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Issues in Hittite Ceramic Production: A View from the Western Frontier

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Abstract

Excavations between 1950 and 1973 at the site of Gordion/Yassıhöyük, near Polatlı in west central Anatolia, produced stratified deposits of Middle and Late Bronze Age ceramics in two deep soundings. Comparison with published assemblages establishes a close similarity in wares and shapes with Hittite centers in the Kızılırmak region; in the latest (Late Bronze II) levels, the Hittite repertory is accompanied by small quantities of wares with possible ties to the second-millennium ceramic traditions of western and southwestern Anatolia. Gordion's predominantly Hittite ceramic assemblage is discussed in connection with current understanding of the empire's western frontier zone, and with ongoing studies indicating standardization in ceramic production over a vast geographical expanse.

Twenty-five years ago, a detailed, stratified ceramic record securely identifiable as Hittite was available almost exclusively from the imperial capital at Boğazköy-Ḫattuša and sites in its vicinity. In recent decades, excavation and publication have contributed substantial new evidence for Hittite ceramic production not only within the Hittite heartland but also from regions along the empire's western, southern, and southeastern frontiers. My point of departure is the Bronze Age ceramic material recovered during the excavations conducted by the University of Pennsylvania at Gordion/Yassıhöyük between 1950 and 1973, the study of which prompted my interest in this subject some twenty years ago (Gunter 1991). Subsequent excavations at the site in 1988–89 have contributed additional Late Bronze Age material with which to assess ceramic production in this period and the site's relationship to Hittite centers in the Kızılırmak basin (Henrickson 1993; 1994; 1995). As presently known, the repertory of wares and shapes at Late Bronze Age Gordion proves closely

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related to those of the capital at Boğazköy-Ḫattuša and Late Bronze Age Tarsus, and joins growing evidence for a remarkably similar assemblage and sequence excavated in Late Bronze Age levels at sites in southern Anatolia and the Upper and Middle Euphrates Valleys.[1] At the same time, final publication of the Late Bronze Age finds from Beycesultan has newly elaborated ceramic developments in southwestern Anatolia that reveal clear Hittite connections (Mellaart/Murray 1995). Evidence for the Late Bronze Age ceramic industry at Gordion is relevant to understanding developments at Beycesultan and western Anatolia more broadly, including precisely the region in which scholars have located the probable frontier between the empire and its western neighbors.[2]

A detailed, systematic comparison of excavated assemblages and their stratigraphic correlations, and the integration of ceramic evidence with that of glyptic and other categories of material culture, remains an essential undertaking. Also needed is a thoughtful review of this evidence in the light of Hittite historical geography, to which newly discovered inscriptions have recently made significant contributions. What, precisely, do we mean by "similarity" among the ceramic assemblages recovered from these sites, and how was this apparently coordinated production achieved? What, if any, inferences about political circumstances are we entitled to draw from the parallel development and geographical extent of Hittite-style ceramic production? Does present evidence allow confident correlations between political and cultural frontiers? In the interim, a few issues can be raised regarding the nature and geographical extent of Hittite ceramic production, with special reference to the empire's western domains.

Late Bronze Age Gordion and the Hittite Empire

Central Anatolia west of the Kızılırmak seems to have belonged within the Hittite ceramic orbit at least from the Old Hittite period onward. Excavations conducted by the University of Pennsylvania at Gordion (the modern site known as Yassıhöyük), located on the Sakarya River approximately 100 kilometers southwest of Ankara near Polatlı, have investigated pre-Phrygian levels only in several soundings, but these have nonetheless furnished important evidence for understanding ceramic developments in this region. Evidence for Bronze Age occupation at the site emerged during the first season of excavations in 1950, in the form of an Early Bronze Age cist burial under one of the Phrygian tumuli, and the following season demonstrated that the site preserved additional deposits antedating the Iron Age levels. The "Hittite" character of the Bronze Age ceramic finds – that is, their close affiliation with central Anatolian developments – was established early. Excavations from 1951 to 1953 under two of the Phrygian tumuli yielded a cemetery dominated by pithos burials but also including inhumations and cist graves (Mellink 1956). Subsequent excavations in 1962 produced an additional eight burials that belonged to the cemetery,

[1] Dupré 1983; Gates 2001; Goldman 1956; Griffin 1980; Korbel 1985; Summers 1993; Symington 2001; Umurtak 1996.

[2] For the evidence from historical geography, see Hawkins 1998 for a recent discussion, with rich bibliography. For a map situating Gordion on the western frontier of Ḫatti, see Mellaart/Murray 1995, 104, Map 4.

expanding the number of excavated burials to some fifty-five, of which forty-two were in pithoi. While the skeletal remains were in all cases poorly preserved, the pottery included as grave gifts was often intact or restorable. Jars, bowls, and pitchers in wheelmade buff wares with red or brown (usually partial) slip exhibit parallels with Kültepe, Boğazköy, and Alişar Höyük, and permit a dating of the associated burials to the Old Assyrian Colony Period and early Old Hittite periods, or Middle Bronze III and IV (Mellink 1956, 55–57; Gunter 1991, 49).

Apart from the burials, the corpus of Bronze Age ceramics from the older excavations at Gordion consists of about 7,000 fragmentary vessels recovered primarily from two deep soundings under Phrygian buildings on the citadel mound (Megaron 10 and Megaron 12). The value of the material lay chiefly in its context, which consisted of superposed layers (probably a succession of floors) occasionally with associated interior features such as stretches of stone or mudbrick walls, hearths, or pebble paving. In 1965, a deep sounding below Megaron 10 revealed an unbroken sequence extending at least from the Old Assyrian Colony Period to the Early Iron Age (Layers 18 to 4). Although Gordion's ceramic phases did not correspond precisely to the major building periods then known at Boğazköy, broad correlations could be established with the sequence preserved from the capital. To judge by the ceramic parallels, along with a clay bulla bearing hieroglyphic signs of Old Hittite form, the settlement of this period at Gordion appears to have been situated within the Hittite orbit, perhaps on or near the western frontier during the Old Kingdom (Gunter 1991, 48, 104). At the same time, a few ceramic parallels with material from sites in the Afyon area, chiefly Kusura and Beycesultan, and the extramural cemetery of pithos burials at Gordion itself, reflect a partial and perhaps significant cultural independence from sites on the central Anatolian plateau. Yet the ceramics recovered from the pithos burials belong exclusively to the Old Assyrian Colony Period and early Old Hittite ceramic assemblages documented at central Anatolian sites. The ceramic vessels from the corresponding occupation layers below Megaron 10 (Layers 14 to 12) are closely paralleled at nearby sites, especially Polatlı, and can also be correlated with central Anatolian sequences (Gunter 1991, 47–49).

There was no break, stratigraphic or otherwise, between Middle and Late Bronze Age levels. Late Bronze Age material from the older excavations at Gordion derived almost exclusively from the soundings under Megaron 10 and Megaron 12, aside from unstratified finds recovered from miscellaneous Iron Age or later contexts. This assemblage seems tied even more closely than in preceding periods to the ceramic repertory associated with the Hittite imperial period. The superposed layers clearly documented a gradual, steady increase in the percentage of wheelmade, unslipped buff wares – and a parallel decline in the red-slipped wares – fashioned in a restricted range of shapes: characteristically, shallow bowls or plates; jars with narrow cylindrical neck, single vertical handle, and pointed or flat base; carinated jars (or perhaps beakers) with ring base; and cooking pots (Gunter 1991, 28–36). Graffiti paralleled at a number of Hittite sites, and Hittite hieroglyphic seal impressions, were recovered from the latest Late Bronze Age II levels (Megaron 10, Layers 9 to 5; Megaron 12, Level VB) and from unstratified contexts (Gunter 1991, 37–38, with bibliography).

Coupled with the evidence of Hittite monuments in the vicinity – at Yağrı, to the southwest, and Gâvurkalesi, to the southeast – the ceramic record revealed in the soundings appears to place Late Bronze Age Gordion firmly within Hittite territory both culturally and politically (Gunter 1991, 105).

Reinvestigation of Late Bronze and Early Iron Age levels at the site in 1988–89 have clarified the stratigraphic situation at the end of the Late Bronze Age and beginning of the Iron Age and yielded additional ceramic material, which has been profitably analyzed with the aid of a broader approach documenting also the processes involved in local ceramic production (Henrickson 1993; Henrickson/Blackman 1996). The 1988–89 Yassıhöyük stratigraphic sequence (YHSS), obtained from investigations likewise conducted on a small scale, produced ceramic finds from stratified deposits assigned to the Middle (Phase 10) and Late Bronze Ages (Phases 9–8). Belonging to Phase 8 was a building into whose collapsed stone walls had been dug a pit containing a cache of five well-preserved ceramic vessels. Associated with this phase was also a sealing bearing Hittite hieroglyphs, which assisted in assigning a date around 1200 B.C. to the deposit and associated ceramic finds (Voigt 1994, 265–267).

The impression remains one of continuous development at Gordion throughout Middle and Late Bronze Age levels, with a ceramic industry closely and consistently oriented toward the Kızılırmak basin. Common to the Late Bronze Age II levels at the site is an assemblage dominated by unslipped buff wares in a restricted range of shapes and sizes: bowls with rounded base; jars with narrow cylindrical neck, single vertical handle, and pointed or rounded base; and cooking pots[3]. The 1988–89 Yassıhöyük stratigraphic sequence produced only scant evidence for the flat and ring bases more common in earlier periods (Henrickson 1995, 85, carinated beaker FN YH88–108). As several vessels with these features were recovered from among the latest Late Bronze Age layers in the soundings below Megaron 10 (Layer 5) and Megaron 12 (Level VA), however, their continued production seems well established.[4] Red-slipped wares also continued, albeit in steadily decreasing quantities, in Layers 9–4 and Levels VA–IVB (Gunter 1991, 28, 41–45).The earlier excavations also seem to have documented a broader repertory overall, including fragments of lentoid flasks embellished with good cream slip (Gunter 1991, 35). As these fragments were recovered from overlying Early Iron Age levels, however, they cannot be confidently situated in the stratigraphic sequence.

In his analysis of the Late Bronze Age material from recent excavations at Gordion/Yassıhöyük, Henrickson has suggested that its apparently simpler repertory might reflect the settlement's peripheral status within the empire or its circumscribed role in a hierarchy of specialized production and exchange. Given the ceramic evidence for specialized production on a large scale, and the small scale of sites of this period in the vicinity, he and Mary M. Voigt suggest that a regional distribution network for ceramic vessels may have been

[3] Gunter 1991, 41–45; Henrickson 1994, 105–6, 121–22; figs. 10.1–10.2.

[4] Gunter 1991, 43, 45; figs. 18: 376–380; 23: 490–491; 31: S58–59.

centered at or near Gordion itself (Voigt/Henrickson 2000, 41–42). On present evidence, the repertory of shapes and to some extent of wares does not match the richness and variety of those at Boğazköy, although the very limited exposure of these levels in both older and more recent investigations at Gordion makes such a comparison extremely difficult. Certainly Gordion has not yet exhibited the elaborate vessels associated primarily with ritual contexts at the imperial capital. Thus far, to my knowledge, Gordion has yielded only one likely candidate for a shape closely associated with Red Lustrous Wheel-made Ware or its imitations: a neck fragment probably from a spindle bottle, recovered from Megaron 10 Layer 7 (Gunter 1991, 35; fig. 16). Despite its unusual plum red slip, it is not readily identified as an import, and it is certainly not of Red Lustrous Wheel-made Ware. Nor have fragments of libation arms yet appeared.[5] Yet the site did furnish specimens of nearly all other ware categories found at Boğazköy, including the cream- or white-slipped ware also attested at Tarsus (Late Bronze IIa) and Alişar Höyük.[6]

In collaboration with M. James Blackman, Robert C. Henrickson has considerably advanced understanding of the manufacturing parameters of ceramic production at Gordion/Yassıhöyük in several periods of its history, including the Late Bronze Age (Henrickson 1993, 93–111; Henrickson/Blackman 1996, 69–79). Their research has established that at all stages – from clay selection and preparing to forming and finishing methods, firing temperature and conditions – the processes involved closely echoed those documented at Boğazköy. These careful observations are significant in defining and elaborating not only notions of ceramic tradition but also of cultural choices in the manufacture of particular vessel types, such as animal-shaped vessels (Henrickson 1993, 109–111). Comprising an important advance toward defining the "technological style" of Hittite ceramics, this research also demonstrates rich potential for new insights into ceramic production during the Old Kingdom and especially the Hittite imperial period at sites over a broad expanse of Anatolia (Henrickson 1994, 98–100).[7]

Considered in association, the results of both older and more recent excavations at Gordion suggest that nearly every aspect of Late Bronze Age ceramic production was tied to specifications presumably established in the imperial capital. To judge by preliminary reports on the newly available material, the inference that the site lay comfortably within the Hittite imperial orbit remains plausible. In addition, a recent reinvestigation of the Hittite monument at Gâvurkalesi near Haymana has recovered evidence for a settlement associated with the carved reliefs and processional way, perhaps representing auxiliary buildings, storage facilities, and domestic units of an administrative complex (Lumsden 2002). It now seems clear that the monument represents a more extensive, complex, and multifunctional site than had been revealed by H. H. von der Osten's exploration carried out in 1930. South

[5] Nor, as far as I know, have libation arms been reported from coastal Kinet Höyük, located in much closer proximity to the Göksu Valley, where considerably greater quantities of Red Lustrous Wheel-made Ware have been found in survey and excavation (Eriksson 1993; Symington 2001, 169–170).

[6] Goldman 1956, 203; Gorny 1995, 164; Gunter 1991, 28; Müller-Karpe 1988, 20–22; Parzinger/Sanz 1992, 45.

[7] Additional useful discussions of technological style, with bibliography, include Gosselain 1998; Hegmon 1998; Reedy/Reedy 1994.

of Gordion, the region stretching from modern Polatlı to Kadınhanı, can be identified as the Hittite dependency of Pedassa. In this general area lay not only the frontier between Ḫatti and Tarḫuntašša, as confirmed by the Hatip inscribed relief south of Konya, but also the eastern frontier of Mira-Kuwaliya and Ḫatti (Hawkins 1998, 22, 24).[8] Moreover, recent archaeological studies in western Phrygia further suggest that Gordion lay well within the Hittite imperial borders. Investigations at Beyköy Höyük, one of a cluster of four sites located between Kütahya and Afyon, have produced a hieroglyphic inscription and Late Bronze Age ceramics of Hittite type.[9]

Yet Gordion's Late Bronze Age ceramic assemblage did not consist exclusively in the standard Hittite wares. Two additional groups, each represented by only a few examples in the latest Late Bronze Age deposits, could be isolated from the dominant local tradition. One consists of an unusually gritty version of wheelmade tan or orange wares, fired in darker hues. Its shapes overlap with prevailing Hittite forms (shallow bowl; jar with broad rim indented on the upper surface), but also depart from well-known categories (heavy bowl; small hole-mouth jar). Samples of this group were recovered only from Megaron 12 Level IVB (Gunter 1991, 30). In addition, the older excavations yielded a small number of ceramic fragments characterized by a biscuit or surface displaying a heavy concentration of "silver" (less frequently "gold") mica, recovered from the latest Late Bronze and overlying Early Iron Age levels in both soundings under Megaron 10, Layers 6–4 and Megaron 12, Level IVB (Gunter 1991, 29; fig. 17: 340, 354). The mica concentration on the surface is readily distinguishable from the mica film or slip that occurs frequently on the Phrygian pottery from Gordion, and the earlier, pre-Phrygian group is also distinguished by its shapes. These samples displayed only limited overlap with the types favored among the wheelmade buff wares of Hittite tradition, such as the ubiquitous plate and certain types of jars. Instead, the other examples of the micaceous fabric represent a different repertory: bowls with profile indented below the rim, which is sometimes flat; a small jar with trefoil rim; and a jar or wide-mouthed jug, perhaps a beaker. The comparatively frequent presence of tan or red-brown slip further distinguished this group from the unslipped buff wares which otherwise formed nearly ninety percent of the assemblage. The coincidence of micaceous fabric and shapes among samples dated to the late second millennium B.C. recovered from survey collections especially in the Akhisar-Manisa region suggested that at least the initial examples at Gordion may have been imported from areas farther west or southwest (Gunter 1991: 29–30, citing French 1969). The nature and distribution of ceramic production in the late second millennium B.C. in western and southwestern Anatolia is now better documented through final publication of the excavations at Beycesultan and Aphrodisias, prompting a brief review of overlapping ceramic traditions – perhaps corresponding to or indicative of cultural or political frontiers – in the late second millennium repertory in areas west and south of Gordion.

[8] The walled citadel of Yaraşlı, southeast of Gâvurkalesi, has been identified as a Hittite hillfort on the basis of its masonry and associated sherds, which appear to belong to the Old Hittite period (Mellaart 1983).

[9] Gonnet 1994, 75–77; Hawkins 1998, 22, 24 on Malatça Höyük; Mellaart/Murray 1995, 101–102, Maps 1–2.

Frontiers in Western Anatolia

Recent discoveries of Hittite inscribed monuments, together with reappraisals of long-known inscriptions, have shed new light on the historical geography especially of southern and western Anatolia. In his recent reexamination of the hieroglyphic inscription preserved on the Karabel rock relief near Sardis, western Turkey (Karabel A), J. D. Hawkins has demonstrated that it gives the name of Tarkasnawa, king of Mira, a figure also attested through a silver seal and on seal impressions found at Boğazköy (Hawkins 1998, 1–18). His investigation prompted a broader reappraisal of the historical geography of western Anatolia, with important results. Hawkins noted that the inland frontier shared by Mira and Ḫatti lay toward the western edge of the Anatolian plateau, extending perhaps from the Porsuk River south to Afyon (Hawkins 1998, 1, 31 with fig. 11). His re-reading of the Karabel inscription demonstrates that the kingdom of Mira embraced a considerable geographical scope, from the Kütahya region to the Aegean coast, and provides a new historical framework within which to consider Late Bronze Age ceramic evidence in this region of western Anatolia.

From the Middle Bronze Age onward, central Anatolian ceramic styles made their way into the repertory of wares and shapes of regions bordering the Kızılırmak basin on the west, the south, and the southeast. Similarities between the Middle and Late Bronze Age red burnished wares of western regions and the Hittite ceramics of central Anatolia have been observed by several scholars, beginning with the initial recovery of the western samples in the 1950s and early 1960s.[10] Excavations at Beycesultan and Aphrodisias have further documented the ceramic repertory of southwestern Anatolia in the second millennium B.C., whose geographical extent can be gauged by survey collections, including the important material collected and analyzed by David H. French in the areas of Balıkesir, Akhisar, and Manisa (French 1969, 72, 75; Joukowsky 1986, 682–686). Excavations at Beycesultan near Afyon contributed an important, stratified sequence and large exposure of levels containing impressive architecture and associated ceramic and other finds. Alongside the dominant local or West Anatolian ceramic tradition, the Middle Bronze Age repertory (Levels V to IV) evinces an increased receptivity to central Anatolian shapes (beaked spouts, wheelmade bowls, trefoil pitchers, teapots, basket-handled and two-handled jars, strainer bowls) and details (skeuomorphic rivets and "bearded" spouts on pitchers) (Mellink 1967, 8–9, with further references). Acquaintance with central Anatolian ceramic fashions thus antedated Hittite imperial activity in the Late Bronze Age.

Beycesultan Levels III to I have been dated by the excavators to the Late Bronze Age, from roughly the fourteenth to the eleventh centuries B.C. A significant change in the ceramic repertory occurred in Level I, following the destruction and burning of Level II. While the red, gray, and gold lustrous wares continued to be produced, new wares and especially a new repertory of shapes were introduced: slipped and burnished wares fired in a variety of colors appeared for the first time, and plain and coarse kitchen wares were unusually

[10] Akurgal 1950, 54–58; cf. Hanfmann 1951, 178–179; Lloyd/Mellaart 1965, 76–78.

plentiful compared with immediately preceding levels (Mellaart/Murray 1995, 56–57). Several features of the Beycesultan Level I assemblage demonstrate close acquaintance with (and influence from) the "core" Hittite repertory. These include not only the standard plates and shallow bowls in coarse, unslipped wares, sometimes with rope-impressed decoration, but also such distinctive types as libation arms (Mellaart/Murray 1995, 93–94; figs. P.35–41). Yet the Level I assemblage at Beycesultan does not precisely mirror the specific constellation of wares and shapes that characterize the Hittite repertory elsewhere, including Gordion. Some of the distinctive shapes of the preceding Levels III and II, including elaborate drinking vessels, reappeared in Level I. Certain vessels such as those designated "chalices," and the prevalence of "gold" and "silver" wash wares, suggest the continued if diminished production of an elite category of drinking vessels not yet attested (at least in ceramic versions) in the Hittite ceramic repertory (Mellaart/Murray 1995, 56–57).

Mellaart has proposed to identify Beycesultan as a major city or perhaps the capital of Arzawa, and has emphasized the region's ceramic and more broadly cultural independence from the Hitttite world (Mellaart/Murray 1995, 98, 108–109). In his recent study of Hittite historical geography in western Anatolia, J. D. Hawkins places Arzawa farther north and west, suggesting instead that Beycesultan was a major city (perhaps the capital) of the land of Kuwaliya or located on the frontier between Mira and Ḫatti (Hawkins 1998, 24). Mellaart proposes that Hittite ceramic features reached Beycesultan from the region west of the Kızılırmak, where there developed "a mixture of older and later Central Anatolian fashions, not reflecting those current in the Hittite capital" (Mellaart/Murray 1995, 94). Yet the evidence for Late Bronze Age Gordion suggests that its local ceramic production closely paralleled developments at the capital throughout the late second millennium B.C. The Hittite affinities of Late Bronze Age Beycesultan, especially Level I, could be explained by Hittite production centers in west central Anatolia, which were located at no greater distance than Gordion and conceivably even closer to the Afyon region. Many characteristic traits of the western and southwestern Anatolian ceramic "province," such as ribbed and grooved ornament, and the wide popularity of "gold" or "silver" micaceous slips or washes especially in the region extending from Afyon to Manisa, are seldom attested in central Anatolia. But the older excavations at Gordion, as described above, furnished hints that the western and southwestern preference for micaceous slips or washes, perhaps along with certain shapes, made its way as far as the upper Porsuk River valley. This evidence suggests a porous frontier, at least ceramically speaking, in the region along the border between Mira and Ḫatti.[11]

Farther west, in the Akhisar/Manisa region investigated by David H. French in 1959–60, survey collections comprise the chief source of information on late-second-millennium ceramic developments (French 1969, 47–55, 68–71). At Sardis, where Late Bronze Age deposits have been little probed thus far, the ceramic finds recovered from the sounding under the House of Bronzes and from survey collections on the nearby mound of Kilcanlar north of the Gygaean Lake reveal similarities with the gray and tan wares from Aphrodisias,

[11] For the distribution of characteristic wares of Beycesultan Levels III–I, see Mellaart/Murray 1995, 99–109.

Beycesultan, and Bayraklı (Ramage 1994, 163, 166: fig. 14.1.1; Gunter in preparation). In Hawkins's recent study of Mira and its neighbors, Sardis emerges as a candidate for the capital of the Seha River land (Hawkins 1998, 24).

The Lower Land, south central Anatolia, lacks a detailed, stratified sequence for the late second millennium B.C. James Mellaart's surveys in the Konya plain in the early 1950s produced good evidence for Hittite ceramics of both red-slipped and plain (unslipped) categories. The "plain ware" bowls (often with string-cut bases) and plates, which seem to fit comfortably with the Late Bronze I and especially II assemblages now known in some detail from Kilise Tepe, were "extraordinarily common in the whole area as well as in Cilicia" (Mellaart 1958, 336–37; pls. VIII, IX).[12] The Hittite monuments of the Konya-Beyşehir region, both those long known from Eflatun Pınar and Fasıllar and the recently discovered Hatip monument just south of Konya, attest to a Hittite presence throughout the region, although its chronology and extent are not yet known.

Standardization of Ceramic Production

One of the most important recent developments in Hittite ceramic research consists in new approaches that document and analyze in detail archaeological evidence for the processes of production. Andreas Müller-Karpe's detailed analysis of the pottery recovered from kilns excavated in the Upper City at Boğazköy represents a major contribution to this emerging field of study, to which Henrickson's studies of the manufacturing parameters for ceramic production at Gordion/Yassıhöyük reviewed above have added importantly (Müller-Karpe 1988). These approaches offer a newly refined and productive set of criteria for making comparisons between and among the "Hittite" ceramic assemblages from Late Bronze Age levels at sites over a broad expanse of Anatolia. As noted earlier, Henrickson has demonstrated that the manufacturing parameters for Late Bronze Age ceramics at Gordion/Yassıhöyük echoed those attested at Boğazköy. While visual inspection of the Hittite ceramics recovered from Late Bronze Age Tarsus and Kinet Höyük certainly points to virtual identity with material from Boğazköy and Gordion, a more systematic determination of the nature and degree of similarity between and among assemblages would be highly informative. The increasing availability of radiocarbon dates will assist in this effort as synchronisms are established among assemblages that are now known in greater detail, and whose description and analysis is enhanced by technical observations on various processes in the manufacturing sequence.

Yet even without benefit of such detailed or quantitative data, the standardization of ceramic production in Late Bronze Age levels attested over a wide expanse of Anatolia – certainly in the circumscribed, mass-produced repertory of wares and shapes, and very likely also in manufacturing parameters – is remarkable and undeniable, and how this might have been achieved deserves further consideration. Was there a systematic, centrally

[12] Mellaart has specified more recently, however, that these were not examples of Hittite "drab ware" (Mellaart/Murray 1995, 94).

controlled dissemination of production techniques along with a standardized repertory of shapes and wares? At several sites within the Hittite heartland or along its frontiers – including Boğazköy, Alaca Höyük, Tarsus, Gordion, and Korucutepe – Late Bronze Age ceramic vessels bear graffiti in a limited number of marks and generally, although not altogether consistently, placed on easily visible parts of the vessel (Gunter 1991, 37–38, with bibliography). Marie-Henriette Gates has recently studied these potmarks with the benefit of a new evidence for their occurrence at Kinet Höyük, near Dörtyol in eastern Cilicia, where a Hittite ceramic repertory was abruptly introduced in Late Bronze I levels 15–13 (Gates, this volume). She has argued that the marks designated the individual or workshop products of potters using communal work facilities, in order to calculate accordingly to each unit its eventual payment or other compensation. The geographically widespread practice of marking vessels using a similar (and restricted) vocabulary of signs, coupled with the standardization of wares and shapes themselves, must have resulted from direct, centralized state regulation (Gates 2001, 138–141). As Gates has argued, the distribution of this characteristic pottery must therefore closely reflect the extent of the empire's control, or at least the territory in which this state-controlled system ordinarily functioned.

Not every site that has produced either Hittite pottery or potmarks has presented an identical situation. Whereas at most sites the vessel marks appear on the unslipped ("drab") ware, at Korucutepe they occur on the burnished, slipped and smoothed wares of Phase I (1600–1400 B.C.) rather than the buff and orange wheelmarked wares of the following Phase J (1400–1200 B.C.), whose repertory otherwise exhibited even closer ties to that of Tarsus Late Bronze II (Griffin 1980, 75–76). Some sites have furnished characteristic Hittite ceramics but no examples of potmarks, suggesting that these marks might also reflect other aspects of ceramic production: the range of processes that was carried out at a particular location, for example, or those which involved shared resources or production facilities.[13] As Gates rightly notes, ethnographic parallels indicate that such marks are commonly used to distinguish individual or workshop products – often those of the *producers* – within communal work facilities such as kilns.[14] Certainly, the limited repertory of marks thus far attested in itself argues for centralized regulation, whether of production or distribution, and the standardized nature of the ceramic output bolsters the argument for centralized production specifications. If the products of centrally regulated workshops

[13] None is reported from Porsuk, for example, whereas the same site produced a Red Lustrous Wheel-made Ware spindle bottle with incised base—the only certain example of a potmark of Cypro-Minoan type recovered anywhere in Anatolia (Dupré 1983, 26, 53, no. 247; Eriksson 1993, 133). In the Adiyaman region, excavations at Tille Höyük yielded examples of drab ware plates and bowls, none of which apparently bore potmarks (Summers 1993, 47–48).

[14] A set of vessel marks on Japanese Shino and Oribe tea bowls of the sixteenth century, previously understood as kiln marks, has been reinterpreted as signs denoting the different ceramic merchants in the major cities who ordered these bowls directly from the kilns (Fujioka 1977, 156–158, a reference I owe to Louise Allison Cort). In most cultural spheres these marks typically also appear discreetly on the underside of vessels or in other inconspicuous places, whereas the potmarks from most Hittite-period sites were instead placed in conspicuous locations and perhaps specifically where they would be most visible while the vessel was in use. It is this typically visible or conspicuous placement of the marks on Hittite pots that makes me wonder whether vessel use, as opposed to or in addition to processes of manufacture or distribution, played any role in this phenomenon.

and kilns made their way into the markets of neighboring frontier settlements and towns that operated outside the boundaries of Hittite imperial control, we might expect to find an assemblage dominated by local tradition but including a component of the "official" Hittite repertory.[15]

Central Anatolian developments played a significant role in the "ceramic landscape" of the second millennium B.C. over a considerable geographical span, antedating the territorial expansion and consolidation that took place during the Hittite Old Kingdom and Empire. The situation regarding the role of imported ceramics, both within the empire and along its frontiers, is not yet clear. Imported ceramics consistently form a very small component of the ceramic repertory of sites within the Kızılırmak basin, and this pattern remained relatively stable throughout the second millennium B.C. – even during the period of Hittite expansion to the Cilician coast and North Syria. Red Lustrous Wheel-made Ware remains a problematic category, in part because consensus has not yet been reached on its region of origin, and the direction or pattern of its distribution is therefore difficult to reconstruct.[16] Its distribution in Anatolia presents some puzzling features. It is particularly well represented in the Göksu Valley, both from survey collections and now from the excavations at Kilise Tepe, yet scarcely attested throughout Cilicia (small quantities at Tarsus, Mersin, and thus far at Kinet Höyük) (Symington 2001, 169–170, with further references). Moreover, in some cases, as has been observed for Tell Meskene/Emar, what appear to be local imitations may conceivably have sought to emulate the color and lustrous surfaces not of this ware but of the finest Hittite red-slipped and polished pottery (Caubet 1982, 76). In addition, a general scarcity of imports is not confined to regions under Hittite control but also characterizes the Late Bronze Age levels at sites in western Anatolia, including Beycesultan, which presumably lay outside the boundaries of any state regulation of ceramic production.

Given the dominant Hittite ceramic repertory as now documented, composed chiefly of a narrowly defined set of shapes made in undecorated wares, increasingly mass-produced, and arguably manufactured under central (state) control, further comparison among assemblages and consideration of differences would surely repay investigation. Despite the apparent ceramic homogeneity extending throughout Late Bronze Age levels from west central to southeastern Anatolia, there are nonetheless indications that the ceramic industry of the capital and environs remained in some respects unique, or at least did not expand beyond the Kızılırmak basin. Sites in the west (Gordion), south (Tarsus), and southeast (Korucutepe) seem to witness a decline in the percentage of good-quality red-slipped and burnished vessels in the latest Hittite empire levels, for example, in apparent contrast with the situation at Boğazköy.[17] On present evidence, "Goldglimmerware," recovered in small

[15] Survey collections from the provinces bordering the Upper Land, the territory of Azzi and Ḫayasa, indicate that the region's ceramic industry came under scant influence from the Hittite tradition (Yakar 1992, 512–514; Yakar 2000, 430–432; Sagona/Sagona 2004, 180–182).

[16] Eriksson 1993 provides a catalogue and detailed review, opting for a Cypriote origin.

[17] Goldman 1956, 205; Griffin 1980, 75–76; Gunter 1991, 43, 45.

quantities at Boğazköy, Alişar Höyük, and Kuşaklı, appears to have been quite restricted both chronologically and in its geographical distribution.[18]

In considering ceramic homogeneity across a considerable geographical expanse and how it was achieved, models developed for other, historically unrelated cultural spheres may offer theoretical assistance in developing or refining hypotheses. Paul E. Zimansky has thoughtfully explored this issue with respect to the Iron Age kingdom of Urartu, widely understood as a state associated with a distinctive and restricted archaeological assemblage encompassing several categories of material culture, including architecture, metalwork, and ceramics (Zimansky 1995). Zimansky argues that the apparent uniformity of Urartian material culture results in large measure from the way in which archaeology has been practiced: fortresses comprise the vast majority of known Urartian sites and almost the only ones that have been excavated. These fortified sites, their inhabitants, and their material culture, were established during a comparatively brief period and maintained in the service of the state, and what is regarded as an Urartian assemblage was chiefly a creation of the ruling apparatus. A greater diversity among items of material culture might well be expected from excavations at multi-period tells whose populations would have been less directly involved in managing the state. Zimansky compares the known Urartian assemblage with that attested for another highland empire that faced related problems of governing in an environment in which communications were difficult. Like the Urartians, the Inca of central America rapidly expanded their territorial control, but over a much greater geographical expanse and larger populations, establishing way stations and administrative centers along primary roads in the central highlands (Zimansky 1995, 177–178, 180). The architecture and ceramics of many of these Inca settlements, which were built over a relatively brief period of time, differ considerably from those of local villages. The centers provided housing, pottery, and all other necessities for their mixed populations whose activities were primarily related to the state. "The pervasive nature of the state stamp on everything down to the crudest cooking pot would tend to affirm that the state lived up to its obligations with almost unbelievable rigidity" (Zimansky 1995, 177, quoting Morris 1972, 399).

In the Hittite empire, present evidence for widespread homogeneity in the repertory of vessel wares and shapes, if coupled with further confirmation that manufacturing processes were likewise standardized, suggests that the effective functioning of the empire required significant intervention in the ordinary activities of populations housed in settlements ranging from towns to large cities. Did this intervention also extend to the rural economic sector? Only further investigation of smaller settlements of the period could answer this question.[19] Even if we postulate or recognize a functional settlement hierarchy in which sites such as Gordion served to produce and distribute ceramic vessels within a regional network, the goals of this apparently highly standardized and regulated ceramic production

[18] Neve 1982, 36; Gorny 1995, 162; Mielke 1998, 125.

[19] For thoughtful consideration of these issues informed by both archaeological and historical evidence, see Yakar 2000, esp. 237–257.

over such an extensive geographical expanse, and among sites quite varied in scale, economic activities, and strategic importance, remain unclear. In a ceramic tradition as narrowly defined as that of the Hittite Empire appears to have been, attention also needs to be paid to differences within the justly perceived similarity that increasingly emerges both from new investigations and reassessment of older excavations.

Hitit Seramik Üretimi Üzerine: Batı Sınırından bir Bakış

İç Anadolu'nun batısında, Polatlı yakınlarında yer alan Gordion/Yassıhöyük'te 1950–1973 yılları arasında yapılan kazılarda, iki derinlik sondajında, Orta ve Son Tunç Çağına ait iyi tabakalanmış keramik toplanmıştır. Yayınlanmış buluntular ile karşılaştırınca, mal ve biçimlerin Kızılırmak bölgesinin Hitit merkezlerindeki malzemeyle iyice benzeştiği görülmektedir. En geç tabakalarda (Son Tunç Çağı II), Hitit repertuarının yanı sıra, az miktarda ikinci binyıl batı ve güneybatı Anadolu seramik gelenekleri ile bağlantılı olabilecek malzeme bulunmaktadır. Gordion'un daha çok Hitit nitelikli olan seramiği, imparatorluğun günümüzde kabul gören batı sınırı olması bağlamında ve geniş bir coğrafi bölgede seramik üretimindeki standartlaşmanın varlığını gösteren, halen sürmekte olan araştırmalar ışığında tartışılmaktadır.

References

Akurgal 1950 — E. Akurgal, Bayraklı. Erster vorläufiger Bericht über die Ausgrabungen in Alt-Smyrna. *Dil Tarih ve Coğrafya Fakültesi Dergisi* 8, 1950, 52–97.

Caubet 1982 — A. Caubet, La céramique. In: D. Beyer (ed.), *Meskéné-Emar: dix ans de travaux 1972–1982* (Paris) 71–86.

Çilingiroğlu/French 1994 — A. Çilingiroğlu, D.H. French (eds.), *Anatolian Iron Ages 3. The Proceedings of the Third Anatolian Iron Ages Colloquium held at Van, 6–12 August 1990* (London 1994).

Dupré 1983 — S. Dupré, *Porsuk I: La céramique de l'âge du Bronze et de l'âge du Fer* (Paris 1983).

Eriksson 1993 — K.O. Eriksson, *Red Lustrous Wheel-made Ware* (Jonsered 1993).

French 1969 — D. H. French, Prehistoric Sites in Northwest Anatolia, II. The Balıkesir and Akhisar/Manisa Areas. *Anatolian Studies* 19, 1969, 41–98.

Fujioka 1977 — R. Fujioka, *Shino and Oribe Ceramics* (Tokyo, New York 1977).

Gates 2001 — M.-H. Gates, Potmarks at Kinet Höyük and the Hittite ceramic industry. In: Jean *et al.* 2001, 137–157.

Goldman 1956 — H. Goldman, *Excavations at Gözlü Kule, Tarsus. Vol. 2: From the Neolithic through the Bronze Age* (Princeton 1956).

Gonnet 1994 — H. Gonnet, The Cemetery and Rock-cut tombs of Beyköy in Phrygia. In: Çilingiroğlu/French 1994, 75–90.

Gorny 1995 — R.L. Gorny, Alişar Höyük in the Late Second Millennium B.C. In: O. Carruba, M. Giorgieri, C. Mora (eds.), *Atti del II Congresso Internazionale di Hittitologia* (Pavia 1995) 159–182.

Gosselain 1998 — O.P. Gosselain, Social and Technical Identity in a Clay Crystal Ball. In: M.T. Stark (ed.), *The Archaeology of Social Boundaries* (Washington, D.C., 1998) 78–106.

Griffin 1980 — E.E. Griffin, The Middle and Late Bronze Age Pottery. In: M.N. van Loon (ed.), *Korucutepe 3. Final report on the excavations of the Universities of Chicago, California (Los Angeles) and Amsterdam in the Keban Reservoir, East Anatolia 1968–1970* (Amsterdam/New York/Oxford 1980) 3–109.

Gunter 1991 — A.C. Gunter, *The Bronze Age. Gordion excavations.* Vol. 3 (Philadelphia 1991).

Gunter in preparation — A.C. Gunter, Kılcanlar. In: D.J. Pullen (ed.), *The Gygaean Lake: Explorations and Excavations on the Shores of Mermere Gölü.* Archaeological Exploration of Sardis Publication (Cambridge, Mass., in preparation).

Hanfmann 1951 — G.M.A. Hanfmann, Prehistoric Sardis. In: G.E. Mylonas (ed.), *Studies Presented to David M. Robinson.* Vol. I (St. Louis 1951) 160–183.

Hawkins 1998 — J.D. Hawkins, Tarkasnawa King of Mira: "Tarkondemos," Boğazköy Sealings and Karabel. *Anatolian Studies* 48, 1998, 1–31.

Hegmon 1998 — M. Hegmon, Technology, Style, and Social Practices: Archaeological Approaches. In: M.T. Stark (ed.), *The Archaeology of Social Boundaries* (Washington, D.C., 1998) 264–279.

Henrickson 1993 — R.C. Henrickson, Politics, Economics, and Ceramic Continuity at Gordion in the Late Second and First Millennia B.C. In: W.D. Kingery (ed.), *The Social and Cultural Contexts of New Ceramic Technologies* (Westerville, Ohio 1993) 89–176.

Henrickson 1994 — R.C. Henrickson, Continuity and Discontinuity in the Ceramic Tradition of Gordion during the Iron Age. In: Çilingiroğlu/French 1994, 95–129.

Henrickson 1995 — R.C. Henrickson, Hittite Pottery and Potters: The View from Late Bronze Age Gordion. *Biblical Archaeologist* 58.2, 1995, 82–90.

Henrickson/Blackman 1996 — R.C. Henrickson, M.J. Blackman, Large-scale Production of Pottery at Gordion. A Comparison of the Late Bronze and Early Phrygian Industries. *Paléorient* 22.1, 1996, 67–87.

Jean *et al.* 2001 — É. Jean, A.M. Dinçol, S. Durugönül (eds.), *La Cilicie: espaces et pouvoirs locaux (2e millénaire av. J.-C. – 4e siècle ap. J.-C.).* Actes de la table ronde internationale d'Istanbul, 2–5 novembre 1999 (Paris 2001).

Joukowsky 1986 — M. Joukowsky, *Prehistoric Aphrodisias : an account of the excavations and artifact studies* (Providence, R.I. 1986).

Korbel 1985 — G. Korbel, *Die spätbronzezeitliche Keramik vom Norşuntepe* (Hannover 1985).

Lloyd/Mellaart 1965 — S. Lloyd, J. Mellaart, *Beycesultan II: Middle Bronze Age Architecture and Pottery.* Occasional Papers of the British Institute of Archaeology at Ankara 8 (London 1965).

Lumsden 2002 — S. Lumsden, Gâvurkalesi: Investigations at a Hittite Sacred Place. In: K.A. Yener, H.A. Hoffner (eds.), *Recent Developments in Hittite Archaeology and History: Papers in Memory of Hans G. Güterbock* (Winona Lake, Ind. 2002) 111–125.

Mellaart 1958 — J. Mellaart, Second Millennium Pottery from the Konya Plain and Neighbourhood. *Belleten* 22, 1958, 311–345.

Mellaart 1983 — J. Mellaart, Yaraşlı Hillfort: A Hittite Stronghold in Galatia? In: R.M. Boehmer, H. Hauptmann (ed.), *Beiträge zur Altertumskunde Kleinasiens: Festschrift für Kurt Bittel* (Mainz am Rhein 1983) 345–348.

Mellaart/Murray 1995 — J. Mellaart, A. Murray, *Beycesultan III.2. Late Bronze Age and Phrygian Pottery and Middle and Late Bronze Age Small Objects* (London 1995).

Mellink 1956 — M.J. Mellink, *A Hittite Cemetery at Gordion* (Philadelphia 1956).

Mellink 1967 — M.J. Mellink, Beycesultan: A Bronze Age Site in Southwestern Turkey. *Bibliotheca Orientalis* 24, 1967, 3–9.

Mielke 1998 — D.P. Mielke, Die Nachuntersuchungen am Westhang. In: A. Müller-Karpe, Untersuchungen in Kuşaklı 1997. *Mitteilungen der Deutschen Orient-Gesellschaft* 130, 1998, 120–129.

Morris 1972 — C. Morris, State Settlements in Tawantinsuyu: A Strategy of Compulsory Urbanism. In: M.P. Leone (ed.), *Contemporary Archaeology: A Guide to Theory and Contributions* (Carbondale, Edwardsville 1972) 393–401.

Müller-Karpe 1988 — A. Müller-Karpe, *Hethitische Töpferei der Oberstadt von Ḫattuša: ein Beitrag zur Kenntnis spät-großreichszeitlicher Keramik und Töpfereibetriebe unter Zugrundelegung der Grabungsergebnisse 1979–82 in Boğazköy* (Marburg 1988).

Neve 1982 — P. Neve, *Büyükkale. Die Bauwerke.* Boğazköy-Ḫattuša XII (Berlin 1982).

Parzinger/Sanz 1992 — H. Parzinger, R. Sanz, *Die Oberstadt von Ḫattuša. Hethitische Keramik aus dem zentralen Tempelviertel. Funde aus den Grabungen 1982–1987.* Boğazköy-Ḫattuša XV (Berlin 1992).

Ramage 1994 — A. Ramage, Early Iron Age Sardis and Its Neighbours. In: Çilingiroğlu/French 1994, 163–172.

Reedy/Reedy 1994 — C.L. Reedy, T.J. Reedy, Relating Visual and Technological Styles in Tibetan Sculpture Analysis. *World Archaeology* 25, 1994, 304–320.

Sagona/Sagona 2004 — A. Sagona, C. Sagona, *Archaeology at the North-East Anatolian Frontier, I. An Historical Geography and a Field Survey of the Bayburt Province* (Louvain 2004).

Summers 1993 — G.D. Summers, *Tille Höyük 4. The Late Bronze Age and Iron Age Transition* (London 1993).

Symington 2001 — D. Symington, Hittites at Kilise Tepe. In: Jean *et al.* 2001, 167–184.

Umurtak 1996 — G. Umurtak, *Korucutepe II. 1973–1975 dönemi kazılarında bulunmuş olan hitit çağı çanak çömleği* (Ankara).

Voigt 1994 — M.M. Voigt, Excavations at Gordion 1988–89: The Yassıhöyük Stratigraphic Sequence. In: Çilingiroğlu/French 1994, 265–293.

Voigt/Henrickson 2000 — M.M. Voigt, R.C. Henrickson, Formation of the Phrygian State: The Early Iron Age at Gordion. *Anatolian Studies* 50, 2000, 37–54.

Yakar 1992 — J. Yakar, Beyond the Eastern Borders of the Hittite Empire: An Archaeological Assessment. In: H. Otten, E. Akurgal, H. Ertem, A. Süel (ed.), *Hittite and Other Anatolian and Near Eastern Studies in Honour of Sedat Alp* (Ankara 1992) 507–520.

Yakar 2000 — J. Yakar, *Ethnoarchaeology of Anatolia: Rural socio-economy in the Bronze and Iron Ages* (Jerusalem 2000).

Zimansky 1995 — P.E. Zimansky, The Urartian Frontier as an Archaeological Problem. In: M. Liverani (ed.), *Neo-Assyrian Geography* (Rome 1995) 171–180.

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