cases where a measure of barley is offered for a pair of sandals, or a measure of wheat is given for a pair of dancing sticks.¹⁰ This leads us to the next, most important question of how the value of merchandise was measured and whether such measures represented the exchange value of the items exhibited in contemporary markets. There is a unique scene, in the Tomb of the Two Brothers at Saqqara, where the abstract value of cloth offered is expressed in six codified pieces of metal, named *shat*, as we read: “*x cubits of cloth in exchange for 6 shat.*” The *shat*, in ancient Egypt, was a piece of metal codified by weight (7.6 gr). Thus, the exchange value of the trade item here is already expressed in metal value.¹¹

The Profit-Oriented Trade

A definition regarding the two values of every item, that is, its utility value and its exchange value, is clearly expressed by Aristotle (*Politics* I, iii, 11) as follows:

Take for example a shoe – there is its wear as a shoe and there is its use as an article of exchange; for both are ways of using a shoe...

Notably, a pair of sandals is one of the very few craft items offered in the Egyptian market scenes. Sandal makers would be the sellers of their produce, as on an Old Kingdom slab, where a series of sandals is depicted on sale behind their maker

9 Lauer 1976, 50.

10 Hodjash and Berley 1980, 49.

11 The bargain would be completed by handing over in exchange another commodity, not stated here, which, however, should be equivalent to the value of these six metal *shat* (James 1984, 258).

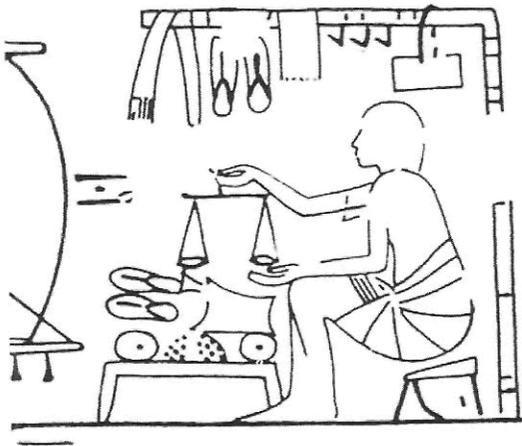


FIG. 3 Two details of a scene in the wall painting from the New Kingdom Tomb of Kenamun (after Kemp 1989, fig. 86).



(FIG. 2). In a New Kingdom scene (FIG. 3), the sandals hanging in separate market stalls among other articles such as pieces of cloth, indicate that such items were also sold by *retailers*, who weigh out the metal in return.¹² Aristotle (*Politics* I,iii,15) has made a clear distinction between the simple art of exchange, which he considers natural, and the *profit*-oriented trade (FIG. 3), which he considers unnatural. The concept of *profit* imposes itself from the moment that retailers undertake to circulate the surplus of the producers. To take the example of shoes again, it is textually confirmed that shoes were one of the most desirable trade items. In one of the texts from Mari, there is a record of a pair of shoes specified as of Cretan craftsmanship or provenance and forwarded by the king of Mari to King

12 The value of shoes was rather steady for over 150 years during the New Kingdom period: it is textually attested between 90 to 270 grams of copper (Michailidou 2005, 25).

Hammurabi of Babylon.¹³ The kings of Hatti, Babylonia, Cyprus, or Ugarit were employing *their own* merchants, as is textually documented.¹⁴ Some texts also refer to merchants being employed by private individuals in their business enterprises or even to traders who are acting in a more independent way, like the merchant Sinaranu from Ugarit who runs business with the island of Crete and is exempted from taxes by the king of Ugarit. In all cases, the motive was the commercial profit. What about the identity of these profit-oriented traders who are usually defined by scholars as Assyrians, Anatolians, Cycladic islanders, Minoans, Mycenaean, Aegean, Syrian, Cypriot, Phoenician, etc? In the so-called “Hittite text in epic style about merchants,” the merchants identify themselves by the towns from which they hail.¹⁵ On the contrary, in Ur texts, traders obtaining copper from the Persian Gulf are defined as “*the men who go to Dilmun*,” the modern Bahrain. Finally, both the departure town and the destination may be mentioned, as is the case with the merchants from Ura operating in Ugarit on behalf of the Hittite king,¹⁶ or the chief merchant from Crete obtaining tin in Ugarit, together with his interpreter.¹⁷ We choose to take as case studies of Bronze Age profit-oriented traders, the seafarers from Crete and the Cyclades, operating in the Aegean, and the caravan leaders from Ashur, establishing emporia in Cappadocia, Anatolia.

Inter-Cultural Concepts Of Measurement And Value

Both the so-called Minoan/Aegean traders and the Old Assyrian traders were following well-tried maritime or land routes. The existence of these routes is already evidenced by the presence of Aegean obsidian as far east as Aphrodisias in Asia Minor and of Cappadocian obsidian as far west as Knossos and Malia in Crete.¹⁸ Besides, some of the metal finds from Middle Minoan/Old Palace levels at Malia may point to copper sources in Anatolia.¹⁹ Minoans of the Old Palace period (1900–1700 BC), extending their influence to the coast of Asia Minor, and Old Assyrians of the Middle Bronze period (1945–1730 BC), operating in Central

13 ARMT XXI 342.5–6 (Malamat 1998, 417).

14 For instance, “A Hittite text in Epic Style About Merchants,” published by Hoffner (1968), leads to the conclusion that the DAM.GAR played an official role in the context of the functions of the palace personnel (Zaccagnini 1977, 173 and n. 12).

15 Hoffner 1968.

16 Rainey 1963, 319, 321.

17 Text ARMT XXIII 556.28–31: “1+ 1/3 minas of tin for the Caphtorite (*kap-ta-ra-i-im*), 1/3 mina tin for the dragoman (*targamannum*), (of the) Chief [merch]ant of the Captorite(s) at Ugarit” (Malamat 1998, 414).

18 Doğan and Michailidou 2008, 28–30.

19 Poursat and Loubet 2005; Carter and Killikoglou 2007; Barjamovic 2008, 97.

Anatolia, need not come in direct contact, but the Minoan presence in the IIIrd MBA settlement at Miletos,²⁰ may be *provoked* by the regular waves of tin transportation from Ashur to Central Anatolia. There is a view that the entire western section of trade in Asia Minor appears to be out of the Assyrian orbit, at least during the phase of Kültepe Ib (1800–1730 BC).²¹ However, was tin imported to Crete only via Ugarit from Mari, as indicated by the text mentioned above?²² We should look for more indirect evidence of a carrying trade of tin from Central Anatolia further on into the Aegean. We may consider here two types of evidence of cross-cultural mingling in the cognitive field of measuring quantities and estimating profits: 1) the evidence of an inter-cultural concept of wool standardization and 2) the evidence of cross-cultural affinities of metric systems applied by the merchants themselves.

The Inter-Cultural Concept Of Wool Standardization

The tablets from the houses of the Old-Assyrian traders in the lower town of the ancient Anatolian city Kanesh, at the site of modern Kültepe in Cappadocia, provide the earliest secure evidence on Bronze Age profit-oriented trade.²³ The Assyrians possessed the monopole of transporting by caravans tin and textiles to Anatolia, after 1000 km and six week journey from Ashur, in order to take back on their return silver and gold from Anatolia. They made sizable profits, first in prices of tin,²⁴ and then in prices of the textiles produced at their homes or imported from Babylonia and carried all the way to Anatolia.²⁵ But they were also engaged in an intra-Anatolian copper and wool trade.²⁶ The Anatolian provenance of wool is indicated by

20 As Niemeier 2005a, 3–4; 2005b, 200–201; Raymond 2009, fig. 6.

21 In the years prior to 1900 (1945?) BC the Assyrians established themselves in Kanesh, obtained exclusive rights over the trade of tin and textiles, and, in a generation or two, came to dominate also the regional exchange in copper and wool, with agencies from Durhumit in the NE to Puruṣhattum in the West. Around 1820 BC, there was a partial collapse of the system and Kanesh is destroyed. Around 1800 BC the Assyrians resettle at Kanesh. “The entire western section of the trade appears to have fallen out of the Assyrian orbit” (Barjamovic 2008, 96).

22 For the tin deriving from Ešnunna and following a route through Mari, Ugarit, and Cyprus to south Aegean, see also Niemeier 2000, 37.

23 Veenhof 1972.

24 Whereas a shekel of silver got you 6 to 7 shekels tin in Kaneš, in Ashur the ratio was 1:14 or 15 (Ratnagar 2003, 88).

25 Michel and Veenhof 2010, 210, 224, 234, 238.

26 Veenhof 1972, 116, 130. Wool and copper were not considered profitable for transportation to Ashur but were previously converted to silver within Anatolia. The copper used in Ashur must have had a different origin, presumably Oman and Iran, and perhaps from Ergani as well (Dercksen 1996, 182).

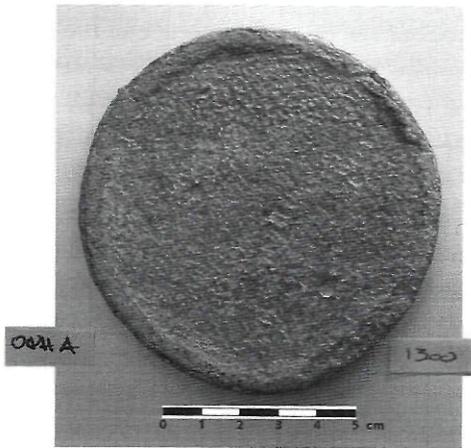


FIG. 4 A lead discoid balance weight from Akrotiri (Thera) weighing 708 gr (after cleaning) and marked with four dots.

the relevant geographic names mentioned in the tablets. Wool is a good example of a storable wealth, easy to arrange in standard shapes such as balls, hanks, bales, often estimated also in loads of donkeys. In the Old Assyrian tablets, wool was normally accounted in talents and minas. Yet, in Veenhof's view, the sheep's fleece was another form in which wool was traded in this 'intra-Anatolia wool trade,' and the weight of the fleece is calculated at 1 to 1.3 minas (that is up to 650 gr).²⁷ This is almost equivalent to the oldest known wool unit from Lagash (680.5 gr),²⁸ obviously responding to one fleece's weight, and this is also the weight of a special wool unit in Nuzi records, named *kuduku*.²⁹ In Akrotiri on the island of Thera, a lead disc displaying four dots (FIG. 4) is regarded by Nicola Parise as denoting a weight unit corresponding to one sheep's fleece, and he assigns the same nominal value to other lead balance weights from the Cycladic islands of Thera and Kea (of weight values from 690 to 744 grams).³⁰ It seems that there was a widespread diffusion of a common standard referring to one sheep's fleece and that, before the evolution of precise systems of measurement, wool was regularly bartered in terms of its most natural unit, namely, the clip of one sheep at shearing time. If we take into account that in the contemporary Linear A script of the Aegean, quantities of commodities were recorded as fractions of a greater unit, then the four dots on this disc may indicate that it corresponds to the fraction of one fourth of a greater wool unit that would make three kilos, or six minas (of c. 500 gr).³¹ This greater

27 Veenhof 1972, 132–4; Michailidou 2008, 228.

28 Zaccagnini 1990, 317; Melena 1987, 398; Petruso 1986, 32.

29 Zaccagnini 1990, 316, 318.

30 Parise 1986a.

31 Michailidou 2008, 92–3, fig. II.66, 228–30, figs V.13–5; 2011, 9–10.



FIG. 5 The three heaviest discoid balance weights from Akrotiri (Thera), the third of which (c. 3 kg) is equivalent to one *LANA* wool-unit.

wool-unit is equivalent to the textually documented *nariu* wool-unit at Nuzi and *LANA* wool-unit of the Linear B script, both units having the same value of six minas. Turning back to the Old Assyrian traders, we may cite the following OA text: “I will give you (for 1 shekel of silver) 6 minas of fine soft wool.” This means that the quantity of six minas wool was used as the standard quantity for the definition of the value of wool, and this ‘price’ of 1 shekel silver for the standard quantity of six minas (= three kilos) wool seems fairly normal, as it appears not only to other Assyrian texts as well, but it is also attested in the Old Babylonian period, in the price list of the laws of Ešnunna.³² Thus, in the overall context of Near Eastern and Aegean measures, there was a common concept on weight standards for the commodity of wool, related to the mode of production (the clip of one sheep) and connected to the exchange value (estimated in silver). This greatly facilitated the trade of wool beyond any cultural borders.

The Metric Systems Used by the OA Traders and Their Cross-Cultural Affinities

While studying the “Aegean” balance weights,³³ of a very distinctive shape and material (FIG. 5),³⁴ I discovered similar discoid lead items in publications of Central Anatolian sites, such as Kültepe, Alişar, Boğazköy.³⁵ The majority of the balance weights from Kültepe are made of haematite and are barell-shaped, not discoid, yet some lead discs were also found.³⁶ All lead discoid weights from Kültepe are dated

32 Cf. Postgate 1992, 193, text 10.2.

33 So-called by Nicola Parise (1986b). Evans has ascribed to them the term “Minoan.”

34 Michailidou 1990; 2008, 66–73 (for the specific cluster of weights).

35 As already Buccholz 1980, 231–232 and n. 43.

36 Published by Özgüç (1986, 77–81, pl. 130–1) and later discussed by Veenhof (1972, 57–67), Dercksen (1996, 80–9), Zaccagnini (2000), Castle (2000, 252–65) and presented in Kulakoğlu and Kangal (2011). Castle (2000, 253, 263) supports the idea that stone weights from Kültepe indicate that during the Level II period, Assyrian traders were using the system with which we are familiar from the Aegean, in contrast to the analysis of the Level Ib stone weights which are adaptable to the

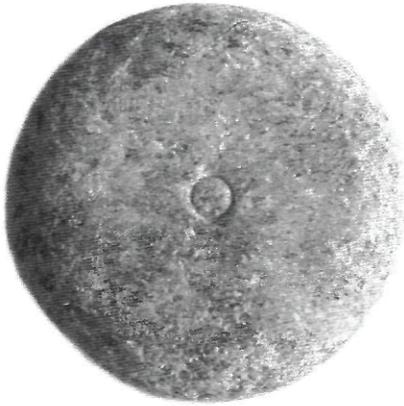


FIG. 6 A marble disc from Akrotiri (Thera) weighing 62.2 gr and marked with one circle is equivalent to the Aegean/Minoan standard.

to the MBA Kanesh Ib level and not only they are of the same distinctive form as the LBA–Aegean ones, but, according to Castle, these Anatolian lead disk weights conform in general terms to the Aegean standard. Therefore, Castle considers the Cretan–Cycladic system Anatolian in origin on the grounds of the earlier date of Kültepe levels.³⁷ However, there is also Evan's view that the Aegean unit (FIG. 6) was based on the Egyptian standard of gold; he supports the idea that the Minoan/Aegean unit was equivalent to 5 Egyptian *deben* of gold.³⁸ The discussion extends to the stone discoid weights, which prevail in Aegean sites and are more reliable for weight evaluation than the lead discs. It is interesting that some early, that is, of MBA date, stone discs come from the site of Malia, a Cretan site already linked to the metals trade with Anatolia.³⁹ Therefore, the direction of influence in shape might be vice-versa. Whatever the origin of concept, the Anatolian lead discs are thicker than the Aegean, more close to the idea of ingots. I have experimentally proved that the lead weights from Akrotiri were manufactured in moulds, possibly of clay.⁴⁰ It is probable that a similar method is indicated by a series of stone moulds from Kültepe, assumed to be used for the production of discoid ingots of silver.⁴¹ Texts from Mari mention the use of lead balance weights (unspecified in shape) for weighing heavier masses, although there is still no such material find from Mesopotamia or North Syria.⁴²

Mesopotamian system.

37 Castle 2000, 254, 256, 258, 263–4.

38 Michailidou 2004.

39 Alberti 2000; Poursat and Loubet 2005, 120.

40 Michailidou 1990.

41 Müller–Karpe 2005, 490 fig. 8.

42 Joannès 1989.

In regard to weight-values, we must take into account that numbers are sometimes very deceptive. It is not difficult to find affinities among many systems. For example, there is a lead disc found in Büyükkale IVd in Boğazköy, that is contemporary to Kültepe/Kanesh Ib level, weighing 117 grams. It has been interpreted as an underweight specimen of two 'Minoan' units of 62 grams.⁴³ However, Dercksen supports the idea that it rather represents the fraction of one fourth of the local Anatolian mina of 450 grams whilst Zaccagnini believes that this lead disc represents ten times the Hittite shekel of 11.75 grams.⁴⁴ In Zaccagnini's view, the traders from Ashur, along with the Mesopotamian standard, also used the basic unitary values documented in the Mesopotamian, Syro-Palestinian, and Anatolian metrological systems. In particular, he recalls the so-called "Western Syrian Mina," whose median value has been set by Parise at c. 470 gr and which formed the meeting point for four metric systems, the differences starting at the level of its division in shekels. This mina was the 50-multiple of the "Syrian" shekel (c. 9.4 gr), or the 40-multiple of the Hittite shekel (c. 11.75 gr), or the 60-multiple of the "Karkemish" (or Eblaitic) shekel (c. 7.83 gr).⁴⁵ In Zaccagnini's view, the Old Assyrian weights also attest to the presence of the 6.5 gram unit, thus the above western mina can also be analyzed in terms of 70 shekels of 6.5/6.8 gr,⁴⁶ which is equivalent to one tenth of the Minoan unit of 65 grams. Therefore, any affinities suggested by Castle among the metric systems used by Old Assyrians and Minoans may be easily explained as intentional and practical.

The Old Assyrian records preserve information on the ownership of balance weights by the merchants themselves, on the authorized use of the standard weight of the *Karum* (emporion) office or on the definition of the balance weight by the personal name of its owner.⁴⁷ There is also the designation of the local standard by the specific term: "*the weight stone of the land*," mainly used in the copper trade within the Anatolian contexts. Therefore it represents the local unit for measuring copper, and this is 10 percent lighter than the Mesopotamian one.⁴⁸ Designations of ownership also exist in Mari texts, e. g. "the weight of the city of Karkemish" or

43 Castle 2000, 263; according to Bittel (1957, 32, pl. 28:3) it has lost some weight to oxidation.

44 Dercksen 1996, 88; Zaccagnini 2000, 1204-6, 1212.

45 Parise 1981.

46 Zaccagnini 2000, 1207, 1212. From Dercksen's list (1996, 251-253), I point out the following weight values: 3.22 (=1/2 of 6.4), 3.3 (=1/2 of 6.6), 6.3, 13.2 (=2x 6.6), 62.7, 68 gr.

47 In Kanesh letters, a merchant may be advised to weigh out his tin personally or with his own weight stones CAD: *sv saqalu*. Ratnagar 2003, 80-1.

48 See the text: "...3 talents of copper (weighed) by means of the 'weight stone of the land'" (Zaccagnini 2000, 1209; Michailidou 2008, 272).

“the weight of the market,” that is, the commercial standard recognized by two cities, at least. Should similar designations be valid for discoid weights of Minoan standard found in other areas as, for instance, the one circle bearing items found in Akrotiri on Thera (FIG. 6) or in Trianda and Phileremos on Rhodes?⁴⁹ In Miletos, a stone disc bearing six engraved circles was found; its weight, 378 grams, is six times the Minoan unit of 63 gr.⁵⁰ Perhaps it represented the “Weight of the City of Knossos,” or the “Weight of the Market” or the authorized weight of the emporion/*Karum* established there by the Minoans.⁵¹

We know that it is not a rare instance for weights of one culture to occur at the sites of another. The question is *why balance weights were taken abroad?* Do they represent evidence of the actual presence of their owners—merchants or immigrants—or do they merely indicate the commercial networks of the site? The weighing of goods abroad with the merchant’s home weights may be linked more with imports than exports, because it was in the home country that a merchant was accountable.⁵² Traders also needed to be conversant with the major weight systems of the day, therefore there is no problem in the variety of balance weights found in commercial places, such as the above-mentioned.

The Numerical Systems Used by The Merchants

The great metrological tablet found in Kanesh with the series of weight values, starting from 1 shekel till 100 talents, indicates the theoretical weight of $7\frac{1}{2}$ grains ($\frac{7}{10}$ of a gram) as the smallest used by the merchants, while its double of 15 grains is materially represented among the balance weights themselves. This tablet was in fact a tool for practice by the merchants, whilst the round school tablets also found in Kültepe contain short arithmetic exercises directly related to the merchant’s profession, that is, they were used for converting the prices of different metals in silver.⁵³ In one of the school texts, for instance, the price of copper is given for the standard quantity of a packet named *elitum*, which contained 30 minas, that is, $\frac{1}{2}$ a talent. We know that the talent corresponded to the heaviest load a man could carry, that is, it represented an inter-cultural concept of measurement (with small varieties in absolute weight values). Cecil Michel has studied the subject of the

49 Marketou 2009, 74–5, fig. 4.

50 Niemeier 2005a, 8, fig. 21; Michailidou 2004, 317.

51 Michailidou 2008, 272–3.

52 E.g. in UET V 796, an Ur merchant had received copper in Dilmun by the Dilmun weight. Some of it was paid out according to the Dilmun standard. But when accounts of who still owed whom were rendered back home (the tablet was found at Ur), the weight was converted to the Ur standard (Ratnagar 2003, 81, 86).

53 Michel 1998, 251–4; 2008, 349.

education of OA traders in script and mathematics.⁵⁴ She points out that, although they were fully aware of the Mesopotamian sexagesimal system, the merchants used for the calculation of quantities and values the decimal additive numerical system, as in Anatolia and North Syria; and she specifically correlates it with the contemporary Minoan decimal numerical system evidenced in the Linear A Aegean script. The Hittite hieroglyphic numerical system later adopted, is identical. What is more, although in official mathematic texts the scribes normally converted fractional quantities in smaller integer units, the Old Assyrian merchants preferred to write with signs of fractions in their calculating documents⁵⁵ and signs of fractions are a significant feature of the Linear A script, in full contrast to the metrograms signifying integer smaller units in the bureaucratic Palatial Linear B documents. It seems that merchants had their own language in numerals and units of measurement, adopted for practical reasons and disseminated over the cultural borders. However, the common language more in need was the language of money, particularly so in a world without coinage.

The Trader and the Language of Money

According to Hallo, the earliest lexically attested term for merchants in the Near East is associated with itinerant metalworkers (*tibira*), but very early the trader's function passed to the emerging professional retailer wedded to his money-bag, since *dam-gàr* (merchant) has the pictogram for *gàr* representing a punch pulled shut by a drawstring around its neck, and the association of the merchant with silver (the dominant index of value) is a cliché in Sumerian proverbs.⁵⁶ Thus, traders and money, mainly expressed in metals, were closely related.

Powell makes it clear that almost everything under the sun occasionally had a money function, while stating that in Mesopotamia barley and copper were the cheap money and silver the most expensive.⁵⁷ Silver was carried back from Anatolia to Ashur by the Old Assyrian traders, copper in various forms, even scrap metal was widely accepted in Anatolia for minor expenses. Aegean economies need not differ in this aspect. A current form of money may be represented by the band of copper strips, functioning as a liquide asset and little by little been found in various places in Crete: Mochlos and Juchtas for instance, and also Akrotiri on Thera.⁵⁸ I have also suggested that 'sacred' representative money may take the form of small

54 Michel 1998; 2008.

55 Michel 1998, 257–8; Michel 2008, 357.

56 Doğan and Michailidou 2008, 42 from Hallo 1992, 351–2.

57 Powell 1996, 227–8.

58 Michailidou 2008, 284, fig. V.75.

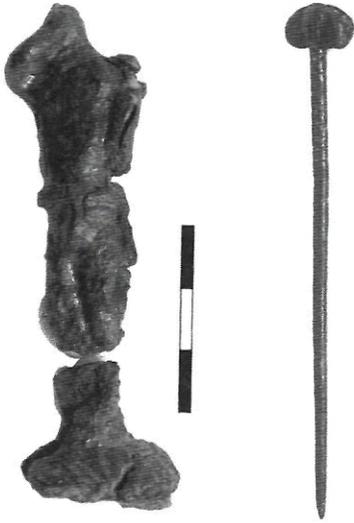


FIG. 7 A bronze figurine of the Cretan type of the "adorant" found at Akrotiri (Thera).

FIG. 8 A bronze pin from Akrotiri (Thera).

non-functional double axes, like the gold and silver miniature double axes from Arkalochori on Crete, perhaps of the same function as items cited by a text from Mari, elsewhere discussed;⁵⁹ while a 'cheaper' form of sacred money may be represented by the thin copper axe-heads from Juchtas (Crete).⁶⁰ A Hittite ritual text dated to the 13th c. reports that an axe and a knife made of silver was the retribution to the builder of a probably holy building.⁶¹

In whatever form and material, money provides a medium of exchange, it stores the value, it standardizes value or prices for good and services, it facilitates the accumulation and accounting of wealth; thus *money*, in the words by Monroe, is less a physical good and more *a technology, that, like writing, is a technology that communicates* and since the information communicated is concerned primarily with prices of things, one might define a given monetary system as *a language of value*.⁶²

The Inter-Cultural Value Of Goods

The language of value, although connected with the weight value of metals, is not confined to it. Postgate points out that the metal pieces had both the practical value that the raw material of finished artifacts gave them as well as any value

59 Michailidou 2003.

60 Michailidou 2005, 21–2, fig. 9.

61 Floreano 2001, 225 and n. 59 where another silver axe of 20 shekels is reported.

62 Monroe 2007, 174.



FIG. 9 A clay kantharos from Achemhöyük (after the pamphlet of the Aksaray Museum).



FIG. 10 The silver kantharos from Gournia (Crete) of MM1b date (after Watrous 2005, pl. XIV, 36).

assigned to them *by society* as currency.⁶³ We notice that various metal artifacts of insignificant weight were circulating as commercial goods and gifts of a particular cultural value, figurines, for instance, or miniature cups, or jewels. The bronze figurine of the typical Cretan “adorant” (FIG. 7) was obviously mass-produced in order to respond to the great demand evidenced by its wide distribution.⁶⁴ Particularly interesting is the resemblance of a bronze pin found at Akrotiri (FIG. 8) to a common type of pin from Kültepe culture (made of bronze or precious materials). The pin, with a six-flanged top, appears in Anatolia already in the EBA in tombs at Alaca Höyük.⁶⁵ This type of pin was considered as foreign in Cyprus,⁶⁶ and Özgüç believed that it was possibly imported to Anatolia from North Syria;⁶⁷ still, pins with the same distinctive flanged head were widely distributed in the area where Old Assyrian traders operated.⁶⁸ Did this particular item of cultural value follow deliveries of tin (and copper) towards the Aegean?⁶⁹ Further research is needed in order to decide whether such items of cultural value, as also the unique silver kantharos from Crete (FIG. 10), represent common trends in art with people

63 Postgate 1992, 204 and n. 345.

64 See, for instance, Niemeier 2005b, 200, for the possible provenance of two such figurines from Smyrna and Troad.

65 Muscarella 2003, 281–2, no 185.

66 Catling 1964, 74, fig. 6:6.

67 Özgüç 1986, 72, pl. 125:14.

68 Cf. Muscarella 2003, 282.

69 For objects of significance embedded in the metals trade, cf. Niemeier 1998, 36–7, fig. 13 (a stone tablet with an Akkadian cuneiform inscription found on Kythera) or Carter and Killikoglou 2007, 133 (Anatolian obsidian found on Crete).

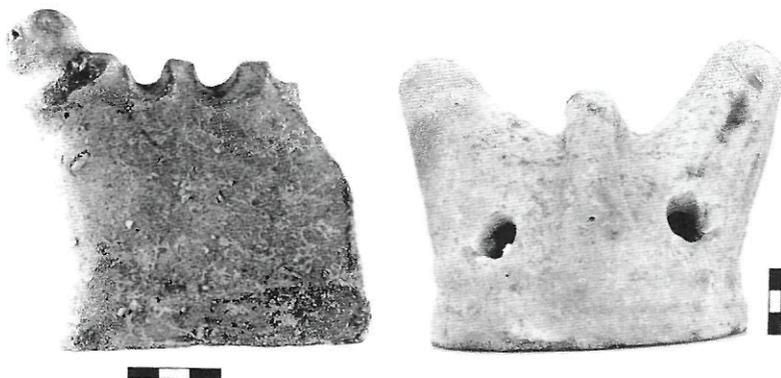


FIG. 11 Both domestic items come from Miletos: (a) the firestand of 'Aegean' type and (b) the horned stand of central Anatolian type (after Kaiser 2005, pl. XLVII c and d)

in Anatolia or actual imports of Central Anatolian origin⁷⁰ (FIG. 9), in which case, objects or ideas were following a route that possibly points to the route of tin. More indicative are utensils of a domestic specialized function, representing the habits of ordinary people. In Miletos, for example, two different types of clay stands have met as articles of hearth furniture⁷¹ (FIGS. IIA-B). One of them is a typical Aegean (?) 'spit-rest.'⁷² The other is a portable 'pot support' in the shape of a simple pair of horns which tilt forward⁷³ and it belongs to a traditional Central Anatolian type (FIG. 12). At this stage of research, it is most significant to add that some Anatolian names of merchants attested in the Old Assyrian archives at Kültepe, may provide us with the crucial link between Middle Minoan and Old Assyrian operations.⁷⁴

70 "There is evidence that trade in metals and metal vessels also played an important role in Anatolian-Minoan relations. There are close connections between Crete and central Anatolia in vessels related to metal originals, and the only extant precious metal vessel of the Cretan Old Palae period, the lobed silver kantharos from Gournia, is of central Anatolian type" (Niemeier 2005a, 4 with references). Cf. Niemeier 2000, 131, figs 16-7; Watrous 2005, 114, pl. XIV.36; For the publication of the silver kantharos see Davis (1979), where more is written on the Central Anatolian inspiration of the shape and "it may be that Middle Minoan Ib in Crete overlaps Karum Kanesh II and Ib periods" (Davis 1979, 40).

71 Kaiser 2005, pl. XLVIIc and d.

72 The Aegean origin represents the current view, but see also Momigliano 2009, 133.

73 It belongs to type III of the horned objects from Anatolia as Diamant and Rutter 1969, 164, figs 29, 31 (I owe this reference to I. Kaiser).

74 Already Garelli (1963, 282) suggested that the Anatolians exported some part of the tin obtained by the Assyrians.



FIG. 12 Horned pot supports from Achemhöyük at the Aksaray Museum (photo by the author).

The Trader and the “Nostos”

To end as I started, that is with Egyptian retailers, and connect them with the title of the conference “*Nostoi*”, the successful and safe return home was a constant desire following every merchant operating in a distant land. In contrast to the rich merchants who thrived in Syria and Mesopotamia, it appears that the traders in Egypt had low status. Yet, the text, known as the *Satire on the Trades* from around 1000 BC, suggests that Egyptian merchants did indeed travel abroad, an idea also supported by the presence of Egyptian names at Ugarit in LBA.⁷⁵ I quote a part of the text where the last line expresses the anxiety for their *nostos*:

The merchants fare downstream and upstream, as they do business with copper, carrying goods [from] one town to another and supplying him that has not. But the tax collectors carry off the gold, that most precious of metals. The ship’s crews from every house (of commerce), they receive their loads. They depart from Egypt for Syria, and each man’s god is with him. (But) not one of them says: We shall see Egypt again!⁷⁶

75 (1400–1200 BC). Monroe 2007, 181–182.

76 Monroe 2007, 182.

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