Wood-worked and metal-shocked: softstone vessels in the Bronze and early Iron Age eastern Mediterranean

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Abstract

This paper reviews an impressive variety of softstone vessel traditions that appear in different parts of the eastern Mediterranean during the Bronze and very early Iron Age. Its goal is to summarise the shapes, materials and decorative pre-occupations that characterise these industries, as well as to offer a point of comparison for others in this volume that deal more directly with Mesopotamia and the Middle East. Such a broad comparative study, ranging over two millennia and a wide geographic area, is useful because it suggests social, technical and environmental reasons why these objects might be valued similarly in very different contexts. Such cross-cultural consistencies emphasise yet another reason why softstone vessels deserve to receive significant archaeological attention.

Introduction

Stone vessels are a particularly informative class of artefact. They are well-preserved in the archaeological record, often retain marks from manufacture, and their raw material can sometimes be provenanced to specific source areas. Moreover, stone vessels tend to acquire a wider range of economic and cultural value than metal vessels (which are usually more precious and more heavily commodified) or pottery (which is usually more common and rarely of high status), and they are often susceptible to very different recycling patterns. Such value is both a variable socially-constructed property, and also something prone to a degree of cross-cultural consistency about which it might be possible to generalise. As a result, we need to consider vessel traditions *both* in great contextual detail, *and* highly comparatively (see also Bevan 2007). This paper therefore attempts to provide a point of comparison for others in this volume by reviewing the evidence for softstone vessel industries in the Bronze Age eastern Mediterranean (with some discussion of the earliest Iron Age products as well). These objects are an evocative and highly significant class of material culture throughout this region and indeed the entire Near East, and the last section of the paper goes on to address the underlying social and technical reasons why this might be so.

Stone vessels have been made by a wide variety of societies around the world including hunter-gatherer groups and highly-stratified states, on most of the inhabited continents, including a wide range of ecological zones from sub-arctic to semi-arid to tropical (Bevan 2007: 166-84). Of these traditions only a few produce a wide variety of complex shapes out of many different stones. Such elaborate levels of stone vessel manufacture

are almost exclusively linked to complex societies in Mesoamerica, the Mediterranean, Near East and China, who usually employed full-time craft specialists and complicated production techniques. A second type of industry is found in less stratified agricultural communities, who make a narrower range of simple bowl and jar shapes in one or more hard stones. The manufacturing traditions and cultural associations of such products are often closely linked to agricultural processing (e.g. the use of quernstones) and many Neolithic communities produced these kinds of vessels.

A third type comprises softstone vessels and it is this group that is in fact found in the widest variety of societies, from hunter-gatherer to highly stratified states. Throughout the world, the two most frequent functions for softstone vessels appear to be as cooking pots and cosmetic containers, though lamps and pipes are also common in certain places. Softstone terminology is plagued by a lack of clarity and huge variation in published identifications. For example, in the eastern Mediterranean, the most commonly-used term for dark-coloured soft stones in the academic literature is 'steatite', although in many cases where vessels have been studied by a geologist, the actual material turns out to be a chlorite-rich rock. In contrast, actual steatite (talc) seems more frequently used for beads and other small items. Likewise, the study of gypsum vessels is bedevilled by using the term 'alabaster' to refer both to examples made of travertine (calcium carbonate, 'Egyptian alabaster') and gypsum (calcium sulphate). This paper repeatedly refers to three main stone types: steatite (also known as talc or sometimes 'soapstone'), chlorite-rich stones (occasionally shortened to the overly-specific term 'chloritite' for convenience), and gypsum (in the case of vessels, this normally means a microcrystalline variety). Serpentinite and travertine are also used quite extensively for vessels in the eastern Mediterranean, but are both a little harder and usually drilled rather than carved, and so are excluded from analysis here. In fact, manufacturing considerations are the main reason why 'softstone' is a useful analytical category in the first place. There is a clear technical threshold at a stone hardness of ca. Mohs 3, distinguishing those softer stones that are more likely to be *carved* and harder ones for which drilling methods are usually necessary, particularly for the removal of the vessel interior (e.g. Stocks 2003: 64-69). In the Bronze Age eastern Mediterranean, softstone vessels are usually carved with a punch or a chisel. The use of more elaborate multi-pronged hammers or a horizontal lathes can occasionally be documented in later periods, but these seem to have been introduced during the Classical period and are particularly visible in the Islamic world (e.g. Kohl 1975: figs 5-6).

A significant concentration of softstone industries occurs in the eastern Mediterranean during the two millennia or so of the Bronze Age and very early Iron Age (Fig.1). The following sections review these traditions by period and region before suggesting what general patterns they might reveal.

3rd and early 2nd millennia BC

Egypt

The Egyptian stone vessel industry was undoubtedly the most prolific, widely-traded and longest-lived in the eastern Mediterranean. The vast majority of these products were made of travertine or harder metamorphic stones, but soft stones such as gypsum and metasiltstone were also used, mainly during the Early Dynastic period (Fig. 2a). For example, hundreds of flint gouges found at the gypsum quarries at Umm es-Sawwan attest to the on-site roughing out of vessel blanks (Caton-Thompson & Gardner 1935: pls lxviii-ix). Metasiltstone was used for a variety of shapes, but perhaps the most interesting are a series of elaborate examples from the earliest dynasties that were carved into footed goblets, reed boats and baskets (Aston 1994: shapes 67, 92, 94-95). Gold leaf adhering to some examples suggests that they were originally gilded and one vessel also has the hieroglyph for gold carved into its side (Buckingham 1985; Tiradritti ed. 1998: 44). In many of these cases, the stone may well have been used as a core to make what actually looked like a solid gold vessel. A similar practice is evident much later on in Neopalatial Crete (see below).

The Levant

There are a series of softstone vessels from late 3rd millennium northern Levantine temples and high-status residences (Fig. 2b). Most come from Byblos and Ebla, where they were found alongside larger groups of imported Egyptian stone vessels (Bevan 2004; Bevan 2007: 76-9), but the softstone examples are clearly non-Egyptian in style. The latter break down into two or three typological groups:

- bowls and a bovine-handled lid, carved with concentric herringbone pattern (e.g. Montet 1928: fig. 30, pl.xlvi; Dunand 1939: fig. 270, pls cxlv-cxlvi; Money-Coutts 1936)
- chloritite or steatite fragments carved to receive dense red and white inlay (e.g. Dunand 1939: nos 1873, 3093, 3386, pl. cxlv; Ingholt 1940: pl. xv.4), and with comparanda in pottery and painted on white stone
- shallower incised bowls in an unidentified soft white stone and found mainly at Ebla (Pinnock 1981: figs A1, B3-4).

The two broad material classes (chloritite/steatite, soft white stone) and decorative styles (e.g. rhomboids, herringbones) overlap slightly across these three groups and we find similar decoration on a gold bowl from Ur (compare Pinnock 1981, fig. A1; Woolley 1934, pl.162), suggesting perhaps that all fit into a wider Syro-Mesopotamian style zone. While these vessels share very little stylistically in common with the most well-known contemporary Near Eastern 'inter-cultural'-style vessels, the deep chloritite bowls with rim decoration are also similar, if not in fact part of the same tradition, as a group of chloritite bowls with zig-zag decoration found in very small numbers sites in Oman, south-central Iran, Mesopotamia and as far east as Bactria-Margiana (Potts 2003). Given that suitable stone sources (e.g. for chloritite) exist in all of these locations, it leaves open the question of whether they were local northern Levantine products or imports from further east, but in either case they may well indicate some extremely long-distance links.

Cyprus

Perhaps the most well-known stone vessel industry from Cyprus is that associated with Aceramic Neolithic settlements, but thereafter the evidence for such objects is very thin until the Late Bronze Age. There is one small group of vessels from a Philia culture tomb that are possibly made of local gypsum, but these do not seem to have been common products (Hennessy *et al*. 1988: figs 48.3-4).

Anatolia

As in Cyprus and the Levant, Anatolia has a long but very patchy history of stone vessel manufacture stretching back into the earlier Neolithic, but by the 3rd and 2nd millennia BC, stone vessels were a very minor component of the local material cultural which is dominated by metal and pottery vessels. However, in the earlier 2nd millennium, there are some very rare examples of chloritite and/or steatite vessels (Fig. 2c), including small bowls from Beycesultan, two small zoomorphic boxes and an unfinished raptor-headed cup from Kültepe (Mellaart & Murray 1995: figs O.26-29; Özguç 1959: 109, pl. 35.1-2; 1986: pls 133.2,4, 136.2). The Kültepe boxes appear to be cosmetic containers, while the cup was found in the home of an Assyrian trader. The later Hittite sources mention many such animal-shaped drinking cups (*BIBRU*), made of various materials (including bluish-coloured stone), and the Hittite use of Akkadian/Sumerian logograms to refer to these objects suggests that by then the tradition was an old one that might well date back to the Assyrian Trading Colony period (Carruba 1967).

The Aegean

The Aegean also reveals patchy evidence for stone vessel production in the Neolithic, but more substantial and diverse traditions appear in the Early Bronze Age, both in the Cyclades and on Crete. In these regions, apparently separate but stylistically related vessel traditions using chlorite-rich stones appear sometime during early EB2 (Fig. 2d-e; ca. 2700-2200 BC). In the Cyclades a group of hut-shaped boxes (with carved hatches and spiral designs) represent late additions to an industry that had long been making marble vessels, but which disappears almost completely by the end of this phase. In contrast, on Crete, vessels made of chlorite-rich stones (e.g. certain schists) are the first major stone vessel products, but mark the beginning of a large, and subsequently more diverse, indigenous stone vessel industry that lasts until close to the end of the Bronze Age (Warren 1965; 1969). The Cretan vessels come in a series of spouted bowl and spherical box shapes, incised with spirals and hatched triangles, and have a wide distribution across Crete. Such vessels were only one of a number of small prestige products (e.g. pottery and seals) being traded across most of the central and eastern part of the island at this time. However, the consistency of their decoration and shape suggests a single manufacturing area, possibly close to chlorite-rich outcrops in the Asterousia mountains (Becker 1976).

The overall priorities of Cretan stone vessel industries alter dramatically in the succeeding Early Minoan IIB – Middle Minoan I period (ca. 2400-1900 BC). Amongst other things, these placed a new emphasis on harder stones (that required drilling) and a different set of shapes. Softstone vessels continue to be found (including some small pots now made of steatite), but are a relatively minor component of the overall tradition.

Ironically, decorated vessels in chloritite rich-stones remain one of the clearest indicators of inter-regional trade in such products, because unlike harder stone vessels, they have highly recognisable incised decoration. More specifically, at least two decorative types – one with incised lines, hatching and inlay cut-outs, and the other with a simpler design of vertical or diagonal incised nicks – are probably made by communities in the southern Mesara-Asterousia region (Fig. 2f; Bevan 2007: 85-93). It is unclear how, if at all, these later traditions are linked with the earlier Early Minoan IIA chloritite vessels, but a major technical difference between them is that the insides of the vessels were now drilled, reflecting the dominance of this technique for the contemporary Cretan industry as a whole.

Later 2nd and early 1st millennium BC

Egypt

There is no good evidence for the manufacture of Egyptian softstone vessels during this period.

The Levant

The first evidence of these is a relatively small-scale tradition of vessel manufacture in chlorite-rich stones at the site of Ugarit (Caubet 1991: pls i.7-8,10, viii.1,3-8; Elliot 1991: 49-53, figs 15.5-6), which is most visible in soundings excavated through Middle Bronze Age deposits, but probably continues throughout the Late Bronze Age as well. Chlorite-rich formations are found in the hinterland of the site, as are copper ores (De Jesus 1980: 395, map 19), and there is a probable link between the use of chlorite-rich stones for vessels and the local metal industry, where this heat-resistant material was used for casting moulds and possible tuyère nozzles (Elliot 1991).

The second clear softstone industry in the Levant during this period is focussed on the Jordan valley, and continues right through until the early Iron Age (Ben-Dor 1945; Sparks 1991; 2001). The settlements of Jericho, Beth Shan and Pella were all making vessels during MBIIB-LBIA out of local gypsum that imitate some of the Egyptian travertine vessels being exported abroad at this time, such as alabastra (Fig. 2g). However, there are also indigenous shapes and all of the gypsum vessels exhibit idiosyncrasies typical of softstone carving, such as compass and chisel marks, carinations, and incised decoration. There are also types such as ram's head bowls and dipper juglets that are clearly indigenous forms. There may be a slight hiatus in the production of such vessels in LBIB, but these products become prominent again at the end of the Bronze Age and beginning of the Iron Age (Fig. 2h), and the production area expands slightly beyond the Jordan valley. The limited size and poor finish of many of these later products suggests small-scale local manufacture catering for individual consumption needs rather than official display. The main gypsum shapes now include footed cups (*tazze)* and lugged flasks.

Cyprus

After a long period during which stone vessels were an extremely rare form of material culture on Cyprus, a small softstone industry emerges on the island in the Late Bronze Age and continues to thrive into the Early Iron Age.[i] We can split this tradition into earlier and later groups: the first group is of 14th-13th century BC date and comprises at least three shapes (Fig. 2i) made out of gypsum that are found mainly at Kition and Enkomi. The footed cup (*tazza*) copies an Egyptian-style vessel, and is broadly contemporary with, but apparently independent of, gypsum copies of the same shape in the southern Levant (see above). The other two main forms are the three-handled flask and jar which copy Mycenaean pottery, although there is also the odd gypsum version of indigenous vessel types as well.

Cypriot artisans also carved local chlorite-rich rocks into vessels, and by the end of the Bronze Age and early Iron Age, the use of this material becomes more common than gypsum. Shapes include Mycenaean-style pottery, lugged tubes, bowls, tripod mortars and amphorae (Fig. 2j). Their distribution is concentrated on the site of Enkomi and the industry appears to have been a relatively parochial one, with only the tripod mortars travelling far beyond the island. The majority of these vessels were heavily decorated and the decorative schemes fall into two main categories. Firstly, incised geometric motifs reflect the types of decorative regimes encouraged by the working properties of this soft stone, and have local parallels in other soft media such as ivory and bone (and probably wood). Secondly, other vessels have carinations, arcades or handle attachments that skeuomorph full-sized metal versions. These metal shapes are all associated with eating and drinking display and the small, chloritite copies may have been used as model replacements in tombs and rituals. An interesting technical detail of many of the Cypriot softstone vessels is that their interiors were hollowed out using an unusual combination of both carving and drilling methods (e.g. BM 1896.2-1.391). In contrast to gypsum outcrops that are relatively widespread throughout the island, chlorite-rich formations are mainly found in the foothills of the Troodos mountains that also include the major ore-producing zones (Bear 1963). As at Ugarit, chlorite-rich rocks were also used in the Cypriot metallurgical industry for jewellery moulds and possible tuyère nozzles (Åström 1967).

Anatolia

Despite the Hittite references to stone *BIBRU*-cups mentioned above and one or two vessel fragments found at Bogazköy, there appears to be no major Anatolian softstone industry during the Late Bronze Age.

The Aegean

After Early Dynastic-Old Kingdom Egypt, the Cretan Neopalatial stone vessel industry is probably the second most diverse and elaborate tradition in the Bronze Age eastern Mediterranean. The majority of its products were made in serpentinite or harder stones, but two small and related groups of vessels made in steatite and chlorite-rich stones are associated with palatial production and ideology (Fig. 2k). The first of these is a series of rhyta, footed goblets and shell-shaped vessels that have shallow relief decoration carved over much of their exterior (Warren 1969: 162-63). It appears as if these objects were

covered in gold leaf, and as in the case of the Egyptian relief carved vessels mentioned above, they may have been a way to build (or at least evoke) what looked like complex, solid gold vessels. The second group are a series of extremely elaborate rhyta made in the shape of bull's heads (Warren 1969: type 34D). These objects were a combination of different vessel parts, gold leaf and quartz crystal inlay and may not have been for practical use as rhyta, but they were closely linked to the concept of bull sacrifice that played a central part in Cretan ritual. For various reasons, both these products and the relief vessels seem relatively closely linked to the workshops and ideological schemes of the Knossos palace.

It is also in a later LMII-IIIA phase at this same site that we see the manufacture of gypsum vessels for perhaps the first time (Fig. 2l). Crete is dotted with many outcrops of the stone, but a major deposit exists at Knossos itself and gypsum was heavily used for architectural elements of the earlier palace (Chlouveraki 2002), although rarely if ever used for vessels before now. The main shapes are large alabastra, cylindrical jars, storage jars, bowls, basins and libation tables (Warren 1969: types 1B, 2, 18B, 25, 26vi, 27iiC). Several features of this industry suggest that its products were ideological and material projections of the ruling group, made within the palace, involved in its rituals, carrying its preferred decorative motifs and generally restricted to the Knossos valley and the harbour towns to the north. More specifically, there are two possible workshop areas known within the palace itself (Warren 1967; Evely 1980), and a group of alabastra found in the throne room of the palace may have been part of some kind of anointing ritual. The decorative schemes are very similar to those associated with palatial workshops in metalwork and ivory.

Cross-media Links

The preceding section has summarised very briefly the main softstone products in the Bronze Age eastern Mediterranean. This section takes a much wider perspective and suggests some common cross-cultural properties of softstone vessels that encourage them to be treated and valued in similar ways. For example, we can identify four overlapping characteristics of such materials that ensure they garner fairly consistent social roles and cultural associations across a wide variety of regional contexts and different time periods. These are:

- working properties
- aesthetic appearance
- chemical properties
- geological provenance

The first of these, as noted above, reflects that fact that flint and metal tools can be used to carve sub-Moh's scale 3 stones very effectively. This results in a manufacturing emphasis that is very different from that for harder stones which required drilling. For example, in the latter case, the most experienced artisan is usually employed in the actual drilling process which is the most difficult stage of production, while in the case of softstone, s/he is usually involved in laying out the overall design and more importantly

in adding the final decorative elements (that are often quite elaborate). Furthermore, the application of carving techniques automatically links softstone vessels with similar products in other carve-able soft media such as ivory, bone and wood. It is also likely that softstone traditions begin by fairly opportunistic translation of wood- or ivory-working schemes because the skill-sets and tools required for each are so similar. These links are extremely obvious in the decorative elements used by many softstone objects. For example, the EB2 Cretan and Cycladic traditions that made use of chlorite-rich stones produce very blocky forms and shallow incised decoration, or in-the-round carved elements (e.g. dog-shaped handles) that might well suggest wooden prototypes. Likewise, gypsum traditions such as those in LBA Crete, Cyprus and the southern Levant all have extremely close links to contemporary ivory-working, to the extent that the same artisans may well have been operating in both media.

Second, the appearance of chlorite-rich stones, steatite (dark greenish, bluish, brownish and grey colours), gypsum and chalk (white or light grey), encourages more specific connections between a stone and other media. For example, dark chlorite-rich stones and steatite have obvious visual similarities to two other very different materials, dark polished woods on the one hand, and tarnished copper (greenish) and silver (dark grey or bluish; e.g. Vickers & Gill 1994: 105-53). Likewise, banded gypsum often appears similar to the harder stone travertine (often associated with Egyptian imports in the Bronze Age) on the one hand and ivory and bone on the other. Along with the emphasis on carving, these links encourage not only cultural and magical/symbolic connections between similarly-coloured media, but also different scales of assumed value, strategies for import substitution, and occasional efforts at deliberate counterfeiting.

Third, steatite and gypsum powder are both sometimes used as fixatives in perfume production which naturally encourages their use for perfume containers as well. More importantly perhaps, chlorite-rich stones, steatite and gypsum are all heat-resistant in various ways. The particular fire-retardant properties of gypsum may have encouraged its use for architectural panelling, but does not necessarily seem to have affected it role for vessels. However, the heat-resistant character of the other two materials promotes both their use for cooking and fumigatory vessels, as well as their association with metallurgical processes (e.g. tuyères, casting moulds).

Fourth, this last metallurgical connection with chlorite-rich stones and steatites in particular is also reinforced in the eastern Mediterranean and Middle East by the broad correlation of the ophiolitic formations that produce these materials and zones rich in metal ores. An arc of such ophiolitic formations runs through the southern parts of the Aegean, across Cyprus and the northern Levant and also through southern Arabia and south-western Iran (Degnan & Robertson 1998: fig.1; Koepke *et al*. 2002). At a micro-scale, outcrops of softstone and metal ore are not usually found in exactly the same place, but more broadly, they are associated with the same hinterlands exploited by the larger political centres for key raw materials. As a result, softstone industries (e.g. vessels, moulds, sealstones, spindle whorls) in these areas may have a relatively opportunistic element to them, piggy-backing on the flows of metal resources (particularly copper) that appear to have been the defining features of long-distance trade networks. This is

particular so, given the fact that the same materials were useful commodities to the metallurgical industry itself.

Implications and Conclusions

A key consequence of the properties discussed above is that softstone vessels make superb tracers for wider social phenomena. More precisely, they are often involved in acts of imitation or substitution that are part of the way material culture is manipulated by different interest groups in society, particularly at the interface between local communities and larger inter-regional systems. It is worth evoking a slightly later Mediterranean example to clarify what this statement implies. During the Jewish Second Temple Period (ca. 50-70 AD) chalk ritual vessels have a sudden and brief *floruit* (unlike other more enduring Jewish material culture), before vanishing almost completely after the Bar Kokhba Revolt (Magen 2002). Chalk vessels copied both very traditional wooden vessel forms and also pottery and metal, but were strongly associated with the application of Jewish purity laws, especially the strict observance briefly favoured by the Pharisees (Magen 2002: 138-47). More precisely, this soft white stone was deemed resistant to impurity, unlike either common pottery or Romanised products such as metal and glass, and therefore appropriate for ritual use. The consumption of these items began as quite a narrow fashion but expanded to become a wider Palestinian Jewish custom for a time. The use of an ultra-local white stone, the general conservatism but cross-media references of the chalk shapes, and their sanctioning by an established Jewish faction during a period of heightened political confrontation are all striking. Together, they suggest that such vessels were being deployed to emphasise the material, cultural and ideological faultlines between Pharisee, Saducee and Roman views of the world.

In many ways, this may be a typical softstone vessel phenomenon. We might characterise such industries as producing objects whose value is inherently flexible, and hence likely to take off and spread through communities at times when they are receptive to new social forms or wish to buttress old ones. This is made easier by the fact that it is not difficult to translate carving skills and toolkits from other soft media to working softstone, and because the raw materials are often available as a by-product of other concerns (e.g. metallurgy, architectural construction, the perfume industry). For example, the gypsum industries of the southern Levant mentioned above seem particularly entangled with the expression of identity in the Jordan valley, both among local communities and between these sites and a wider world. The use of an ultra-local stone to refer both to Egyptian-style travertine vessels on the one hand and to very indigenous products on the other is striking, as it the fact that these items never became long-distance trade goods. Such items may express a tension between foreign and local elements, and it is probably no accident that periods of peak production coincide with the ebb and flow of Egyptian political influence in the region. The first group of gypsum vessels is contemporary with a period of relative political instability in Hyksos Egypt and the second with the decline in Egyptian control at the end of the Bronze Age and early Iron Age. Between these two periods, Egyptian political and cultural influence on the area was much stronger and the softstone industry far less visible. In other words, we might characterise these objects as expressing a ‘volatile mixture of emulative and resistive

reactions' (Broodbank 2004: 48) typical of communities on the edge of more culturally-influential and politically-powerful states.

These factors are even more obvious for vessels made of steatite and chlorite-rich stones, because of their strong association with the source areas, processing and finished appearance of metals. The acquisition of metal is perhaps the single-most important motor for long-distance, inter-regional exchange during this period, and the one responsible for dramatic shifts in elite lifestyle (Sherratt & Sherratt 1991; 2001). In this regard an interesting example to consider is the role of chloritite vessels in the earlier EB2 Aegean. These products emerge during a period in which metal-based values become more prominent, there is increased regional contact within the Aegean and the first possible signs of contact with the wider Near East. As suggested above, Cycladic and Cretan vessels made of chlorite-rich rocks both have quite blocky carved forms, with a dense network of incised designs on their exterior. There are parallels in contemporary incised greyware pottery from both regions, but it is quite possible that the original prototypes are wooden (and occasionally basketry). The translation of such designs into softstone at this particular time may also have been made easier by an increased availability of suitable metal tools (e.g. Renfrew 1972: 326-32, fig. 17.2). Another interesting clue given by the pottery is that in the later EB2-3 period, the emphasis in decorated ceramics shifts to skeuomorphing the appearance of metal vessels (e.g. Vasilike and Urfinis wares). There is a strong inter-cultural dimension here too because while incised decoration had a local Aegean ancestry that we can occasionally glimpse for example in Neolithic pottery, the new metal-based values were associated with Anatolianising shapes and practices. The relatively sudden appearance of chloritite vessels and incised greyware pottery traditions, during what appears to be a period of acute social and demographic change, may reflect one factional response to the growing importance of partially foreign, metal-based value regimes. So, this softstone tradition is sandwiched into a phase during which metal vessels and tools become more available, and during a period of heightened inter-regional contact, but disappears when metal-based values become more entrenched, which on Crete appears to occur in tandem with the emergence of more complex social structures.

Do these suggestions have relevance to the study of Mesopotamian and Arabian softstone traditions? The suggestion that softstone production may be linked to the metals trade is also potentially relevant to the character of the Bactrian, Iranian and Omani softstone traditions. It may be possible to explain, for example, the shifts in major production (e.g. between *série ancienne* and *série récente*) as one linked to shifts in the main regions supplying Mesopotamian centres with most of their metals. Certainly not all metal extraction areas see the appearance of chloritite or steatite vessels, but such traditions probably emerge in tandem with certain types of social and economic relationship linking the inhabitants of these metallurgical upland landscapes, with lowland or coastal entrepots (Susa, Dilmun, Ugarit, Enkomi) and sometimes complex neighbouring states who provided a larger market for metal products. One key difference however is in the distribution of mineral resources. In Mesopotamia, the relative paucity of such resources probably encouraged a greater trade in such softstone vessels, whereas in the eastern Mediterranean, these stones are widely available and finished vessels rarely move very

far (though harder Egyptian travertine vessels certainly do). However, other similarities suggest avenues for further investigation: for example, Near Eastern softstone vessels also often include a combination of soft media designs (also with links to local incised greyware pottery: e.g. Potts 1999: fig. 6.4) and skeuomorphic metal ones. Likewise, the mixed Elamite and Mesopotamian cultural references of the Iranian chloritite vessels from places such as Jiroft and Tepe Yahya (e.g. Majidzadeh 2003) balances the preferred iconography of producers and potential consumers, but may also reflect a complex and sometimes contentious discourse between local and inter-regional influence.

This paper has introduced the variety of softstone vessel industries present in the Bronze Age eastern Mediterranean, and suggested some features that they share in common. The appearance, working properties, chemical character, and geological provenance of many softstone vessels often allows them to contain ideologically-charged and extremely informative social messages. One of the challenges of studying such objects is therefore to judge which features about these traditions require explanation at a general cross-cultural level, and which ones reflect historically specific variation.

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Figures

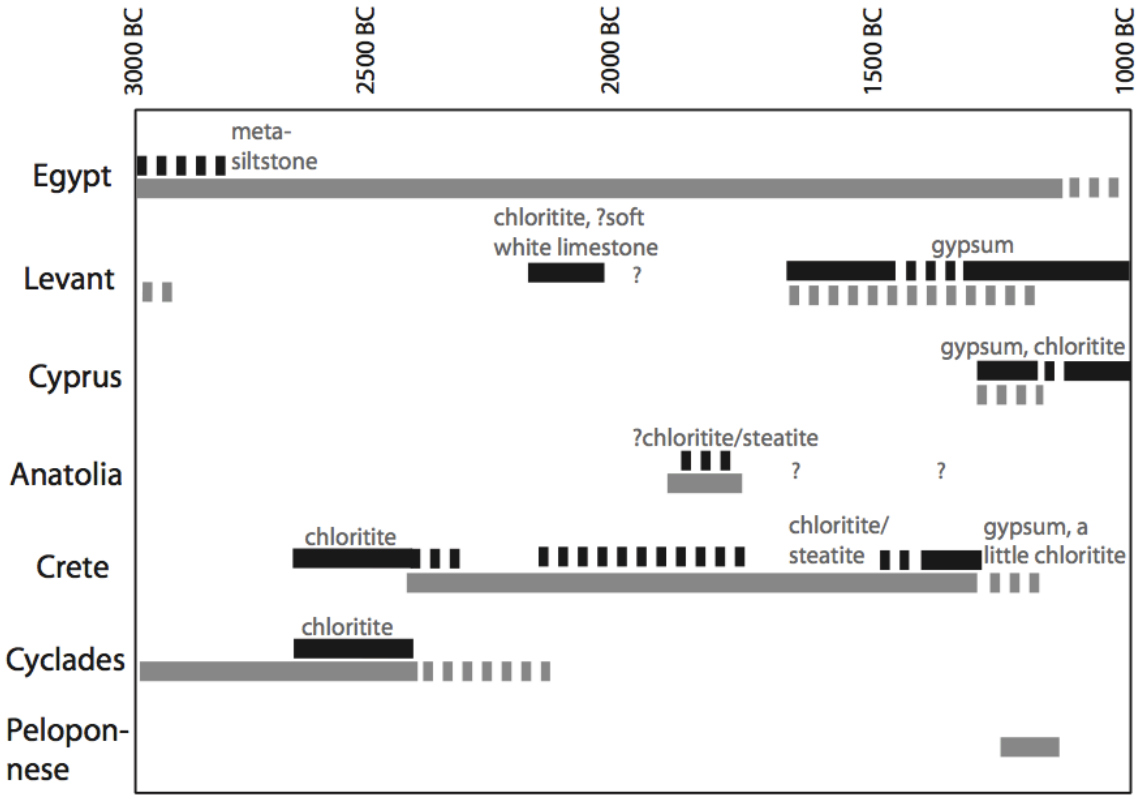

Fig. 1. Chart showing the major regional stone vessel industries in the Bronze Age Eastern Mediterranean. Softstone industries are shown in black, while traditions using harder stones are shown in grey.

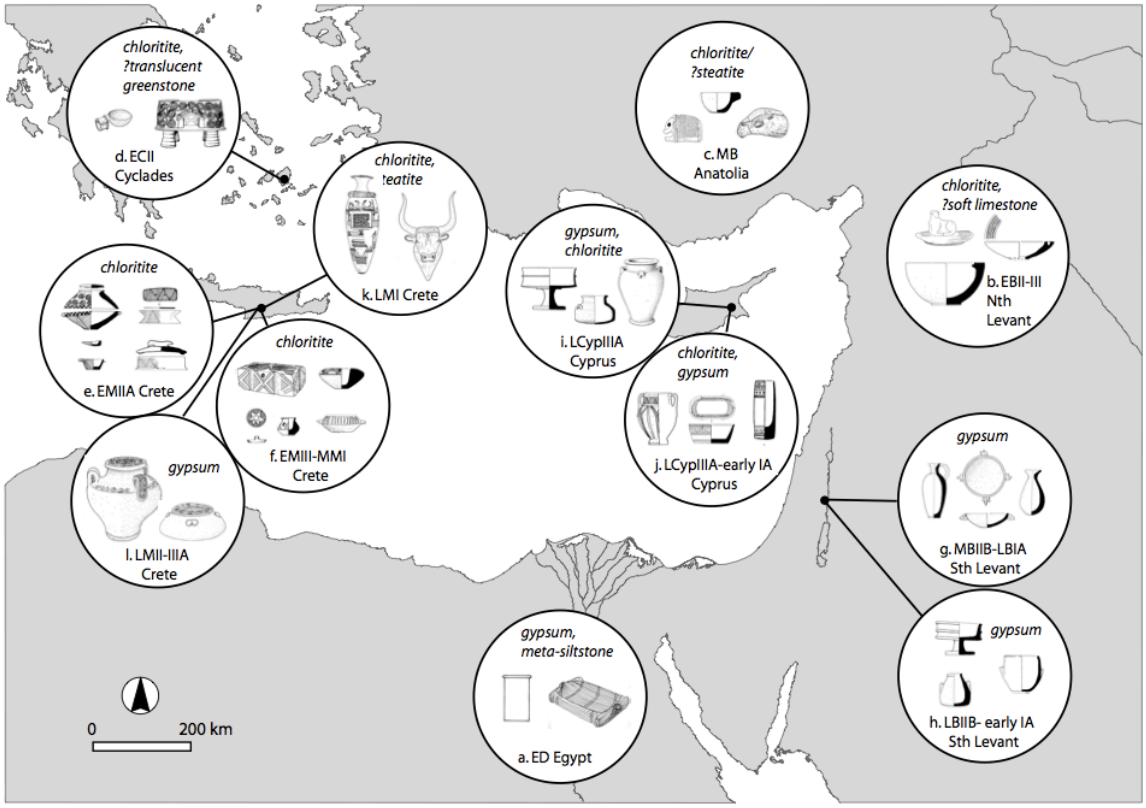

Fig. 2. Map of the Eastern Mediterranean with important softstone vessel industries marked, along with a selection of their main shapes.

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[i] The published examples for this industry are particularly dispersed (e.g. Åström 1967: 71; Courtois 1984: nos 905-15; Karageorghis 1960; 2000: nos 116-24) and further vessels exist in the Cyprus Museum collections. A fuller discussion, typology and catalogue will be published elsewhere (Bevan in prep).