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SKEUOMORPHISM IN 3RD MILLENNIUM BC POTTERY FROM WESTERN CENTRAL ANATOLIA: METAL VESSELS AND THEIR REFLECTIONS

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ABSTRACT

The intensification of metallurgical production and the rise of social stratification that started around the end of the 4th millennium BC are well-represented in archaeological literature. During this period, numerous changes in architecture, burial customs, and ceramic manufacture can be detected in archaeological levels. Most of the analyses so far conducted on ceramics have focused on ware groups, forms, decorations, and functions, with less attention traditionally paid to the process of skeuomorphism, which has often been described as 'imitation'. More recent studies have shown that the transfer of techniques, shapes and decorative elements between media and production processes (e.g. from metal or stone vessels to ceramic vessels) played an important economic role in ancient societies. This article employs the pottery of the Early Bronze Age from inland Western Anatolian, to understand the impact of metal vessel manufacture on ceramic production. Examples of skeuomorphism are provided, particularly noting surface colours, handle attachments and decoration, and an analysis made of the contexts of retrieval to suggest the possible reasons for their presence.

KEYWORDS: Skeuomorphism, Early Bronze Age, Anatolia, Küllüoba, Metal Vessels, Pottery

1. INTRODUCTION

Important cultural changes occurred in Anatolia at the end of the 4th millennium BC, in the period sometimes called the Late Chalcolithic, notably a rise in metallurgical activities. Termed "metallurgischer Schock" by Fritz Schachermeyer (Schachermeyer, 1952–1953: 86), this period appears to be the first stage of the phase in Anatolia that would lead from simple village settlements to developed cities.

There are only limited data from Anatolian Late Chalcolithic sites, and these are mostly from small settlements, so it is not possible to describe the period in detail. Yet recent studies have reinforced the appearance of early forms of social stratification (Horejs, 2014; Schoop, 2011), for instance weapons in male graves at İkiztepe (Welton, 2010: 103) and Ilıpınar (Roodenberg, 2008: 320), that have been dated to the middle and the end of the 4th millennium, to suggest a new tradition that includes signs of social stratification.

This phase is also characterized by intensive land use, increasing agriculture, and greater consumption of animals and animal products. Although the sizes of the settlements are smaller and the complexity of the organization in Anatolia is simpler than the surrounding regions such as Syria (Badra 2015: 14), a research shows a corresponding, and significant, increase in the number of settlements (Massa, 2014: fig. 7), and developments that reflect a change in the social order, such as defensive systems and monumental architectural structures.

Fortification systems that date to the beginning of the 3rd millennium enclose small areas, (Aykurt and Böyükulusoy, 2020: plan 1; Blegen et al., 1950: pl. 436; Umurtak and Duru, 2014: fig. 4.) but some buildings can be defined as elite (Blegen et al., 1950: pl. 426; Mellink and Angel, 1966: 247, fig. 2). Evidence for organized trade in this period includes balance weights (Horejs, 2016: fig. 4) and sealings (Schmidt, 1932: 57). Some of the funerary contexts from Alacahöyük that belong to the beginning of the 3rd millennium (Yalçın, 2011: 143; Yalçın and Yalçın, 2013: 44) are related to elite groups, but also show high levels of craft specialization. Additionally, it can be clearly shown that as metallurgical activities intensified, so too were new tool types and alloys developed (Wagner and Öztunalı, 2000), along with an increasing number of primary and secondary metallurgical activities. Copper-arsenic alloys were first used in the early 4th millennium and became widespread in the early 3rd millennium BC, which is when tin bronzes were first utilised (Yener, 2000: 74). Complex metal production techniques such as lost-wax, multi-valve casting, repoussé and filigree (Bernabo Brea, 1964, 591–592, fig. 320, pl. 86e; Sağlamtimur and Ozan, 2015: 518) are evidence for specialisation in craftmanship. Metallurgical technologies would also have influenced pottery firing techniques (Friedman, 2000: 173). In addition, the beginning of the Early Bronze Age is characterized by the emergence of red-coloured wares in various shades, alongside the dark-coloured pottery of the previous period. Vessel forms began to vary, and pottery started to be produced in a larger number of types.

The second part of the Early Bronze Age is characterised by increasing social complexity. According to Özlem Çevik, this stage in Western Anatolia can be described as one of centralisation (Çevik, 2007: 137). Settlement sizes were extended (Abay, 2011: 26; Öztan and Arbuckle, 2013: 280), and there was almost certainly separation between public and residential areas at this time. For example, Küllüoba (phase IVC) was a centre of regional control during this phase in western Central Anatolia, and its monumental public buildings are separated from the rest of the settlement by substantial walls (Efe and Fidan, 2008: fig. 3). The Troy IIa–c citadel also shows evidence of a division between public and residential areas (Blegen et al., 1951: pl. 453–455).

The Early Bronze Age III was an important turning point for Anatolia, because interregional relations and contacts developed (Efe, 2007; Şahoğlu, 2005, Massa, 2016; Massa and Palmisano, 2018) shown to have extended across a wide area, from northern Syria to the Balkans, must have triggered the acceleration of cultural development (Massa and Palmisano, 2018). Although metallurgy has a long history in Anatolia, Mesopotamian interests in the area began in the mid-3rd millennium, during the Akkadian period, when long-distance trade for raw materials such as tin became more frequent. Such trade networks also led to an increase in the circulation of finished products and technologies, both within Anatolia and with surrounding regions, notably jewellery, weaponry, objects from made semi-precious stones and specific types of drinking vessel. The potter's wheel (Türkteki, 2013) and metrology (Rahmstorf, 2006) also reached Anatolia during this period, probably from Upper Mesopotamia or the Levant.

Starting from the beginning of the 3rd millennium BC, as understood from the results of new analyses performed on vessels recovered during excavations at Alacahöyük, new types of metal vessels began to appear. In many excavations these metal vessels were uncovered in smaller numbers than other groups of finds, and in some they have not been recovered at all. This may be because the creation of metal vessels required skilled artisans. In many cases they were made of silver or gold, meaning that the difficulty and cost

of obtaining the raw material might have been prohibitive. They were therefore likely to be restricted to elite contexts, and are thus relatively rare. The fact that metals are recyclable might be regarded as another reason for limited find quantities, as damaged or unwanted vessels could be melted down and the metal reused for other object types. Nevertheless, a number of examples are known, both from excavations and from archaeological collections (Sazcı 2007; Perk, 2014; Toker and Öztürk, 1992; Reeves, 2003).

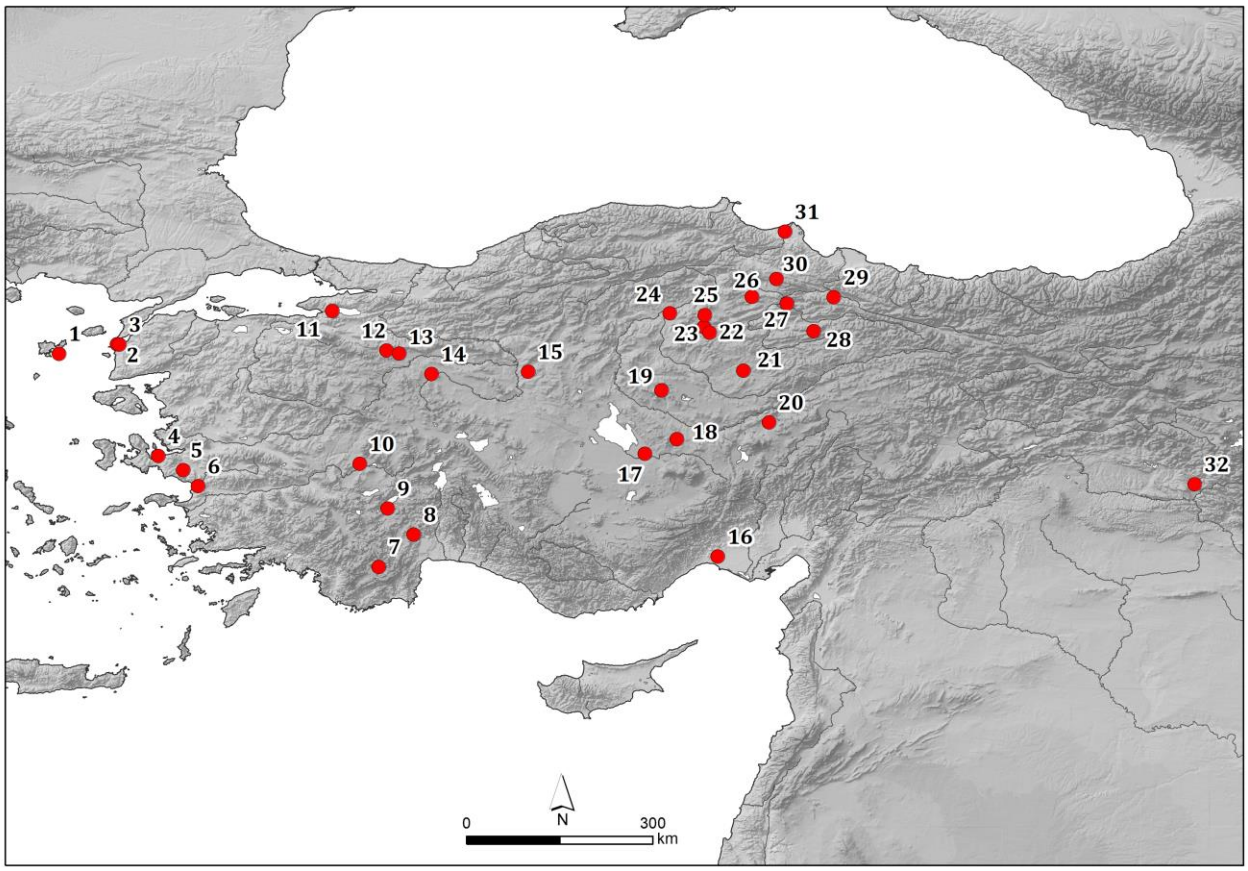

Fig. 1: Sites mentioned in the text (map by M. Massa)

NAME	MAP No	NAME	MAP No
Acemhöyük	17	Küllüoba	14
Alacahöyük	23	Kültepe	20
Alişar Höyük	21	Kumtepe	2
Bademağacı	8	Limantepe	4
Bakla Tepe	5	Mahmatlar	27
Başur Höyük	32	Ovaören	18
Beycesultan	10	Oymaağaç	26
Küçükhüyük	12	Polatlı	15
Çukuriçi Höyük	6	Poliochni	1
Demircihüyük & Sarıket	13	Resuloğlu	24
Eskiyapar	22	Tarsus-Gözlükule	16
Hacılar Büyük Höyük	9	Troy	3
Horoztepe	29	Yassıhöyük	19
Ikiztepe	31	Yeni Hayat	25
Karataş Semayük	7	Devret Höyük	30
Kayapınar	28	Ilıpınar	11

Contemporary with developments in metallurgy and metal vessels were changes in pottery manufacture, with new shapes and new surface treatments. The early 3rd millennium BC saw the introduction of thin-walled, sharply-carinated, and dark-coloured vessels with glossy burnishing that were not present in earlier periods. Other new forms and applications pertaining to pottery can be seen in the ceramics of the Early Bronze Age II, such as ware groups that included new styles of drinking and offering vessels. The motivation behind the production and use of these new types of pottery is probably a sign that drinking habits had changed, perhaps related to the introduction of viticulture (Çalış-Sazcı, 2006: 205–206; Özyar, 2017: 530).

The introduction of new ware groups was not universal, and there is evidence to indicate regional differences that vary considerably (Sarı 2013)[1]. Christoph Bachhuber, for example, draws a parallel between the appearance of metal skeuomorphs in Anatolia at the beginning of the 3rd millennium BC and the transition to the Early Bronze Age, and emphasizes that they arose from metallurgical developments (Bachhuber, 2008: 38; Bachhuber, 2015: 72). Accordingly, a general evaluation of examples chosen from the most distinctive groups is required before they can be discussed in relation to metal skeuomorphs. Along with qualities that are regarded as archaeologically important, such as intended use, content or context, skeuomorphic vessels are of significance because they demonstrate that some of the formal attributes observed on baked clay pottery actually pertain to metal vessels. Indeed, some of the applications seen on baked clay vessels have no apparent function, and this may be a sign that they were intended to reflect the appearance of such metal vessels.

Lucinda Reeves, who studied metal vessels from Anatolia as part of a doctoral thesis, laid emphasis on skeuomorphism, but only made comparisons between examples from the Aegean world (Reeves, 2003). According to her analysis, the date at which metal became an inspiration for potters in the Aegean world would be during the Early Bronze Age II, at the earliest (Reeves, 2003: 203). Not all researchers have reached the same conclusion. According to Ellen N. Davis there are no examples of metal imitations among the pottery of the pre-palatial period (Davis, 1977: 86), while Oliver Dickinson states that round, simple shapes constitute only a prototype for metals (Dickinson, 1994: 130). Yet many researchers working on Bronze Age Aegean material have identified skeuomorphic ware groups among the pottery they study. Vassiliki ware, Urfirnis ware, and yellow-mottled ware are among the well-known examples of metal skeuomorphism in the Aegean world, and these are of higher quality than contemporary ceramics.

So far, no detailed study has been undertaken on vessels that are often classified as 'metal-imitations' in publications related to Anatolian archaeology (initially discussed in Lloyd & Mellaart, 1962: 116–129, 136). The aim of this study is therefore to evaluate vessels from Western Anatolia that suggest skeuomorphism, to understand their development in the specific period in which they appeared, and to recognise which social and class differences occurred in parallel with the other developments of Early Bronze Age western Central Anatolia.

2. ON SKEUOMORPHISM

A skeuomorph, of which the lexical meaning is "an ornament or design representing a utensil or implement,"[2] has been variously defined, and discussed, by many scholars.[3] V. Gordon Childe, for example, believed that the first vessels or containers made of organic material, such as wood, were copied in pottery and metal, and provided the examples of a gourd and a beak-spouted jug, defining the latter as skeuomorphic. He argued that skeuomorphism provides an idea of the range of products available in the distant past, direct evidence for which has not survived (Childe, 1956: 13). Michael Vickers described skeuomorphic characteristics on the Classical Greek pottery he studied, and suggested that some of the colours on vases normatively represent the colours of metals (Vickers, 1985: 146; Vickers and Gill, 1996).

It has long been observed that leather vessels or wicker containers were used as models for pottery forms (Duru and Umurtak 2005: pl. 59/1). In his study in 1909, Carl Schuchardt stressed that developments in many pottery traditions occurred primarily for functional reasons, and that modeling manufactured items after natural materials can yield only a limited number of types, in terms of form and decoration. Among the examples he examined were pottery vessels with incised and painted decorations that resembled wicker containers, which he concluded were the prototypes for later ceramics, and published many related examples in his work (Schuchardt, 1909: pl. XII, figs. 1–3). The influence of wicker containers might also be seen in the Anatolian Early Bronze Age, in the style of handle often called 'twisted' or 'pseudo-twisted'.

Numerous examples of this pottery type are known from Anatolia, dating at least from the Neolithic, and through these vessels it is possible to interpret the visual aspects of organic materials that rarely, if ever, survive to the present day. Basket-shaped vessels reflect the appearance of a basket since the latter were, essentially, models for the former. It should be

[1] Western Anatolia covers a wide geographic area, and the region has been separated into cultural groups according to sometimes arbitrary geographic divisions, and then into smaller pottery groups, by a number of scholars (for a general overview, see Sarı 2013).

[2] https://www.merriam-webster.com/dictionary/skeuomorph, from the Greek skeuos (σκεῦος), meaning 'utensil', and morphḗ (μορφή), meaning 'shape'.

[3] Even though it is widely regarded as an archaeological term, the concept of skeuomorphism is applied to many fields, including nature, the arts, and visual and digital technologies, where the term has a diverse variety of definitions, see: O'Hara, 2012: 281 ff.

noted, however, that skeuomorphism between organic and ceramic vessels and skeuomorphism between ceramic and metal vessels arose from different circumstances, and the intent in making them was almost certainly different (Knappet, 2002: 111–112). Since this study focuses on pottery forms that were reproduced as metal skeuomorphs, one essential point needs to be clarified: influence is reciprocal, so skeuomorphs also influence later examples of the model.

Skeuomorphs of metal vessels can be regarded as products that imitate those made from precious metals, particularly bronze, silver and gold, and can be considered to have been regarded by their users as belonging to a higher category than other baked clay goods (Knappet, 2002: 112). In his study on European ewers in the Middle Ages, Frans Verhaeghe indicates that skeuomorphic products were made for middle- and lower classes, rather than for the upper class. Metal ewers would have belonged to upper class users, whereas baked clay imitations, even those of good-quality, must have belonged to the less-rich middle class (Verhaeghe, 1991: 48).

3. METAL VESSELS IN ANATOLIA

The earliest phases of Anatolian metalworking are from the Neolithic, and are represented by hammered native copper. Subsequent phases in the Chalcolithic Period are characterised by ornaments and tools shaped by both heating and hammering, and grew and evolved into the widespread manufacture of weapons (Yalçın, 2008: 18, 22, 23).

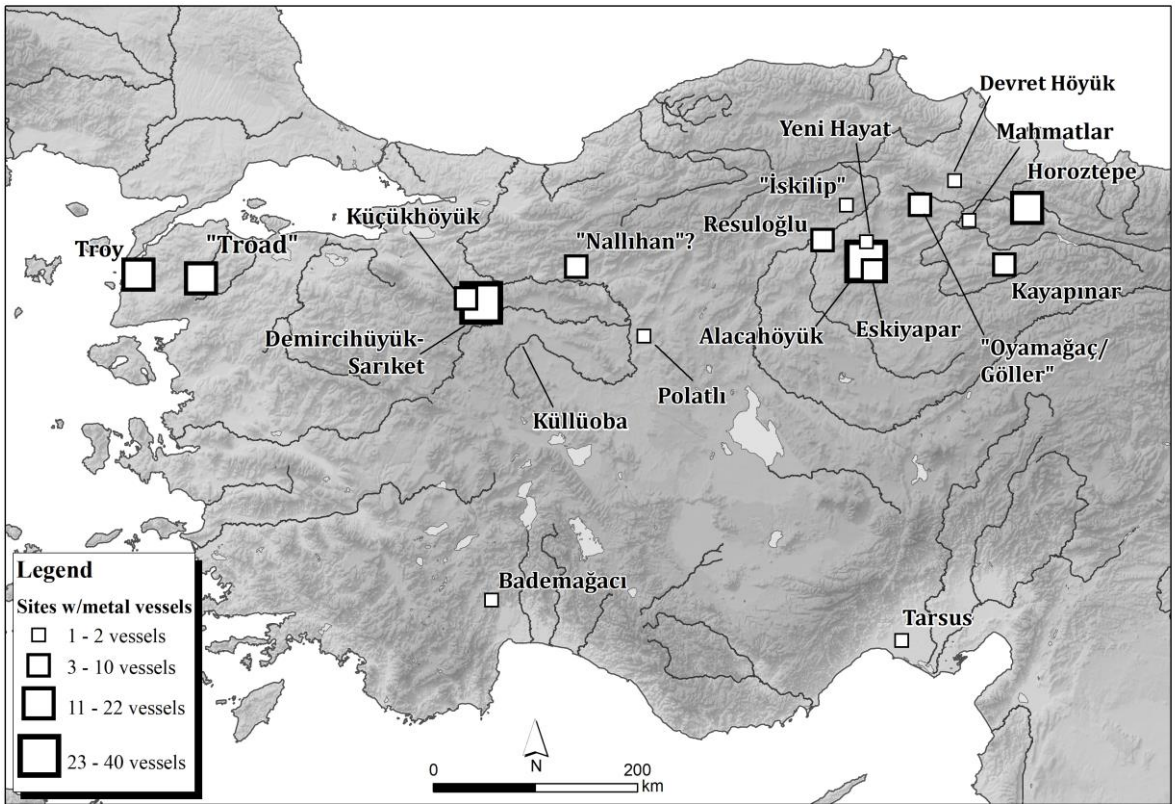

Fig. 2. Map of the locations and numbers of metal vessels (map by M. Massa)

Copper and arsenic deposits in northern Central Anatolia, and silver and gold deposits in inland Western and Northwestern Anatolia, were exploited in this period. As noted, metal vessels have been recovered in smaller numbers than other groups of artefacts, the earliest of which were discovered at Alacahöyük.[4] Distribution of metal vessels (Fig. 2) appears to favour north-Central and Northwestern Anatolia, as metal pots have been recovered from Alacahöyük (Arık, 1937), Horoztepe (Tezcan, 1960; Özgüç and Akok, 1958; Özgüç, 1964; Toker and Öztürk 1992; Coleman, 1985; De Jesus, 1980; Muscarella, 1988), Kayapınar (Temizer, 1954; Toker and Öztürk, 1992), Resuloğlu (Yıldırım, 2006: fig. 13.), Eskiyapar (Özgüç and Temizer, 1993), Oymaağaç

[4] Although this phase at Alacahöyük is traditionally dated to around 2600–2400 BC, the latest results of ^{14}C sampling offer an earlier date (Yalçın 2011:62).

(Özgüç, 1980; Toker and Öztürk, 1992), Mahmatlar (Koşay and Akok, 1950), Kültepe (Toker and Öztürk, 1992: 193), Yeni Hayat (Müller-Karpe, 1994), and Devret Höyük (Türker, 2014: fig. 9). Vessels found at Demircihüyük-Sarıket (Gürkan and Seeher, 1991: 104, 110; Baykal and Seeher, 1998: 115), Bozüyük-Küçükhöyük (Gürkan and Seeher, 1991: 52, 64, 70) and Troy (Bittel, 1959; Sazcı, 2007) form the second largest group, while Polatlı (Toker and Öztürk 1992: 185; Lloyd and Gökçe, 1951: 60–61), Bademağacı (Duru and Umurtak, 2011: 442) and Tarsus-Gözlükule (Goldman, 1956; Mellink, 1989) are other centres where metal pots have been uncovered. Apart from these, examples are also known from various collections from the Troad (Bittel, 1959) and northern Central Anatolia (Baykal-Seeher and Seeher, 1998; Perk, 2014).

Vessels from northern Central Anatolia have been found in sufficient quantities that subgroups can tentatively be identified: semi-spherical bowls with or without handles, deep bowls, wide and shallow plates, beak-spouted jugs, pedestalled chalices, and ladles. Metal examples of an Aegean vessel form, sometimes known as the 'Cycladic frying pan', have been recovered in Central Anatolia (Özgüç and Akok, 1958: pl. 7.1). A Syrian bottle and a vessel in the form of a chalice are also among the examples of imports recovered in the region (Toker and Öztürk, 1992: 190; Özgüç and Temizer, 1993: 617).

In inland Western and Northwestern Anatolia, bowls with everted rims, omphalos-based bowls, bottles, tankards, *depas*, goblets, cups, sauce boats, and necked jars and their lids can be included among the metal vessel assemblage. The main characteristics of Anatolian metal vessels are extremely thin walls, long, thin ribbon handles with rivets to keep the handles in place, heavily carinated profiles, fluted decorations, incised decorations, tubular lugs, and developed bases. A further Syrian bottle and chalices are among the metal artefacts recovered from Troy (Schmidt, 1902: 230–231, 231, 237; Sazcı, 2007).

4. AN OVERVIEW OF SKEUOMORPHIC EXAMPLES FROM WESTERN ANATOLIA

Pottery attributes that might indicate skeuomorphs of metal vessels include thin walls, shiny burnishing, sharp carinations, fluting, and attachments such as raised handles, rivets (Broodbank, 2000: 27), knotted handles, and pedestals. Black, gray, purplish-red and brownish-red colours are also suggestive (Vickers, 1985: 146; Vickers, 1989: 49). Of these, the choice of colour, surface treatments, and attachments appear to be the most important indicators of metal skeuomorphs. Some or all of these characteristics might be found on a given pot. These elements are not found across the majority of Anatolian Early Bronze Age pottery, and are wholly unknown before the second half of the 4th millennium, before the advent of metallurgy in the region. Bachhuber has stated that the earliest "metallicising traditions" (Bachhuber 2008:38) could belong to Phase I of Kumtepe, though the black burnished pottery group defined as Ware F from Demircihüyük in Western Anatolia is a fair parallel to the Kumtepe examples (Seeher, 1987: 58–64), and Karaz ware, characteristic of the Transcaucasian region, could be another group of metal skeuomorphs (Bachhuber, 2008: 40).

4.1 Colours and ware groups

The colour and glossy surfaces of vessels are the most significant features that, at first glance, make a baked clay item appear like metal. However, metals change colour over time, and thus neither metal vessels nor their pottery skeuomorphs should be expected to have only one colour. The precise colour of any vessel also relates to changing tastes and fashions over time, and for that reason the colours discussed below only represent generalisations. Following the definitions presented by Reeves (Reeves, 2003: 206–207), colours and the metals they resemble are as follows.

4.1.1 Silver and lead

These two metals are similar in colour, though black and shades of grey are often encountered on silver, because tarnishing on silver vessels, the result of oxidation due to water exposure and long periods of use, tends to form in the parts that aren't routinely handled, and can in some circumstances make a vessel look very different from polished silver (Vickers, 1995: 190.). This theory is also suggested for some grey ware groups in northeast Syria (Forest 2003:566; Badra 2015: 10, fig.2). A few significant ware groups stand out in the Western Anatolian Early Bronze Age (Fig. 3).

Kumtepe Ib pottery is commonly found at Early Bronze Age excavations in a wide area that runs from Troas in northwestern Anatolia to İzmir in the south. This group is noted for its dark grey, brown or black coloured surfaces, and is well-burnished.

The dark grey surfaces are sometimes interrupted with a mottled brown-black.

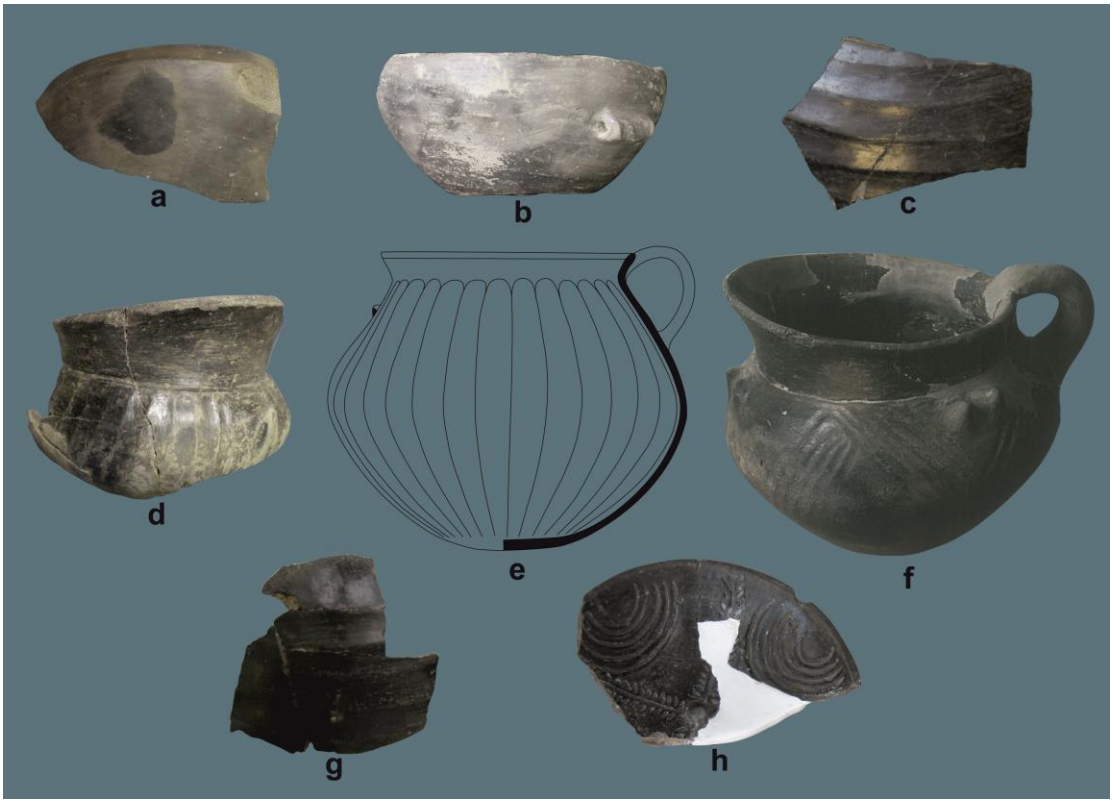

Fig. 3: Gray ware from Beycesultan EB I (a, b); characteristic Beycesultan EB I ware (c–e) (photos by the author, and redrawn after Lloyd and Mellaart, 1962); skeuomorphic sample from Kusura (f) (Şahoğlu and Sotirakopoulou, 2011); sample pottery of the Beycesultan EB I culture from Küllüoba (g) (Küllüoba Excavation Archive); black topped pottery sample from Küllüoba (h)

Fig. 4: Samples of İnegöl gray ware from İnegöl II and Çakırca (a, b) (photos by the author); examples of depas from Western Anatolia (c, d) (after Şahoğlu and Sotirakopoulou, 2011); silver example from the Troas collection in the British Museum (e) (after Sazcı, 2007)

Early Bronze Age I wares of the Beycesultan culture are generally the dark faced, well-burnished and fluted, and were produced within and around the Büyük Menderes river basin during that period (Türkteki, 2020). The fluting and glossy burnish on this thin-walled ware are often metallic in appearance (Fig. 3 c–d, g). Black-topped ware, which is part of the broader Demircihüyük ware group, appeared during the Early Bronze Age I and II in a limited area (Fig. 3 h), and are mainly black on the inside and in shades of light brown on the exterior. Particularly noteworthy are bowl forms that have sharp profiles and decorative incisions and embossed knobs on the inner surface.

Grey-coloured pottery was produced in many regions of Western Anatolia from local pastes (Aykurt, 2008: 13), and appears in assemblages from Troas and İzmir in the Early Bronze Ages I, II, and III. The group is represented by three different wares at Troy, which are usually well-fired, light grey-coloured, and mica-tempered. Wheel-thrown vessels of this sort also include *depas* (Fig. 4 c, d) (Aykurt, 2008: 13), tankards and *pyxis*. It was originally introduced as İnegöl grey ware by David H. French (French, 1967: 61–62) as a result of his surveys, and is typically light grey-coloured with a soapy surface and glossy burnishing (Fig. 4 a, b). Very clean paste and mica inclusions are characteristic of this group. A silver *depa* from Troas is a good example of this kind of vessel (Fig. 4 e).

Fig. 5: A copper jug from Polatlı (a) (Toker and Öztürk 1992) and red-slipped jugs from western Anatolia (b, c) (after Şahoğlu and Sotirakopoulou, 2011); silver and gold vessels from Troy (d–f) (after Sazcı, 2007); red-coated and fluted pottery from Küllüoba (e–g) (Küllüoba excavation archive)

4.1.2 Copper and bronze

Researchers are generally in agreement that red, purplish-red, reddish-brown and other shades of brown on ceramics give the appearance of copper (Lloyd and Mellaart, 1965, 70; Vickers, 1985: 144–145; Vicker and Gill, 1996: 124–127; Reeves, 2003: 207–208).

Some examples of copper vessels have been unearthed in Anatolia (Fig. 5 a, Fig. 6 a–b), and can be used for comparisons. Red-slipped wares constitute the main ceramic group from the beginning of the Early Bronze Age in Western Anatolia (Fig. 5 b, c, f, g), but it is inaccurate to think that all red wares were produced to resemble metal.

The colour red might simply have been preferred for pottery as it is – and has long been – regarded as impressive, elegant and attractive. It was present in the Neolithic period (Sagona and Zimansky, 2015: 101), before the development of metallurgy. Anatolian clay also turns red due to firing conditions, so pottery in this colour may have been regarded as natural. Also XRD (X-Ray Diffraction) results from an early bronze age site of Shahr-i Sokhta from Iran signs to the relation of firing and chemical reagents in clay due to its components effected the color red (Javanshah 2018:90). Yet colours such as dark reds and purples on some red ware groups, and the fact that these wares were generally very well-burnished, might indicate that they are skeuomorphs of metal vessels.

Two ware groups from Western Anatolia stand out at the end of the Early Bronze Age. One is the ware simply named red-coated ware that is particular to inland Western Anatolia. The surface colours of this ware, which is formed of high-quality paste and is well-fired, are in tones of red, dark red and purplish-red. The other is a similar ware group known as Polatlı fluted ware. This group is also purplish red slipped with glossy burnishing, and is characterized by shallow vertical or horizontal flutes on the surface of the vessel (Fig. 5 e–g), which bear a close resemblance to flutes seen on metal examples (Fig. 5 d–e).

Fig. 6: Copper pitchers from Alacahöyük and Polatlı (a–b) (after Toker and Öztürk, 1992); brown wash wares from Beycesultan (c–d) and Küllüoba (e) (photos by the author).

The group known as brown wash ware, which is characteristic of Early Bronze Age III Beycesultan (Lloyd and Mellaart, 1962: 199), is dirty brown in colour (Fig. 6 c), always well-fired, and slipped and burnished. Examples of this group are also represented at Küllüoba (Fig. 6 e). The variegated brown and yellow colours on the surface of many pieces reflect the look of bronze, as do areas on some parts of vessels that were left un-slipped. This group remained in use at Beycesultan during later phases at the site (Fig. 6 d). A group called Vasiliki ware, known on Crete (Betancourt, 1979), is similar in appearance to brown wash ware, in that its characteristic feature is the red and black patches caused by firing.

A third example can be seen in certain 'metallic' wares, such as Konya metallic ware, or Darboğaz painted wares that are known particularly from Niğde and its surrounds, which might also be regarded as skeuomorphic (Friedman, 2000: 178). This group has properties consistent with being fired at higher temperatures, has sharp features, and the painting techniques used on it are generally metallic in appearance. When considered together with metallurgical activities at Göltepe, where this style of ware is prevalent and production stages of metallic wares have been detailed (Hacar 2017), there is scope to suggest mutual influence between the potters and miners who worked in the same community.

4.1.3 Gold

There is only a single example that possibly imitates gold. A *depas* recovered from Beycesultan was defined as gold ware by Seton Lloyd and James Mellaart (Lloyd and Mellaart, 1962: 209) (Fig. 7 a), but this example is also decorated with red paint and does not give the impression of being a metal skeuomorph. A ware group considered to represent gold is however known from the Aegean world: yellow-mottled ware.

Fig. 7: Gold ware from Beycesultan (a) (after Şahoğlu and Sotirakopoulou, 2011) and a possible gold ware skeuomorph from Küllüoba (b) (photo by the author).

A single fragment of yellow-slipped plate and with glossy burnishing was found at Küllüoba (Fig. 7 b) and is the only example of something that might be considered a gold skeuomorph. However, no detailed research on this subject has yet been undertaken on Anatolian examples, so interpretations must be provisional.

4.2 Surface applications

When evaluated within a framework that lays the emphasis on functionality (e.g. Scott, 1954: 402), burnishing is generally considered to be a means of adding impermeability to a ceramic, but other reasons for this treatment are possible, particularly when used on high-quality products or on pottery with specific colours (Reeves, 2003: 52). Indeed, cooking vessels that were meant to hold liquids associated with food preparation are generally without slip or burnish, when burnishing to ensure impermeability would aid their intended purpose. One cannot completely ignore the effect that burnishing has in closing the pores of a vessel, but it would be incautious to think that such a time-consuming process would have been intended

only for a single purpose. Slips were occasionally used for decorative purposes, as can be seen in the application of reserved slips. An example of this can be observed on a sherd belonging to the ware group known as 'ring burnished' (Fig. 8 b–c). A metal example with finishing that closely resembles the form of a ring burnished vessel can be seen in a Syrian bottle uncovered in Eskiyapar (Fig. 8 a).

Fig. 8: A silver Syrian bottle from Eskiyapar (a) (after Toker and Öztürk, 1992); baked clay Syrian bottle from Tarsus (b) (Goldman, 1950); ring burnished ware from Küllüoba (c); a reserved slip decorated jug from Kusura (d) (after Şahoğlu and Sotirakopoulou, 2011); an incrusted necked jar from Küllüoba (e) (Türkteki, 2010); a silver vessel from Eskiyapar (after Toker and Öztürk, 1992)

Horizontal and vertical flutes on ceramic vessels (Fig. 5 b, c, e, g) may reflect repoussé, a metalworking technique by which patterns are hammered into a surface from the reverse side in order to create low relief (Fig. 5 d–f). The technique known as encrusting in pottery (Fig. 8 e) reflects a metalwork application called incising, in which inlays create patterns for embellishment, as often seen on metal vessels (Fig. 8 f). It is usually a white encrustation on a black background, though colours were also applied (Fig. 8 d–e). Contrasting colours etched into ceramic vessels also bring to mind the practice of engraving on metal vessels.

5. VESSEL FORMS AND ATTACHMENTS

Thin walls, sharp carinations, extremely long handles, and similar applications are considered risky in pottery (Reeves, 2003: 54), but have nonetheless long been used on baked clay vessels even though they structurally impact the stability of a vessel.

In the production of the baked clay vessels, handles with exaggerated flaring and length constitute the weakest parts. Therefore, it is possible that such handles were applied on baked clay vessels to emulate their counterparts on metal examples. Some, particularly sharp-edged strap handles or concave strap handles, visually reflect the look of metallic handles (Fig. 5 f, Fig. 7 a).

Rolled rims, spool handles, and knobs located either below or above rims are characteristic features of the aforementioned Kumtepe Ib wares (Sperling, 1976: 332; French, 1961: 102). These resemble examples on metal vessels. Lugs similar to the horn-shaped style known from the Beycesultan example (Lloyd and Mellaart, 1962: fig.18/9) appear on the Kayapınar spouted vessel (Toker and Öztürk 1992:191/34). Fluted spool handles, of which numerous baked clay examples (Fig. 9 b) have been recovered, appear in metal specimens from Alacahöyük (Fig. 9 a) and Horoztepe (Özgüç and Akok, 1958: 44, pl. IV.3, fig. 14). It is possible to compare some Early Bronze Age examples of pierced lugs (Fig. 9 d–f), and in particular where such lugs were positioned, with those on metal examples (Fig. 9 c–e).

This analysis has shown that in the Anatolian pottery repertoire there are numerous elements of contact between ceramic and metal vessels, most notably surface treatments, decorative elements, and shapes. Studies on skeuomorphism in other archaeological contexts have shown that imitations of metal vessels in ceramics may be related to a process of emulation of elite behaviour. The evidence presented above therefore implies that the Anatolian Early Bronze Age, which was a period that saw the rise of social stratification, might likewise have been a context in which social emulation could occur. The following section thus aims to explore whether metal skeuomorphism can be evidence for this process in Anatolian societies of the 3rd millennium BC.

Fig. 9: A spool handled vessel from Alacahöyük (a) (after Reeves 2003); an example of spool handled pottery from Beycesultan (b) (after Lloyd and Mellaart, 1962); pierced lugs on a metal vessel from Troy (c–e) (after Sazcı, 2007); a necked pot from Küllüoba (d); a necked pot with pierced lug from Western Anatolia (after Şahoğlu and Sotirakopoulou, 2011)

6. SKEUOMORPHS AND SOCIAL STRATIFICATION

The most significant reference points for the existence of an elite class in Anatolia are metal finds and changes in architecture (Zimmermann, 2016: 277; Massa and Şahoğlu, 2011: 168; Bachhuber, 2015: 117, 197). Silver and gold were regularly chosen for luxury items, and these have been discovered from graves at Alacahöyük and Horoztepe, and in hoards from Troy and Eskiyapar. Metal vessels (particularly those of gold, silver and copper) are almost exclusively associated with wealthy burials, or contexts such as Trojan votive pits that were discovered within the citadel (Blegen et al., 1950, 206, 277). Precious metals are thus synonymous with elites and the ruling class at the top of the social hierarchy. Architectural factors, such as the concept of upper and lower cities, confirm the emergence of monumental public and private structures, and notable defense systems support the theory that social divisions were established at this time. However, a hierarchy implies difference, even among the elite, and it should be remembered that few among the population of a 3rd millennium settlement would have administrators or bureaucrats. If there was an elite class who lived in the upper settlements of early Anatolian cities, then they may have consisted only of the ruler and his family, along with some lower-level bureaucrats and their relatives.

The normal contexts for this type of pottery, and considering the examples from Küllüoba (Fig. 5 f; Fig. 8 e), are burials (Efe, 2015: 247) and votive pits (Türkteki, 2010; Türkteki and Başkurt, 2016). The many votive pits from Küllüoba that contained skeuomorphic examples suggest that such skeuomorphs were employed within the context of feasting. This may also be true for the examples from Troy. A counter example seems to be Seyitömer Höyük, a Bronze Age site in inland Western Anatolia that has been excavated across a large area, which contained examples of *depas* with fluted decorations that were found in contexts of daily use (Bilgen and Kapuci, 2019: 188, 189, tables 4.18, 4.19). It is uncertain whether this might be representative, because there is relatively little contextual information from contemporary examples of skeuomorphs in Western Anatolia.

Ceramic skeuomorphs of metal vessels are more difficult to produce than – and are typically of high quality than – ordinary vessels, yet are often found in substantial numbers. It may be that the reasons for this are archaeologically invisible, and therefore somewhat speculative. For example, elites might sometimes have used high quality ceramics, saving

metal vessels only for very special occasions such as feasting, and it is therefore possible that skeuomorphs were also utilised for many rituals involving votive pits and burials, when metal vessels were unavailable or reserved for other activities. Skeuomorphic pottery may also have been used by the general populace because of its visual qualities, or because people enjoyed the idea that they were using the same vessels as elites.

As social divisions developed in the Early Bronze Age, metal skeuomorphs must have been produced to meet the needs of a developing socio-economic class. During periods when metal production intensified, the numbers of metal skeuomorphs would have increased commensurately, and so began to appear gradually at the beginning of the Early Bronze Age before reaching their height in the Early Bronze Age III. During this period, and in parallel with changes in the types of beverages consumed, new ceramic vessels for drinking and for making offerings emerged. Most such vessels were metal skeuomorphs.

Their earliest examples appear to have been intended to represent silver, but later other metals are represented, particularly copper, bronze and gold, with the latter being found in far lower numbers. The fact that there are so few gold skeuomorphs coincides with a theory by Lloyd and Mellaart, which was developed based particularly on northern Central Anatolia, that there is an inverse correlation between the rate of circulation of metal vessels and that of metal skeuomorphs (Lloyd and Mellaart, 1965: 87), notwithstanding that the scarcity of their recovery might be due to metals being recyclable.

7. CONCLUSION

Rather than imitating or exactly copying all the features of a metal vessel, skeuomorphism can be regarded as reflections of metallurgical applications or features of metal vessels that were reproduced in pottery. It appears that metal vessels were a source of inspiration for potters, not only in direct imitations of metal vessels, but also because the applications found in metal were sometimes replicated in pottery. From colours to surface treatments, from decoration types to handle shapes, these applications reveal that in Western Anatolia, in the Early Bronze Age, imitating metal vessels was a relatively common practice. This pottery also provides a glimpse of metal vessel types that might have existed but have not been found, due to recycling.

In the Anatolian Early Bronze Age, skeuomorphism is important evidence for the development of social complexity. The number and variety of skeuomorphic ceramics increased in parallel with other developments, such as urbanism, metallurgical activities, trade, and cultural interaction. Detailed analysis of the phenomenon is lacking, but contextual evidence suggests that skeuomorphs of metalic vessels became more prominent over time, to the point where they were regarded as suitable for ritual usage, including in burials and votive pits, even by elites.

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