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Itinerant potters and the transmission of ceramic technologies and styles during the Proto-Elamite period in Iran

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ABSTRACT

An INAA study of a widely used potters' tool, the ceramic ring scraper, demonstrates that the elemental compositions of these tools are very different from the pottery produced at the sites where the tools are found. These results are interpreted to indicate that Proto-Elamite (3400–2900 BC) potters in Southwestern Iran were moving from site to site through large regions rather than living and working in single sites. The presence of such mobile potters suggests that ceramic technologies and styles were spread throughout the Uruk/Proto-Elamite world, at least in part, by the movements of itinerant craft specialists.

1. Introduction

Archaeologically, the Proto-Elamite Period (c. 3400–2900 BC) is characterized by the presence of a shared writing system and by accompanying similarities in ceramics, architecture, and iconography across a wide area of southwestern Iran, from the western and southern edges of the Dasht-e Kavir across the Zagros mountains to the Susiana Plain near the head of the Persian Gulf (Alden, 1982a, Abdi, 2012:24–26). But the mechanisms for the spread and maintenance of these shared aspects of material culture are unclear. Were these common features a consequence of the migration of populations, the emigration of small numbers of individuals or families, or the regular back-and-forth exchange of goods and ideas by traders and travelers within the region? This paper uses compositional data derived through INAA to examine how ceramic styles and manufacturing practices may have been spread by itinerant potters within the geographic territory defined by the presence of Proto-Elamite material culture.

Seasonally migratory potters are known ethnographically from Afghanistan (Matson, 1974:345, Olesen, 1994:18–44), "other areas of the Middle East," (Johnston, 1974: 95), and Sudan (Tobert, 1984) and archaeologists have long speculated that itinerant potters may have played a role in the transmission of ancient stylistic and technological practices. Indeed, Matson (1965:281) explicitly suggested that itinerant potters might have been responsible for features like "the ceramic uniformity in the Early Bronze Age from eastern Anatolia into northern Iran". Amiet (1986: 135) suggested that communities of craftsmen, "les uns sédentaires, les autres nomads, apparaît ainsi comme caractéristique de l'Iran." More recently, H. T. Wright noted that "Similarities in [Uruk] pottery do not imply 'close cultural relations,' but only close relations among a specialized group of potters" and concluded that "The available evidence suggests a continuous circulation of potters throughout the Uruk world" (Wright, 2001:134–135). Specifically, Wright was arguing that in the Later Middle and Late Uruk (LC 4 and 5; c. 3500–3000 BC), many categories of ceramics were being produced by skilled craft specialists, and the technological and stylistic similarities apparent in those widely distributed ceramic types are a result of the movement of professional potters rather than the migration of populations or the adoption of some broadly shared cultural/social ideology. The possibility of itinerant craftspeople was also discussed in 2009 at a workshop on Iran in the 4th millennium BC in Cambridge, England (Petrie ed., 2013: 466–467). But until now, we are unaware of any studies that explicitly tested whether itinerant potters may have been working in prehistoric times in the Middle East.

Broadly speaking, the later Uruk (LC 4 and 5) and Proto-Elamite eras are largely contemporaneous and the distribution spheres of their material culture corpuses are geographically contiguous (Mutin, 2013:Fig. 8.1; Petrie, 2013:8–18). In addition, Uruk and Proto-Elamite ceramics share many technological characteristics, stylistic features,

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and particular vessel forms. Both ceramic corpuses can be separated into two broad technological categories—low-fired chaff tempered ware (beveled rim bowls, low-sided trays, and conical cups and goblets) and more highly fired sand or grit-tempered wares (primarily jars and bottles)—and vessels in both ware categories come in a variety of standardized forms and share a variety of distinctive decorative features (for descriptions and drawings of Proto-Elamite ceramics, see Nicholas, 1990, Sumner, 2003, Helwing, 2011, Mutin, 2013 and Alizadeh, 2014). However, because producing the two wares required different manufacturing techniques, tools, and skill sets, they are most suitably treated separately when evaluating their organization of production.

This study focuses on one distinctive object—the ceramic ring scraper—that is found throughout the Late Uruk and Proto-Elamite regions. Based on their form, the wear pattern on their working edge, and their regular association with ceramic slag, these objects are interpreted as tools used by Late Uruk and Proto-Elamite era potters in the manufacture of grit-tempered ceramics (Alden, 1988).

Using compositional data determined through INAA of a small collection of ceramic ring scrapers, this paper concludes that the Proto-Elamite period potters making grit-tempered pottery in the Kur River Basin of highland Iran were itinerant specialists. It then proposes that this pattern is likely to have been typical for the production of kiln-fired grit and sand-tempered ceramics in both Proto-Elamite and Middle/Late Uruk era societies. Our analysis supports Wright's suggestion that the wide geographical distributions of standard types, forms, and decorative techniques within both Uruk and Proto-Elamite ceramics are best viewed as a result of the regular back-and-forth movement of professional potters within (and to some extent, between) the two cultural spheres. People and populations may well have moved widely during the Uruk and Proto-Elamite eras, and the distribution of iconographic styles, writing systems, and architectural techniques may well indicate the existence of shared cultural ideologies. But the evidence presented here indicates that one important factor contributing to the broad intra- and inter-regional distribution of ceramic styles and manufacturing practices during the late 4th millennium in the ancient Near East was the movement of itinerant potters.

2. Specialized pottery production tools in the Late Chalcolithic near east

In 1979 one of this paper's co-authors proposed that during the Late Uruk and Proto-Elamite periods, potters in the ancient Near East used highly fired incurving ceramic rings as scrapers to remove excess clay from the exteriors of large pots before the pots were fired (Alden, 1979:88–89; Alden 1988). This interpretation was made on the basis of the form, material characteristics, and wear pattern observed on a collection of roughly two dozen fragments of those objects, primarily from grit tempered ceramic production sites in the Kur River Basin of highland Iran, and no attempt was made to experimentally replicate the proposed use of these 'ceramic ring scrapers.' Interestingly, three of the fragments of ceramic rings from the Kur River Basin had what appear to be potters' marks on their exteriors.

A subsequent study of Chalcolithic and Early Bronze Age potters' tools by Hiroyuki Ii (1991) published three additional examples of ceramic ring scrapers (Fig. 9:9–11). Ii also made and used replicas of ceramic rings and found that they were effective in removing excess clay from both the inside and outside of partially dried 'leather hard' pots. However, he observed that scrape marks similar to ones he produced experimentally were typically only found on the interiors of archaeological ceramics (though he shows photographs of a few examples of possible exterior and basal scraping), and noted that it was easier to use the ring scraper to remove material from the interior of the vessel rather than the exterior. He also pointed out that the pattern of wear described by Alden could have resulted from *re*-sharpening worn ceramic rings on a flat abrasive stone rather than from trimming material from the outside of large grit-tempered vessels (Ii, 1991:47–48).

Ii also published examples of other ceramic working tools, including lunate and discoidal flint and ceramic scrapers, stone and ceramic smoothers, ceramic tournettes, and spoon-shaped ceramic gouges, from sites in Mesopotamia and Iran. He illustrated ten cylinder seals and seal impressions showing potters at work, with at least one seal appearing to show a potter holding a ring-shaped object while working on a large vessel (Ii, 1991:Fig. 28:7), and reported ceramic working tools from contexts as early as the Ubaid (c. 4500 BC) and as late as the second millennium. Several of the lunate scrapers (Fig. 1:2 from Ur and 7:7–9 from Susa) had potters' marks, but none of the other tools appear to have been marked. Ii also used replicas of gouges and lunates to work the interiors of large leather-hard vessels, and found that, like the ceramic rings, gouges and lunates produced the kinds of interior scrape marks observed on archaeological ceramics.

Two years later, Robert Henrickson published a collection of eight ceramic ring fragments from Godin 3 contexts (c. 2600–1400 BC) at Godin Tepe (Henrickson, 1993). He observed that these tools occurred in two forms: Type 1, with an almost vertical profile, a beveled exterior edge, and with a work-polished inner face, and Type 2, with an incurved profile and use wear similar to the Late Uruk/Proto-Elamite ring scrapers described by Alden. From the pattern of wear on the three Type 1 tools he concluded that they had been held at a slight angle to the horizontal plane of the ring, pulled toward the user, and used to scrape material from the lower interior of medium to very large jars. Unfortunately, the five Type 2 ring fragments found at Godin were small and uneven, "making it difficult to determine whether the use wear forms a bevel or lies in the plane of the [tools'] upper edge." Like Ii, Henrickson saw no evidence of exterior scraping in the Godin 3 ceramic corpus. Nevertheless, he observed that his Type 2 rings "were similar in both form and general patterning of use wear to most of the Late Uruk scrapers which Alden argued were used on the outsides of leather-hard pots" (Henrickson, 1993:484) He also noted that signs of external scraping could have been erased by smoothing the exterior surface of a vessel after it had been scraped. The total circumference of Henrickson's eight fragments as listed in his Table 1 is equivalent to something more than two full rings, and he reports no evidence of potters' marks on the Godin tools.

Since the time of those initial studies, fragments of ceramic ring scrapers have been identified at a number of additional sites, including Tell Brak in Syria and Surezha Tepe near Erbil (Alden, personal observation), Bab w Kur in Iraqi Kurdistan (Skuldboel, p.c.), Tell Kosak Shamali on the upper Euphrates in Syria (Nishiaki, n.d.), Susa (Alizadeh p.c.) and Tal-e Geser in southwestern Iran (Alden et al., 2014:Table *A*1 item TG-18), Musiyan in Deh Luran (Neely and Wright 2010:Fig. 4.7j), and the Uruk Mound at Abu Salabikh in central Mesopotamia (Coursey, 1997:99). Taken as a whole, it is now apparent that ceramic ring scrapers are a common accouterment of Uruk era grit and/or sand tempered pottery production throughout Mesopotamia and into the Proto-Elamite region of southwestern Iran. To my knowledge, however, there are no ceramic ring scrapers from any Proto-Elamite era settlements north or east of the Kur River Basin, including the well-published sites of Arisman (Helwing, 2011) and Yahya (Mutin, 2013). Nor are there any ring scrapers published from the Mamasani survey (McCall, 2009) or the Nurabad/Spid excavations (Potts et al., 2009). These gaps in the presently known distribution of these tools raise the possibility that the use of ceramic ring scrapers may not have extended throughout the entire Proto-Elamite cultural region.

Finally, several objects similar to Henrickson's Type 1 ceramic ring scrapers have been found in the Kur River Basin (KRB) of highland Iran in contexts earlier than the Proto-Elamite period—a Lapui era (c. 4000–3600 BC) ring from site 10F1 (Fig. 1: RS-22) and a Bakun era example (Alizadeh, 2006:79 and Plate 24:A) from Level III at Tall-e Bakun (c. 4500–4200 BC). But no Type 1 rings were found at any of the KRB Proto-Elamite grit-tempered ceramic production sites, and no Type 2 rings have been reported from KRB contexts either earlier or later than the Proto-Elamite era. Thus, at this time it appears that in

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