



Hierarchical or Transegalitarian? Societies of the Transitional Chalcolithic Period on the North-Central Plateau of Iran

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(183-219)

Abstract

Tracking the emergence of political authority and social hierarchy in the archaeological record has been one of the major challenges addressed by archaeologists in the past fifty years or more, with considerable attention given to potential material correlates of early stages in developments leading ultimately toward statehood (Chapman 2003; Smith 2012). Much of this research has explored the evidence from past societies of the ancient Near East, including Mesopotamia and Iran (Wright 1998; Flannery 1999; Smith 2003), but there has been less investigation of the communities of the Iranian plateau in this light (Matthews and Fazeli 2004). What was their role(s) in the complex series of socio-political developments leading to the appearance of hierarchical societies in the centuries between 5500 and 4000 BC, and how might the archaeological evidence inform us on those roles? Recent and ongoing research into societies of the Iranian plateau in the so-called Transitional Chalcolithic period (5200-4200 BC) is continuing to enhance our understanding of this question. In this article we summarise and analyse the evidence from archaeological investigations of sites and regions on the Tehran, Kashan, and Qazvin plains, addressing in turn settlement patterns, subsistence strategies, craft production, and mortuary practices (Fig. 1).

Keywords: Hierarchical .Transitional Chalcolithic .North-Central .Plateau .Iran.

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1. Introduction: Iran in the Transitional Chalcolithic period

Tracking the emergence of political authority and social hierarchy in the archaeological record has been one of the major challenges addressed by archaeologists in the past fifty years or more, with considerable attention given to potential material correlates of early stages in developments leading ultimately toward statehood (Chapman 2003; Smith 2012). Much of this research has explored the evidence from past societies of the ancient Near East, including Mesopotamia and Iran (Wright 1998; Flannery 1999; Smith 2003), but there has been less investigation of the communities of the Iranian plateau in this light (Matthews and Fazeli 2004). What was their role(s) in the complex series of socio-political developments leading to the appearance of hierarchical societies in the centuries between 5500 and 4000 BC, and how might the archaeological evidence inform us on those roles? Recent and ongoing research into societies of the Iranian plateau in the so-called Transitional Chalcolithic period (5200-4200 BC) is continuing to enhance our understanding of this question. In this article we summarise and analyse the evidence from archaeological investigations of sites and regions on the Tehran, Kashan, and Qazvin plains, addressing in turn settlement patterns, subsistence strategies, craft production, and mortuary practices (Fig. 1).

Our argument is that the Transitional Chalcolithic societies of the north-central plateau of Iran underwent agricultural intensification and a growth in complexity in terms of social ranking, as revealed in mortuary practices and ritual activities, long distance trade, and growing craft specialization. The evidence indicates that from the end of the sixth millennium BC, the social organization of previously self-sufficient and independent communities in this region changed to the more complex social systems of the Chalcolithic period. The markers of rising complexity in the Neolithic to Chalcolithic transition include intensified herding of cattle, sheep, and goat (Mashkour *et al.* 1999; Fazeli *et al.* 2009), the cultivation of barley and bread wheat using irrigation systems (Gillmore *et al.* 2009), the development of long-distance trade (Fazeli and Abbasnegad 2005), complex ritual activities, social differentiation in mortuary practices, specialized craft areas for increasingly standardized craft production and new production techniques such as wheel-thrown ceramics (Fazeli *et al.* 2007; Fazeli *et al.* 2010). All these developments support the idea of complex societies evolving on the Iranian central plateau from *ca.* 5200 BC onward.

While an increased degree of complexity appears beyond doubt, what remains open to debate is the extent to which Iranian Transitional Chalcolithic societies were constructed along hierarchical lines of differential access to and control of power. Archaeological evidence that initially appears to support interpretations of social hierarchy can, on further investigation, rather be seen as connected to issues of gender, cultic practice, or craft specialization, for example. Strata of power and hierarchy may be cross-cut by transegalitarian socio-economic identities that need to be discerned and articulated in the specifics of the archaeological record as characteristics of individual societies. As Peregrine (2012, 183) has recently stated, “the past is always more complex than the archaeological record makes it appear”.

2. The evidence of settlement patterns

Table 1 indicates the chronology of the most important Late Neolithic and Transitional Chalcolithic settlements within the Iranian central plateau (Fazeli *et al.* 2005; 2009). The dramatic increase in settlement densities on the Tehran and Qazvin plains during

the Transitional Chalcolithic period reflects social, economic, and population developments (Fig. 2). In the 2003 survey of the Qazvin plain a number of Transitional Chalcolithic sites were distinguished, including Ebrahim Abad, Kamal Abad, Qara Qobad, Mahmodian, Zagheh 2 and Zahir Tape, most of them below 5 ha in area. The site of Zagheh covers 3.5 ha (Malek Shahmirzadi 1986, 11), while Akbarabad on the Qazvin plain covers more than 3 ha and is 17-20 m high. These sites compare well with the size of the Transitional and Early Chalcolithic site of Sialk, which Ghirshman (1938, 166) reported as approximately 3.5 ha. The Transitional Chalcolithic settlements of the Tehran plain consist of Cheshmeh Ali, Mehdikani, Kara Tepe Sharyar, Mafinabad, Poeinak, Mortezaگرد, and Sadeghabadi. Some of these sites have been disturbed and although the present size of Cheshmeh Ali covers 400-500 m, workers from Ray Council making a water channel identified Transitional Chalcolithic material up to 300 m from the mound. Transitional Chalcolithic settlements are located close to the river banks or springs giving villagers direct access to water resources. Some of the sites have only one phase of occupation but most of them show multiple periods of settlement (Fazeli 2001).

3. Subsistence strategies

Transitional Chalcolithic settlements on the plains across the south of the Alburz Mountains exhibit evidence for agricultural activities such as food procurement and processing, cloth processing, high quality pottery making and stone tool manufacture. The evidence includes a large number of ceramic vessels, for both cooking and storage, flint sickle blades (Fazeli *et al.* 2002) for harvesting grain, grinding and pounding stones for preparation of food and perhaps for other materials, and hearths for cooking, baking, and heating (Fazeli 2001).

Societies in the Transitional Chalcolithic period in Iran employed mixed subsistence strategies of farming, animal husbandry, and exploitation of wild resources (Mashkour *et al.* 1999). The animal bones from Cheshmeh Ali and Zagheh indicate that animals such as cattle, sheep, and goat were fully domesticated by the Transitional Chalcolithic period (Young and Fazeli 2008). Domesticated ovicaprids (*Ovis aries* and *Capra hircus*) are the dominant species at the site of Zagheh in the Transitional Chalcolithic period. Wild ovicaprids and then cattle are the next most significant types. Botanical studies show that bread wheat and other domesticated species were cultivated in many settlements of the central Iranian plateau using irrigation systems (Coningham *et al.* 2004; Gillmore *et al.* 2009). In general, the villagers of the plains in the sixth millennium BC settled in the areas close to water sources and it is possible that they utilised simple irrigation systems for agriculture. This economic strategy enabled and underpinned an increase in population during the Transitional Chalcolithic period.

In summary, the evidence for subsistence activities at Transitional Chalcolithic sites on the north-central plateau of Iran attests the first full agricultural exploitation of the arable soils which occur in highly restricted portions of the Iranian landscape. The intensified cultivation of cereal crops clearly develops hand-in-hand with exploitation of the potential for pastoral grazing afforded by the grassy slopes and hills adjacent to the plains in most directions. Both these factors increased the possibility of accumulation of subsistence surpluses by certain components of society, based on systems of irrigation, storage, and redistribution. In the classic model, the accumulation of surpluses of agricultural products facilitated both the development of craft specialization carried out

by artisans largely freed from the need to engage in subsistence production, and an increased potential for social stratification through controlled management of those surpluses. As yet, there is insufficient evidence from Iranian Transitional Chalcolithic sites for storage facilities for agricultural surplus in the form of grain silos or granaries, for example, but more open-area excavation is required in order to address this issue. On the other hand, the extensive evidence for large vat-like storage vessels from the Late Neolithic and Transitional Chalcolithic onwards, as at Zagheh and Pardis, does indicate a capability for significant long-term storage of a range of liquid and solid commodities.

4. Craft specialization and cultural complexity during the fifth millennium BC

Since the 1980s a number of theoretical approaches have been proposed in approaching the role of craft specialization and technological development in the formation of complex societies (e.g. Tosi 1984; Costin 2007). The organization of production is one of the more significant elements in the study of the development of complex societies and several models have been developed to describe it (Clark 2007). Four modes of production have been defined (Rice 1987; Tosi 1984): household, household industry, individual workshop industry, and nucleated workshop industry. In 'household' production, pottery manufacture is occasional, preparatory to household consumption, and characterized by a simple technology for production. In this model, ceramics are fired in the open kiln with little or no standardization in the selection of raw materials. There is also a lack of efficiency and skill in manufacturing. It is often stressed that this type of production system is orientated towards self-sufficiency, with little opportunity for intensification (Rice 1987, 184). 'Household industry' is also characterized by a simple technology and operates on a part-time level, but production occurs more frequently and is directed towards a larger consumer market (Arnold 1991, 92). In 'individual workshop industry', production is full-time and involves significant capital investment (in kilns, wheels), but the unit maintains a level of stylistic and economic autonomy. These three modes of production are generally attributed to prehistoric societies. In 'nucleated workshop industry', a 'clustered industrial complex' which occurs in urban settings results in pottery manufacture as a major economic activity with extensive technological investment. This type of production emphasizes high volumes of output with the finished products destined for a supra-regional market (Arnold 1991, 94).

In a recent study Petrie (2011) has delineated the technological innovations that mark the Early Chalcolithic of southern Iran, including a shift to calcareous clays from vegetal-tempered clays, the use of basic turning devices, the use of black rather than bi-chrome painted decoration, and an increase in firing temperatures to between 850 and 1000°C. Taken together these attributes are understood as characterizing an increasing specialization and centralization of ceramic production. If we examine the evidence for ceramic production from the plains of north-central Iran during the period 5200-4200 BC, can we observe similar developments in the technology of ceramic production? Fortunately, there is considerable evidence to bring to bear on this question.

In order to study the degree of ceramic specialization through the time period in question we focus on two assemblages of archaeological evidence for ceramic production during the Transitional Chalcolithic period. Direct evidence includes the remains of workshops, craft quarters, kilns, tools related to ceramic productions such as

molds, ceramic polishers or scrapers, wheel-throwing and other materials such as slag and waste materials (Costin 2001; 2005), which were found at the archaeological sites on the two plains of Tehran and Qazvin. Indirect evidence refers to the product, which is the ceramics themselves. By these means we can evaluate the evolution of manufacturing technology and the organization of production, including issues such as standardization, skill and efficiency, labor investment, and scale and mode of specialization, from the Late Neolithic to the Chalcolithic period.

At both Zagheh and Pardis, excavations indicate that certain types of craft activity, such as the production of ceramics, were located away from the residential areas, which may relate to concerns over fire hazards from kilns. Recent excavations at Zagheh and Tepe Pardis have provided some direct evidence of ceramic production including workshops and tools related to production. In Zagheh, the findings in Trench K at the south of the settlement are remarkably different from those in trenches in the other sections of the site (Fazeli 2006). These distinguishing features include 5.05 m of ashy layers, kiln remains, many finished and unfinished ceramic products including clay figurines, ceramic slag, and raw materials in the form of prepared clay balls, lumps of red ochre and crushed stones

In order more fully to understand the site function of Zagheh a 10 x 10 m trench was recently opened in the south of the site, close to Trench K (Fig. 3). The excavated contexts of the 2011 season comprise 1 m depth of uniform ash layers, probably expended kiln fuel, and it is clear that this part of the site was not used for domestic or residential activities (Fig. 4). Fig. 5 shows the distribution of small finds in Trench N30, largely comprising clay objects, many of which are broken or incomplete. We suggest that these materials are surplus clay pieces broken and discarded during the manufacturing process. 158 clay tokens (Figs 5-6; Table 2) were found in the 2011 season of excavation in Trench N30 and when we review the history of tokens found at archaeological sites of the Near East (Schmandt-Besserat 1992) Zagheh is a unique site in respect of the quantity of such finds. This density of tokens may relate to the distribution and receipt of batches of raw materials or processed commodities connected to the production activities taking place in this part of the site. Also found in the trench were sherds with traces of wear on the fractured surface, identified as possible pottery making tools (Fig. 7), large numbers of which were broken during the manufacturing process. 18,583 sherds were found during the current excavations in Trench N30, consisting of Cheshmeh Ali Painted Ware, Zagheh Painted Ware, Simple Zagheh Ware, and Standard Ware (Fig. 8).

At Zagheh the occurrence of large numbers of clay tokens in ash deposits, interpreted as originating from kiln rake-out, suggests a form of monitoring of movement of materials and/or products to and from the production area. Combined with the other features outlined above, the tokens suggest a level of craft production which can be characterized as 'individual workshop industry', with full-time specialist engagement, capital investment in production technology, and a trans-regional sharing of knowledge and skills within an environment of site by site autonomy. The development of craft specialization in the Transitional Chalcolithic period and the reorganization of the ceramic industry attest increasing cultural complexity and socio-economic development in the late prehistory of the Iranian Central Plateau.

Tepe Pardis in the Tehran plain contained a ceramic workshop, and burnt rooms, over an area of 1600 sq m. We have recorded a number of kilns of different sizes (Figs 9-11).

A terracotta slow wheel was found near a kiln. A unique discovery in Iran, it has a diameter of 0.36 m and a thickness of 0.12 m and still contains a pivot of animal bone (Fig. 12). Among the thousands of ceramics are two simple flat bottomed bowls with straight walls which seem to have been used for mixing and applying slips for the ceramics (Fig. 13). Ceramic polishers or scrapers made from pot sherds match well with those from Zagheh (Fig. 14).

The ceramics themselves provide clarification of the degree of ceramic standardization, labor investment, and skill during the Transitional Chalcolithic period. Decorative motifs, color, homogeneity of the surface with the core, and design elements demonstrate a gradual development of specialist craft producers during the Transitional Chalcolithic period. In the Qazvin and the Tehran plains a variety of ceramics were produced that are technologically and stylistically different from those of the Late Neolithic period. The finished products also attest a change in the scale and mode of production during the Transitional Chalcolithic period. Ceramics show a remarkable increase in uniformity between the core and surface color. Such uniformity, brought on by greater control of the firing process, reflects technological improvement, greater skill among potters, and standardization. A variety of archaeological evidence reveals two of the most obvious characteristics of the Transitional Chalcolithic ceramics, namely the unprecedented degree of decoration and high technical quality. Distinct major categories of ceramics were produced across the three plains of Tehran, Qazvin, and Kashan, including 1) Zagheh Standard Ware; 2) Zagheh Painted Ware (Fig. 15); 3) Zagheh Simple Ware; 4) Cheshmeh Ali (Sialk II) Ware (Fig. 16), and; 5) Buff and Red Crusted Ware which is found only at Zagheh.

Petrographic, chemical, mineralogical, and X-radiographic analyses of the four main types of ceramics from 14 sites on the Tehran and the Qazvin plains have advanced understanding of the modes of ceramic production and technological development during the Transitional Chalcolithic period. The analyses suggest that sites on the Qazvin and Tehran plains were producing their own ceramics, including the fine Cheshmeh Ali Ware. Thus, specialized production of technologically and stylistically similar ceramics took place separately on each of these plains (Wong 2008).

Most of the Pardis ceramics were hand-built but radiographic studies indicate some had been fashioned using a form of fast wheel-throwing. Two of the Pardis sherds with these features were recovered from deposits dated to the beginning of the Transitional Chalcolithic period (Fazeli *et al.* 2010). In sum, the organization of production between 5200 and 4300 BC at settlements of the Tehran and the Qazvin plains underwent substantial changes. From the petrography and ICP results it appears that each settlement produced its own ceramics, while sharing knowledge and expertise on methods of production and schemes of decoration, for example. Standardization is suggested in the selection of raw materials, kilns were employed to achieve higher temperatures, and wheels and other techniques were used for mass production of pottery (Wong *et al.* 2010).

We conclude that, based on the evolutionary model, ceramic production during the Transitional Chalcolithic was that of 'individual workshop', in which ceramic production was a full-time activity requiring significant capital investment in kilns and wheels. An increase in the production output was likely to be associated with a desire to improve the operational efficiency of manufacturing activity, and task specialization and improved activity scheduling could thus contribute to more efficient production.

The Transitional Chalcolithic potters could increase the amount of output by using the wheel and mold. As workshop industries are designed to supply goods to a larger number of consumers, we can surmise from the scale of production that is evident in Tepe Pardis and Zagheh that sufficient demand was present to support the industry and that distribution would be more advanced than a primary marketing system, as suggested by Rice (1987, 184). The development of craft specialization in the Transitional Chalcolithic period and the associated reorganization in the ceramic industry reflect increasing cultural complexity and socio-economic development in this crucial period in the late prehistory of the Iranian Central Plateau.

5. Use of tokens at Zagheh in the Transitional Chalcolithic period

As mentioned above, during the 2011 excavations at Zagheh 158 clay tokens were recorded. Furthermore, 24 tokens were recorded from the residential quarter of Zagheh in the earlier excavations and are now located in the Museum of the Institute of Archaeology, University of Tehran. These 24 examples have no contextual information but the 158 recorded from the 2011 season consist of flat, pyramidal, circle, cylindrical, cube and diamond shapes (Table 2 and Fig. 6). What might have been the function of the Zagheh tokens? At Zagheh we see good evidence for long distance trade, differentiation in mortuary practices and craft specialization beyond agricultural products during the Transitional Chalcolithic period, all of which suggests that tokens here were probably used for counting in a system of administration. Schmandt-Besserat (1992, 6) suggested that such tokens reflected an archaic mode of 'concrete' counting prior to the invention of abstract numbers. She suggested particular tokens were needed to account for specific type of goods, such as oil/ovoid, measures of grain/cone, and so on, and she correlated this development with socio-economic changes during the Transitional Chalcolithic period. The tokens of Zagheh can be divided into the two types of plain and complex tokens, and the latter group includes a repertory of forms and markings which Schmandt-Besserat (1989, 39) suggested stood for goods manufactured in workshops. This scenario provides a rich contextualisation for the Zagheh tokens.

6. Mortuary practices during the Transitional Chalcolithic period

On the basis of ethnographic parallels and cross-cultural generalisations it is widely accepted that social complexity is interlinked with mortuary practices. The mortuary practices of the Iranian north-central plateau can be studied regarding the spatial patterning of burials, differences in burial goods, differences in body treatment and differences between adults, genders, and children. In order to understand the nature of archaeological data regarding mortuary practices during the Transitional Chalcolithic period we analyze here the archaeological data from the sites of Zagheh, Cheshmeh Ali, Pardis, and Sialk in the three regions of Qazvin, Tehran, and Kashan.

7. Mortuary practices at Zagheh

During the 1970s' excavations at Zagheh, Malek Shahmirzadi (1977) reported 23 individual burials, of which 11 skeletons were clearly associated with five structural units, the others being poorly recorded. These burials within the village houses include adults, male and female, and children, many painted with red ochre and some with modest numbers of ceramic vessels, stone cosmetic palettes, and stone beads. Infants were buried in the unit areas without burial goods but some of them were covered with

red ochre, while only some adults were buried with elaborate goods. The spatial organisation of the burials may be divided into four groups; 1) infants tend to be buried in roofed areas and adults in open areas; 2) adults buried in the architectural units near the Painted Building were buried in roofed areas; 3) some adults were buried in public spaces, such as in the square and lanes or corridors; and 4) most of the individuals in the structural units (open or roofed areas) did not receive burial goods.

Tala'i briefly published an extraordinary assemblage of eight adult female burials in the open area to the south of the Painted Building (Tala'i 1999). These burials are distinguished by their location, the attitude of the skeletons in facing and reaching towards the Painted Building, the extensive use of red ochre on their faces, even inside the mouth, and the high numbers of beads of a range of stones. These include necklaces, armbands, bracelets, belts, diadems and objects placed near the skulls. The placement of the arms of the buried females is especially notable, with arms and hands outstretched in front of the face of the body, reaching towards the nearby Painted Building in a classic pose of humility and divine accolade. Combined with the nearby, but discrete, location of female figurines to the west and north of the Painted Building (Negahban 1979; 1984), these burials further underline the building's special nature. In sum, Zagheh mortuary practices in the Transitional Chalcolithic have distinctive characteristics, with differentiation potentially related to a range of factors including proximity to the Painted Building.

8. Mortuary practices at Sialk

Thirty-nine human skeletons, dating from the late fifth to the early first millennia BC were excavated by Ghirshman and studied by Vallois (1939). This sample included six individuals from the late fifth and five individuals from the early fourth millennia BC. Vallois' investigation included basic information about sex, age, and the prevalence of carious lesions, as well as a comparison of cranial indices with skulls from Mohenjo Daro. The early burials were coated with red ochre as at Zagheh, and shell ornaments from the Persian Gulf also occur in the burials.

During the 2009 spring excavation season at Tepe Sialk North, a cluster of six burials was excavated within the Late Neolithic-Transitional Chalcolithic stratum, *ca.* 5400 BC (Sołtysiak and Fazeli 2010). Of the six burials, one was a double burial with both cremated and uncremated human bone, four were cremations, and one included the articulated skeleton of an infant placed in a pit grave filled with numerous sherds (Fig. 17).

Although cremation is rare in all periods in Iran, as many as five examples were discovered at Tepe Sialk. The bodies of adults were burned, whereas the bodies of infants were both cremated and buried without burning. In addition, the use of red ochre, although frequent, did not appear to follow a recognizable pattern. In two cases, fragments from various body units were completely mixed. In two other cases, however, the rough sequence of collection of bone fragments from the funeral pyre may be reconstructed; in both burials skull fragments were located on top.

9. Mortuary practices at Cheshmeh Ali

At Cheshmeh Ali, Schmidt's team recovered the remains of 174 burials, of which 34 belong to the prehistoric period (Gustavel and Fazeli in press). All 34 burials appear to

have been primary inhumations, with the bodies interred below the ground surface. There is no evidence of compound or secondary inhumations, as the bodies appear to be neither rearticulated nor disarticulated. Most of the graves are reported to have come from beneath the floors of buildings or from “garden plots” between the buildings. The general pattern at Cheshmeh Ali is for graves to be associated with houses and private spaces spread throughout the community, rather than for use of formal cemeteries. This appears to be a widespread cultural preference for the Late Neolithic and Transitional Chalcolithic communities of north-central Iran at sites such as Tepe Pardis, Zagheh, and Tepe Sialk.

The dead at Cheshmeh Ali appear to have been buried wrapped in cloth shrouds or mats. This is evidenced by the excavator’s notes for “white substances” covering some of the bodies. In some cases, Schmidt noted that the bones within the graves were stained red from a clay or pigment, while in others the description suggests a “covering” of red-brown clay. The two proposed elements of body preparation – covering in clothes or a shroud, and the painting of the body in red brown pigments – are paralleled at Zagheh, Pardis, and Sialk, as discussed above.

At Cheshmeh Ali, there are two modes of body disposal, used with approximately equal frequency. The more common of the methods is a simple pit excavated into the ground. There are 19 simple pit inhumations at Cheshmeh Ali, representing 56% of cases. Some of these pit burials are located within a specific room, or are clearly designated as being found under a constructed floor. Fifteen of the burials (44%) were marked with the annotation “c.t.,” which is probably “cist tomb”. A cist tomb is a construction that involves the building of tomb walls with unbaked mud-brick, creating a clear burial chamber. Of the burials, 22 skeletons were assigned a sex. Overall, 41.2% of the burials were male (n=14), 23.5% were female (n=8), while the remainder were unsexed. Given the small sample size, it is not possible to determine statistically whether or not there is a cultural significance to this distribution pattern. The male:female burial ratio is clearly atypical of living populations and it may be that males were more likely to be afforded intramural burial at prehistoric Cheshmeh Ali.

The majority of burials at Cheshmeh Ali contained grave goods, although none of the burials was particularly well appointed. Most graves contained one to three artefacts, with only four graves containing more than three artefacts. The most common artefacts were ceramic vessels (n=23) and beads (n=18), including necklaces, pendants, and bracelets. Other categories of material were less common, such as chipped stone flakes (n=6) and rings (n=3), while a number of graves contained unique artefacts including a fragment of a shroud, a pair of bone needles, a bone seal, a pottery whorl and a copper pin. Twelve burials contained no grave goods. There does not appear to be any strong correlation between the presence/absence of grave goods and either age or sex. Of the graves without grave goods, five are male, five are female, and two were unsexed. Similarly, seven of these graves were of adults; one was a juvenile, one an adolescent, and one senile. It is interesting that all three of the youngest burials (Infant I category) had grave goods, while the oldest burials had none. This suggests that the grave goods reflect some ascribed, as opposed to achieved, social status at Cheshmeh Ali.

It is telling that there is not a great range in the quantity or quality of grave goods, arguing that there is little class differentiation between the inhabitants buried at the site. Leaving aside the pottery vessels, most of the artefacts put into the graves at Cheshmeh Ali were purely decorative in nature: beads, pendants, and rings. Presumably these were

adornments placed on the body during the burial ceremony.

The two skeletons excavated at Cheshmeh Ali in 1997 were both recorded in Transitional Chalcolithic levels. The two skeletons were situated within a circular structure in Trench H7 at a depth of some 4 m below the surface. Skeleton 1 was located in the exterior section of the trench and only the skull could be distinguished. The skull was located 20 cm from skeleton 2 which also yielded traces of matting. Both showed traces of having been sprinkled with red ochre but a small bowl and large whole trapezoid cross-section blade were excavated at the feet of skeleton 2. It is interesting to note that during the excavation only two large trapezoid blades were recorded, one of them in the above burial and another in the upper layer of the Early Chalcolithic period. It appears that this high quality product was an exotic material, manufactured elsewhere and imported to Cheshmeh Ali. This type of blade can be considered a traded good, which has a regular distribution in the Transitional, Early, and Middle Chalcolithic settlements of the Tehran plain on a small-scale. The deceased were interred in an architectural unit with two hearths or ovens (Fazeli 2001).

10. Mortuary practices at Tepe Pardis

In the 2007 excavation of Tepe Pardis in Trench IV we found a partial burial which had been badly damaged by quarry machinery. The burial, though crushed and cut, was associated with beads of turquoise, agate, shell, and lapis lazuli (Fig. 18). This find suggests that the burial practices at Pardis align with those discussed above from other Transitional Chalcolithic sites of the north-central plateau of Iran (Fazeli *et al.* 2007).

11. Grave goods in Transitional Chalcolithic burials

From the above survey we see that many Transitional Chalcolithic human burials in Iran include deliberate deposits of specific items. Turquoise, lapis lazuli, white and black beads, as recovered from Zagheh, Cheshmeh-Ali, Tepe Pardis, Sialk and Ismailabad, for example, are remarkable in quantity and style. The beads vary in size and shape from tiny, circular, and thin in cross-section to large, massive, and almost rectangular in shape. The artefacts of many burials consist of local, regional, and exotic materials. Local and regional burial goods include ceramics, copper tools, and stone palettes. The exotic and imported materials comprise ornaments of materials such as lapis lazuli, turquoise, and marine shells. During the fourth millennium BC lapis lazuli began to spread, though in limited quantities, through the Indo-Iranian borderlands and Central Asia.

Casanova (1992) has studied two kinds of lapis lazuli samples – those from mines and those from archaeological contexts. Twenty-one mine samples have been collected in Russia and Afghanistan and 29 archaeological samples from Shahr-i-Sokhta and Tepe Sialk. The Sialk samples display only a weak resemblance to mined samples from Badakshan and the Chagai Hills. Casanova's study did not reveal the origin of lapis lazuli in the central plateau of Iran, but it could be suggested that the lapis lazuli used in the region may have been imported from eastern Iran. Hole and Flannery (1968, 179) assumed that prehistoric turquoise came from the well-known sources near Nishapur, but Kerman province has also long been a source of turquoise. The source of shell beads is not clear and they were probably imported from the Caspian Sea and Persian Gulf or elsewhere.

During the Transitional Chalcolithic period, we suggest that ideology played an active

role in the formation and transformation of social identities through differential burial practices. The evidence from Zagheh suggests burial location and grave goods as indicators of social identities. Thus the burials near the Painted Building are wealthier and more highly structured than other burials at the settlement. In examining Bronze Age societies of Europe and the Near East several studies have argued that the Bronze Age is characterized by ideologies related to the acquisition and consumption of cherished materials such as metals and semi-precious stones, including lapis lazuli (Kristiansen and Larsson 2005). The appearance of traded and cherished materials in human burials of the Transitional Chalcolithic in Iran, suggests that the origins of social ideologies attached to cherished commodities can be sought in periods long before the Bronze Age.

12. Conclusion: hierarchical or transegalitarian?

The material evidence presented above from a range of sites on the plains of Tehran, Qazvin and Kashan argues for the development of nascent societal differentials on the north-central plateau of Iran from about 5000 BC onwards, as expressed in differential access to and consumption of a range of commodities and facilities, including arable land, water resources, imported stones and shells, alongside the evidence for increasing specialization and standardization in craft activities. Associating this evidence with early steps towards power differentials and social hierarchies, however, is problematic and we should proceed with caution. The picture we can draw from all the evidence is of small-scale farming communities, numbering not more than a few hundred villagers per settlement, steadily spreading out across the fertile soils of the plateau, and participating still in some degree of hunting and gathering of wild resources. Some elements of society will have been engaged in pastoral nomadism, moving according to season. The villagers employed sophisticated technologies for ceramic production and were in the process of developing their metallurgical skills. They doubtless were highly skilled in textile and basketry making but the evidence for these skills is rather sparse. Some villagers were almost certainly full-time specialists, in tasks such as ceramic production and perhaps architecture and building. Clearly certain areas of the settlements were dedicated to craft production, but there is also evidence for craft activity within residential houses and compounds. There is good evidence for inter-site and cross-plateau interaction, both in the form of shared mental templates for the production and decoration of pottery, for example, and in the movement of regional and exotic materials across often large distances. This was a well-connected and well-developed world. But it was also a world where individual villages and communities pursued their own trajectories through space and time.

Tracking the pathways to power and the emergence of political hierarchy is not a straightforward task. Evidence for difference is not evidence for hierarchy. The detection of hierarchy requires us to present evidence for individuals or groups of individuals with, in Bogucki's words (1999, 257), the "sustained ability to claim control over a specific, bounded population, its internal social affairs, and its external economic relations". As it currently stands the available evidence does not support such an interpretation. We propose that the communities of the Iranian plateau can be meaningfully situated within the context of what researchers such as Crumley (1995) and Bogucki (1999) have called heterarchical and transegalitarian societies. Crumley (1995, 3) defines heterarchy as "the relations of elements to one another when they are

unranked or when they possess the potential for being ranked in a number of different ways.” This concept provides a flexible framework, not pyramidal in structure, which allows differentiated material evidence to be viewed in a variety of shifting lights according to context. Bogucki (1999, 257) has elaborated on the idea of heterarchy as “an alternative configuration of social relations”, valuable in the analysis of “situations of increasing complexity without apparent centralized control.” Thus, in examining the differentiated burial evidence from Zagheh, for example, instead of assuming nascent claims to power and political hierarchy, we might more profitably consider them from a point of view that starts from their context. In this light, we note firstly that the elaborate burials are all in proximity to a special building, itself distinguished by its elaborate internal fittings and decoration. Secondly, the burials here are all of adult females, a fact we can associate further with the presence of large numbers of specifically female figurines, some clearly meant to be pregnant, distributed along the west and north sides of the Painted Building. The internal decoration of the building, by contrast, with at least 18 skulls of wild male goats, has a masculine flavour. In looking at the differences between the Painted Building burials and those in the nearby residences, the issues here seem more related to gender, fertility, cult and devotion than to claims to political authority and hierarchy.

This is not to deny that struggles for political authority may have been implicated, however indirectly, in these social developments, but the point here is that they are not necessarily involved in shaping the archaeological evidence with which we are confronted. Bogucki (1999, 258) has argued that the transformative element in the development of societies from transegalitarian to hierarchical is when the domestic sphere is dominated by “some formalized and structured public life”, which might be manifest in a range of ways including large non-residential buildings or centralized control over craft production. In this regard it is notable that Wong *et al.*'s study (2010) of Cheshmeh Ali type ceramics from a range of sites on the Tehran and Qazvin plains concluded that, despite striking similarities in vessel forms and decorative schemes, pottery production was organised at very local levels with no evidence for centralized control or of integration of ceramic production into a broader regional economy of redistribution.

Following the arguments of Drennan and Peterson (2012, 73) we might profitably view the Transitional Chalcolithic societies of Iran as “supra-local communities” with regionally specific characteristics that transcended and connected individual settlements, as richly attested in ceramic styles and burial practices, for example, coupled with the development of central places which served as a focus for a range of social, economic, and ritual activities. The highly significant sites of Zagheh on the Qazvin plain and Sialk on the Kashan plain are probably best interpreted in this way. We argue here that the societies of the Iranian plateau in the Transitional Chalcolithic can be viewed as being on the cusp of a dramatic episode of change, but not yet quite over it. In sum, the Transitional Chalcolithic communities of Iran were certainly complex and multi-stranded but the jury must still be out on the question of whether they had become truly hierarchical by the end of the Transitional Chalcolithic period in the late fifth millennium BC.

Attachments

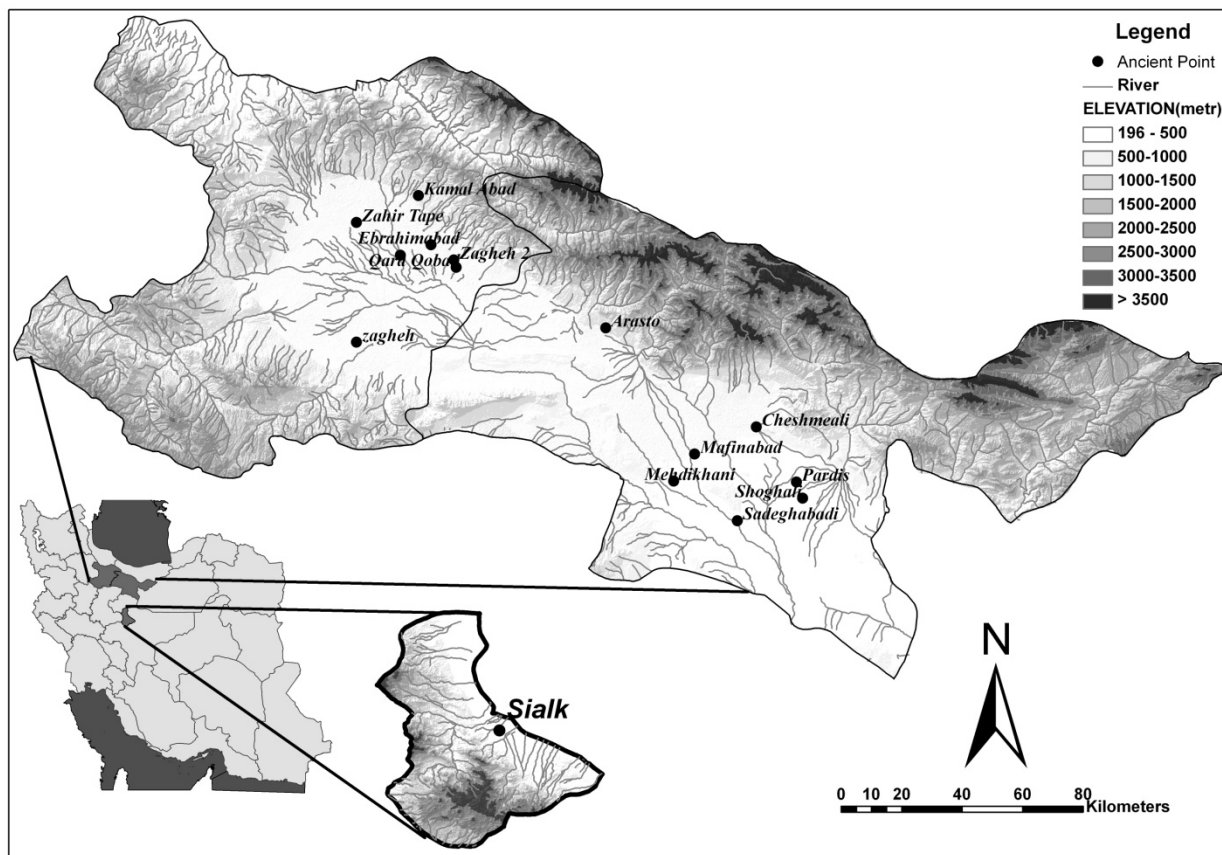


Figure 1: Map to show location of the Tehran, Kashan and Qazvin plains, with key sites.

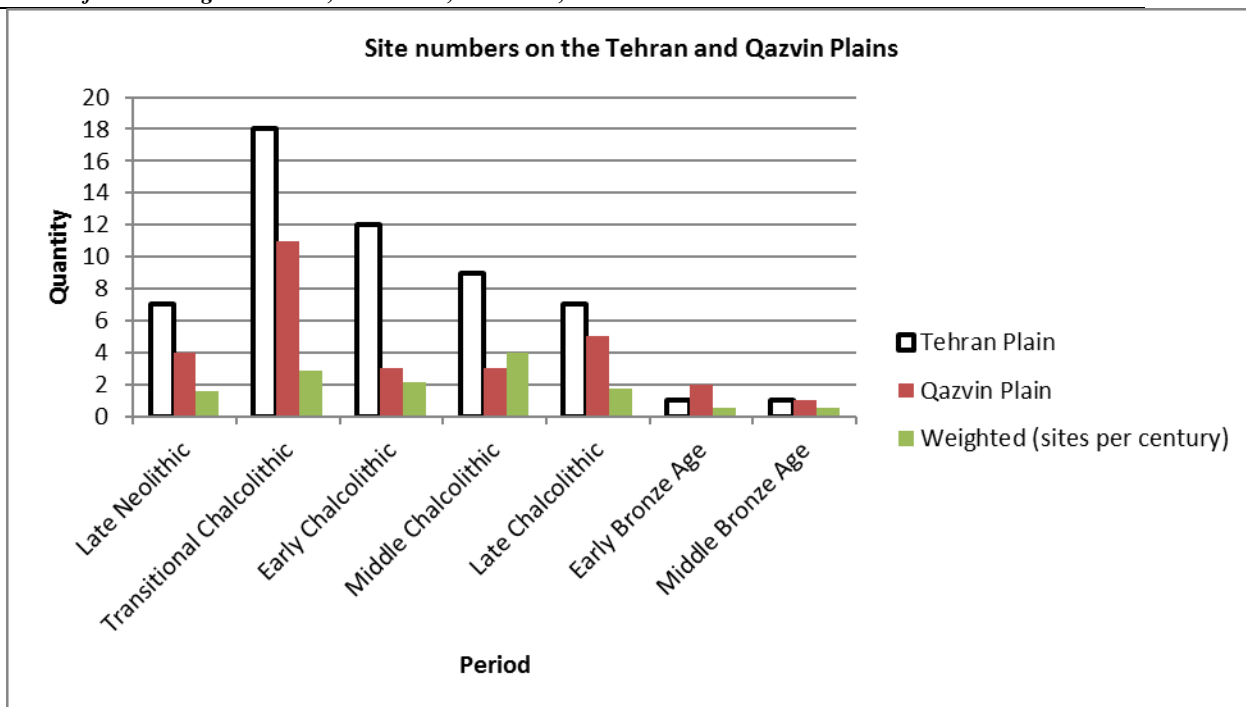


Figure 2: Settlement through time on the Tehran and Qazvin plains.

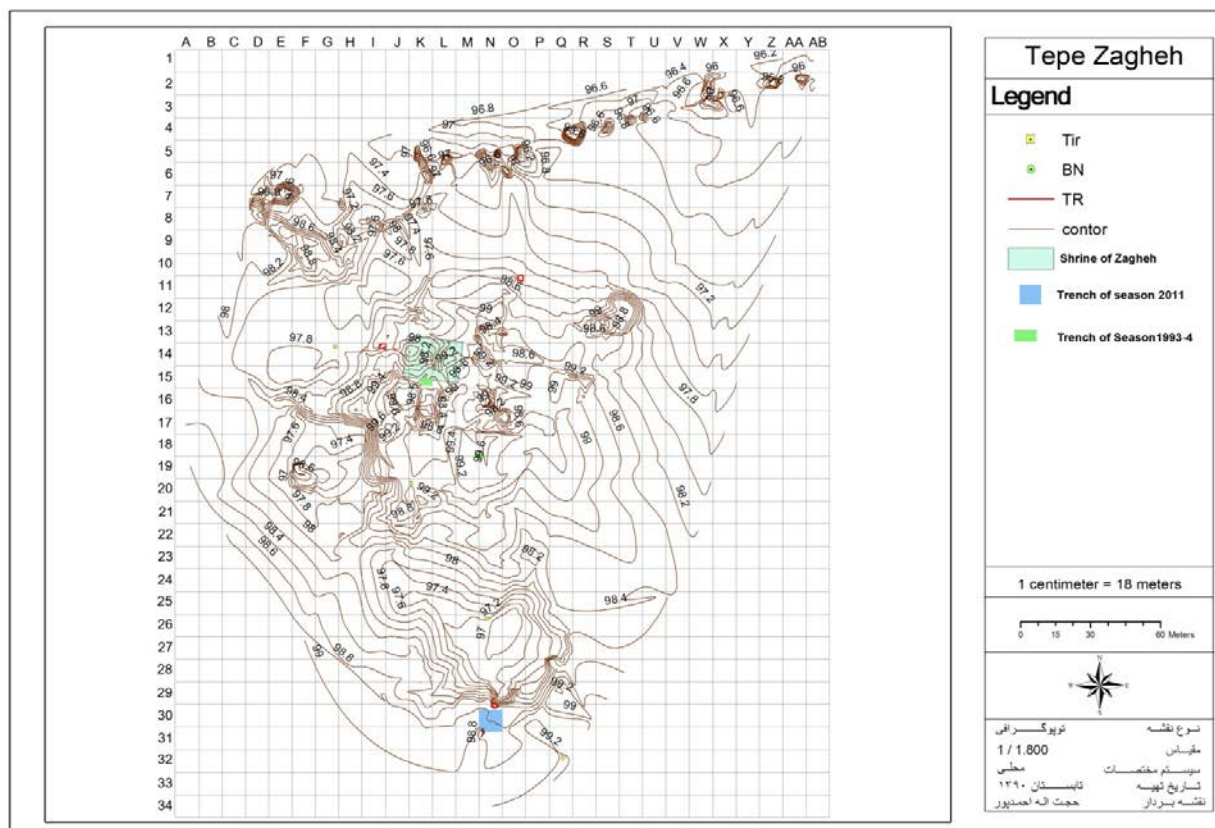


Figure 3: Topographic map of Zagheh and location of workshop area (Trench N30).



Figure 4: View of Zagheh, Trench N30, 2011 excavations.

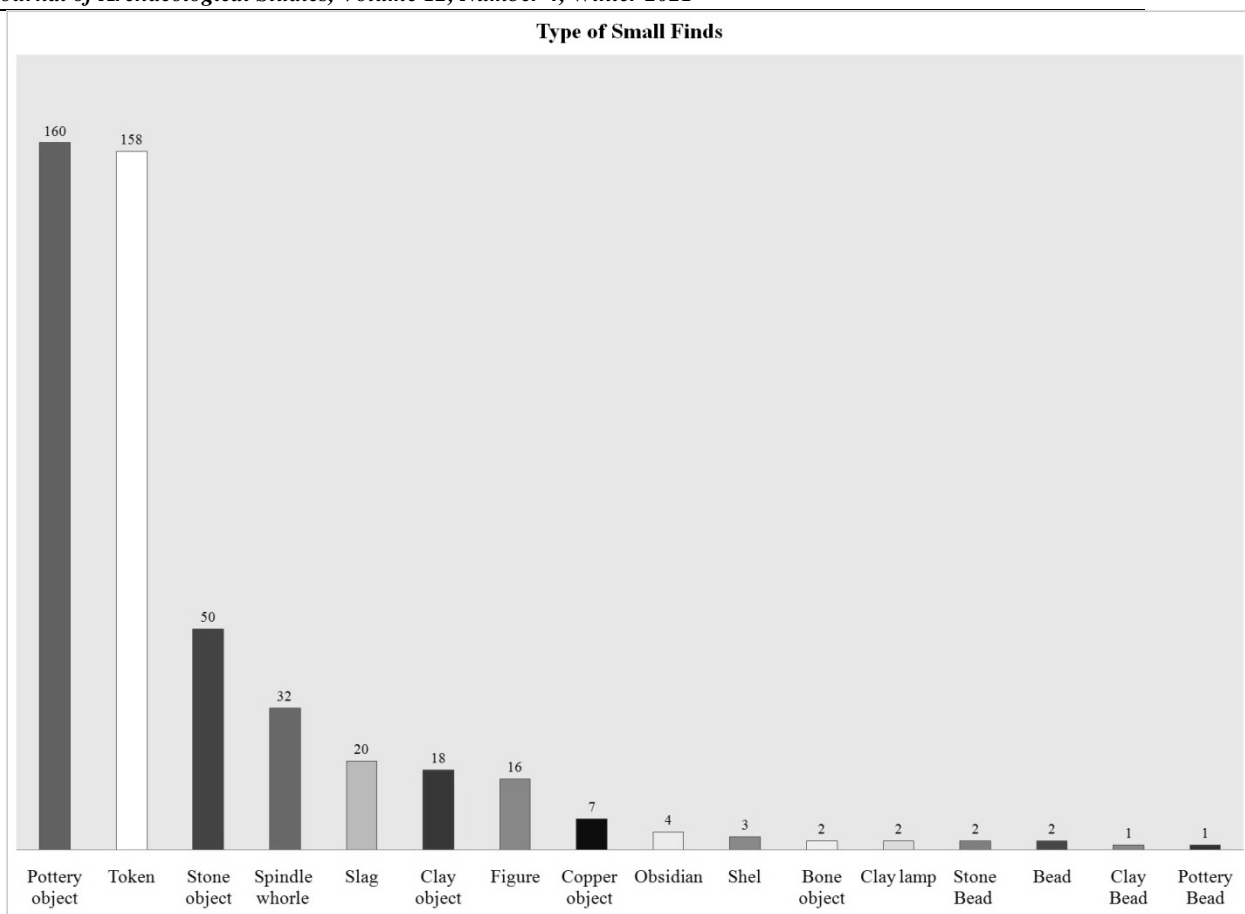


Figure 5: Small finds from Zagheh, Trench N30, 2011 excavations.



Figure 6: Tokens recovered from Zagheh, Trench N30, 2011 excavations.



Figure 7: Recycled pot-sherds with wear on the fractured surface, possible pottery making tools, from Zagheh, Trench N30, 2011 excavations

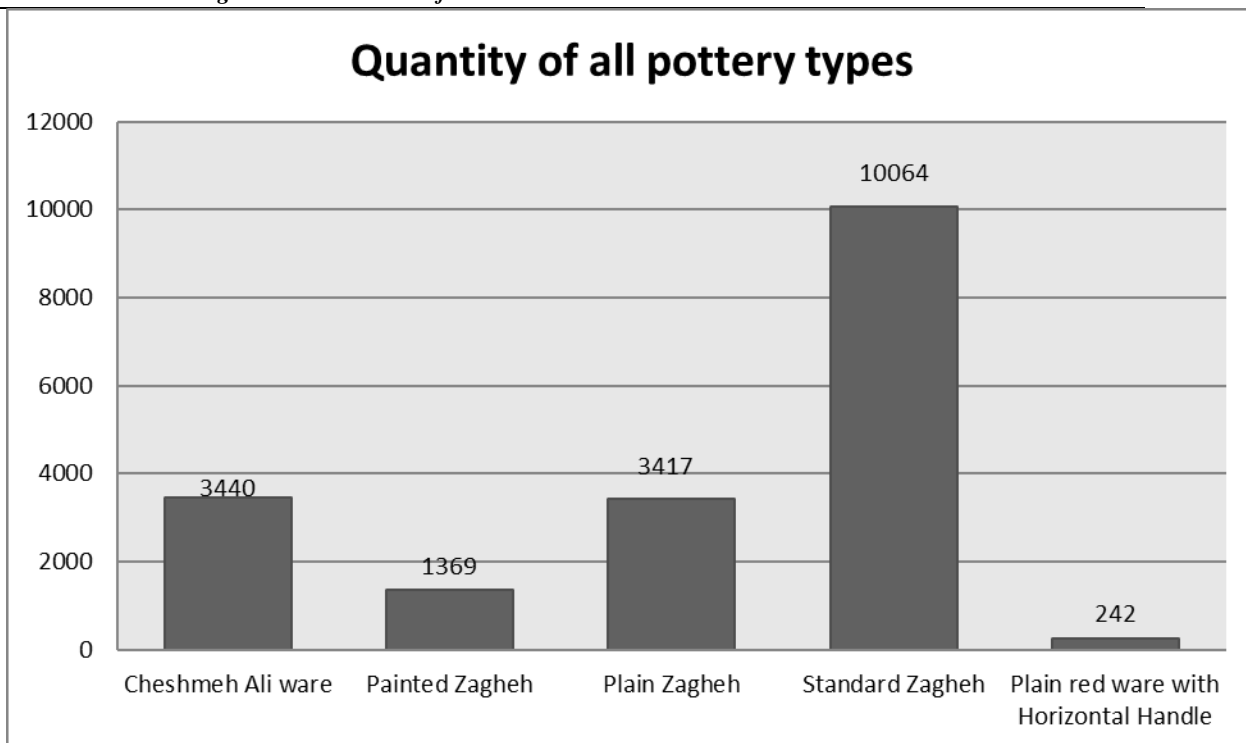


Figure 8: Quantities of ware types found at Zagheh, Trench N30, 2011 excavations.

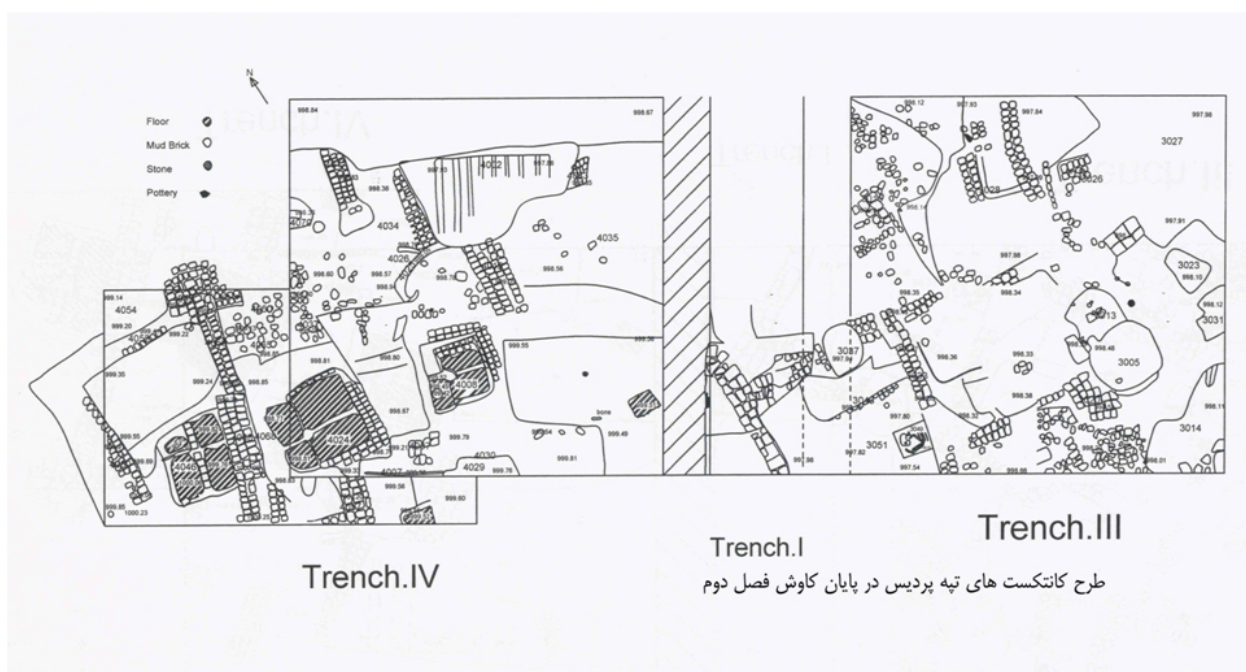


Figure 9: Plan of kilns and features at Tepe Pardis, Transitional Chalcolithic period.

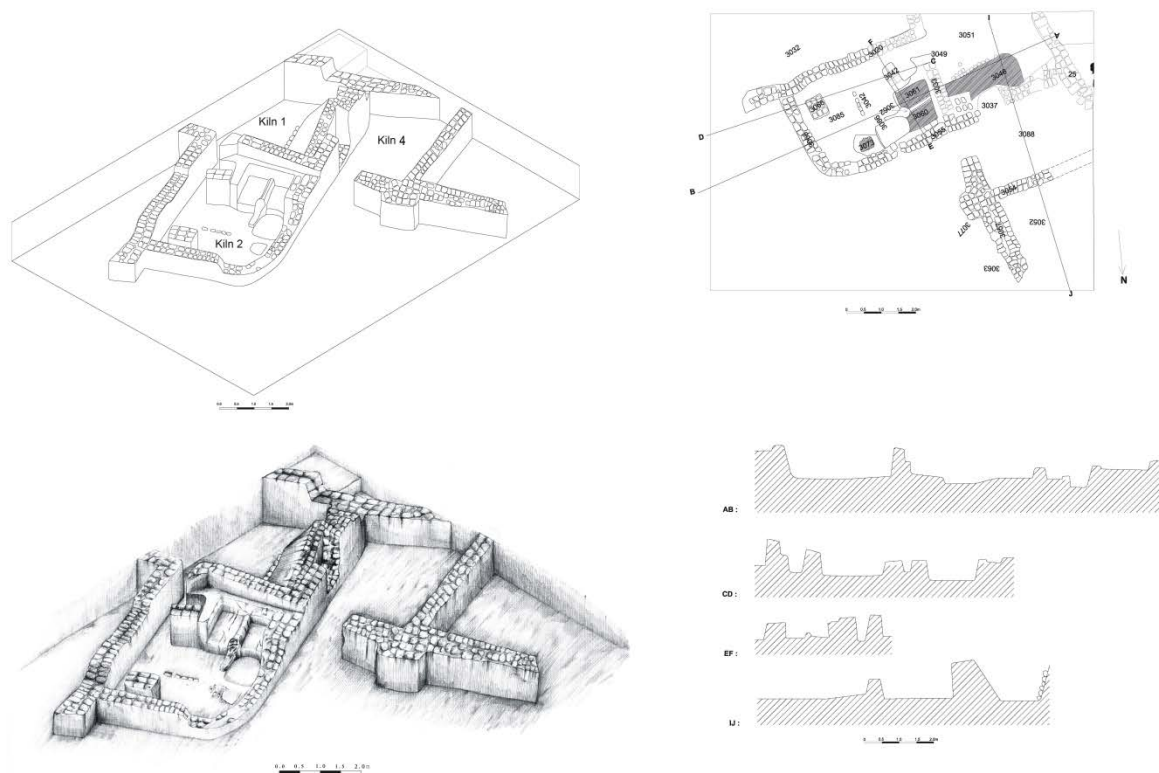


Figure 10: Plan and section of kiln and features at Tepe Pardis, Trench III.



Figure 11: Kiln and features at Tepe Pardis, Trench III.

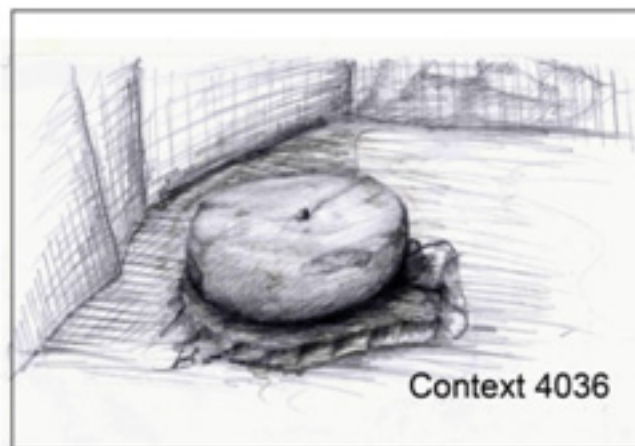


Figure 12: A terracotta slow wheel, Tepe Pardis, Trench III.



Figure 13: Vessels from Tepe Pardis, Transitional Chalcolithic period. The bottom two bowls were used for mixing and applying slip.



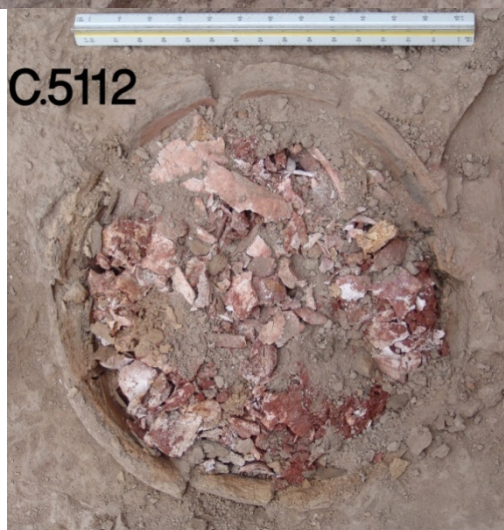
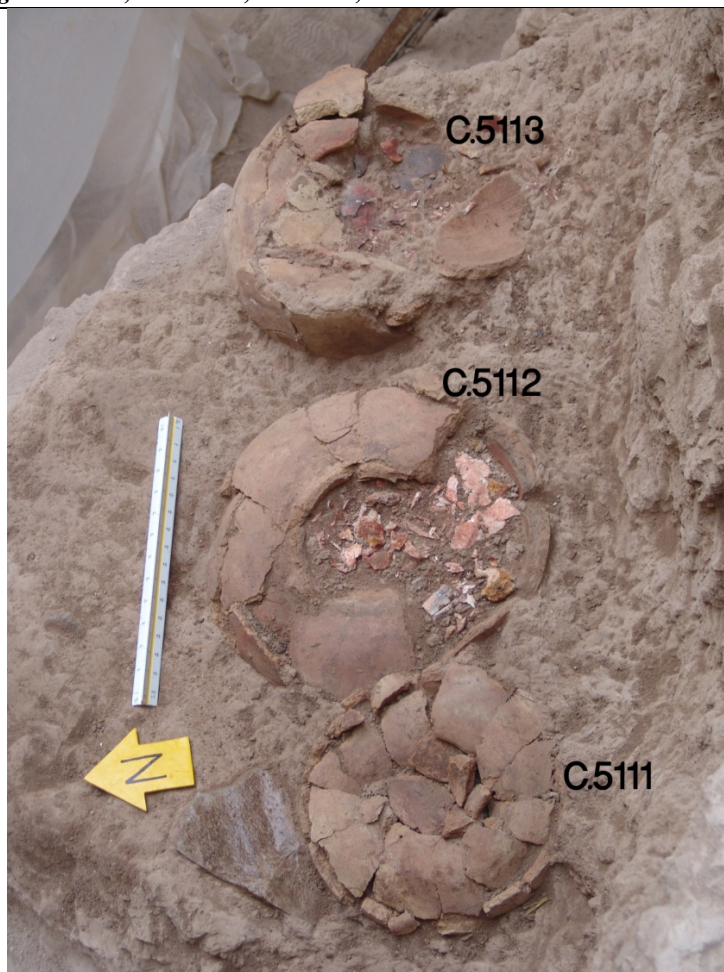
Figure 14: Recycled pot-sherds with wear on the fractured surface, possible pottery making tools, from Tepe Pardis, Transitional Chalcolithic period.



Figure 15: Zagheh Painted Ware from Zagheh, Transitional Chalcolithic period.



Figure 16: Cheshmeh Ali Ware (Black on Red), from Zagheh, Transitional Chalcolithic period.



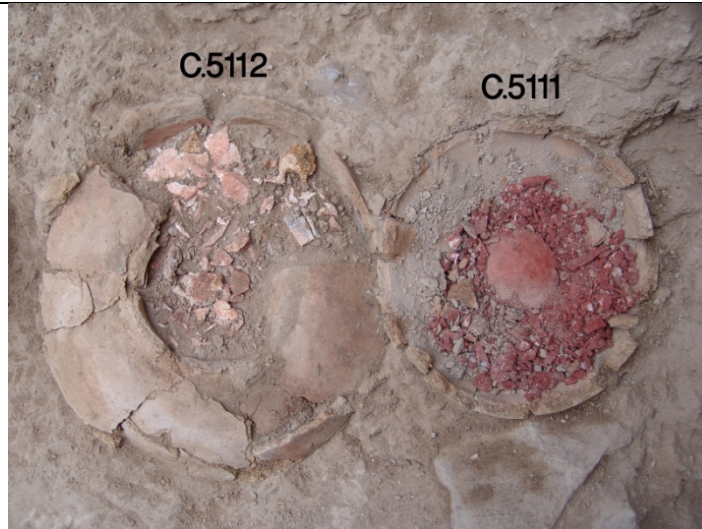


Figure 17: Cremation burial, Sialk, Transitional Chalcolithic period.





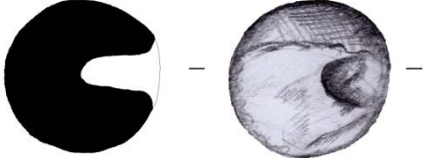


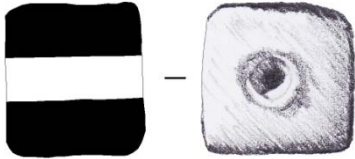
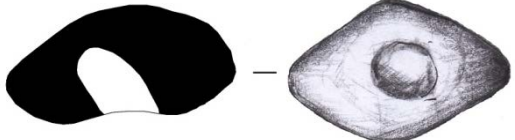
Figure 18: Beads from Tepe Pardis, Trench IV burial, Transitional Chalcolithic period.

Table 1: Chronology of settlement on the Iranian plateau.

Period BCE	The Qazvin plain	The Tehran Plain	The Kashan Plain	Damghan/Shahrud	
Transitional Chalcolithic	Late 4600-4300	?	Cheshmeh Ali Ismailabad Kara Tepe Shogali	600 to 500 years gap between Sialk North and Sialk South	Shir Azhian Aq Tappeh
	Early 5200-4600	Ebrahim Abad Zagheh	Cheshmeh-Ali Tepe Pardis Ismail Abad	Sialk II ₁₋₃	Sang-i Chakhmaq East (2-1)
Late Neolithic	Late 5600-5200	Chahar Boneh Ebrahim Abad	Cheshmeh-Ali Tepe Pardis	Sialk I _{3,5}	Sang-i Chakhmaq East (top levels) (4-3)
	Early 6000- 5600	Chahar Boneh	?	Sialk I ₁₋₂	“Djeitun” Phase (6-5)

Table 2: Types and quantities of tokens found at Zagheh, Trench N30, 2011 excavations.

Type of Token		Number	Sample
Flat		10	
Circle		59	
Pyramidal		67	
Cylindrical		12	
Token that are perforated in the center	Circle	7	

	Square cube	2	
	Diamond	1	

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چکیده

پیگیری ظهور اقتدار سیاسی و سلسله مراتب اجتماعی در مدارک باستان شناسی با توجه به ارتباطات مادی بالقوه ای که در مراحل اولیه شکل گیری دولت ها وجود داشته است، یکی از مهمترین چالش های باستان شناسان در پنجاه سال گذشته یا بیشتر بوده است (Chapman 2003; Smith, 2012). بیشتر این تحقیقات شواهد مربوط به جوامع گذشته خاور نزدیک باستان ، از جمله بین النهرین و ایران را بررسی کرده اند (Wright 1998; Flannery 1999; Smith 2012) ، اما بررسی کمتری در مورد جوامع ساکن در فلات ایران انجام شده است (Matthews and Fazeli Nashli 2004). اینکه نقش این جوامع در مجموعه تحولات پیچیده سیاسی-اجتماعی منجر به ظهور جوامع سلسله مراتبی در ۵۵۰۰ تا ۴۰۰۰ قبل از میلاد چه بوده و چگونه ممکن است شواهد باستان شناسی ما را در مورد این نقش ها آگاه کنند، کنند یکی از مسائل مهم و به روز باستان شناسی می باشد؟ بررسی های مداومی اخیرا در مورد جوامع فلات ایران در دوره به اصطلاح مس و سنگ انتقالی (۵۲۰۰-۴۲۰۰ قبل از میلاد) در جریان است که به تقویت درک ما از این سوال کمک میکند. در این مقاله ، ما شواهد حاصل از تحقیقات باستان شناسی محوطه های واقع در دشت های تهران ، کاشان و قزوین را خلاصه و تجزیه و تحلیل کرده و به الگوهای استقراری ، استراتژی های معیشتی ، تولید صنایع دستی و شیوه های تدفین پرداخته ایم (شکل ۱).

بحث ما این است که جوامع مس و سنگ انتقالی شمال فلات مرکزی ایران تحت تأثیر تشدید کشاورزی و رشد پیچیدگی از نظر رتبه بندی اجتماعی قرار گرفتند ، همانطور که در شیوه های تدفین و فعالیت های آیینی ، تجارت از راه دور و تخصصی شدن صنایع نشان داده شده است. شواهد نشان می دهد که از اواخر هزاره ششم قبل از میلاد ، جوامع قبلی خودکفا و مستقل این منطقه به سیستم های اجتماعی پیچیده تری در دوره مس و سنگ تبدیل شدند. نشانگرهای افزایش پیچیدگی در دوره انتقال نوسنگی به مس و سنگی شامل گله داری گاو ، گوسفند و بز (Mashkour et al. 1999; Fazeli et al, 2009) ، کشت جو و گندم نان با استفاده از سیستم های آبیاری (Gillmore et al, 2009) ، توسعه تجارت از راه دور (Fazeli and Abbasnegad 2005) ، فعالیت های پیچیده آیینی ، تمایز اجتماعی در شیوه های تدفین و ایجاد مناطق تخصصی برای تولیدات صنعتی با استاندارد سازی بیشتر و روش های جدید تولید مانند سفال های چرخ ساز (Fazeli et al. 2007; Fazeli et al 2010) می باشند. همه این تحولات از ایده جوامع پیچیده ای که در مرکز فلات ایران از ۵۲۰۰ سال قبل از میلاد به بعد در حال تکامل هستند ، پشتیبانی می کنند. در حالی که افزایش درجه پیچیدگی بدون هرگونه تردیدی به نظر می رسد ، اما همچنان این مورد که جوامع در دوره مس و سنگ انتقالی در یک روند سلسله مراتبی از دسترسی متفاوت و کنترل قدرت

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ساخته شده اند، قابل بحث می باشد. به نظر می رسد داده های باستان شناسی در ابتدا تفسیرهای سلسله مراتب اجتماعی را پشتیبانی می کردند ، با بررسی ها و تحقیقات بیشتر می توانند به عنوان مثال با موضوعات مربوط به جنسیت ، مراسم آیینی یا تخصصی شدن حرفه ها مرتبط باشند. طبقه های قدرت و سلسله مراتب ممکن است توسط هویت های اقتصادی-اجتماعی برابری طلبانه ای که باید در مشخصات سوابق باستان شناسی به عنوان ویژگی های جوامع جداگانه تشخیص داده شود ، همزمان باشد. همانطور که پرگرین (Peregrine 2012) اخیراً بیان کرده است ، " گذشته همیشه پیچیده تر از آن است که در یافته های باستان شناسی به نظر می رسد " .

کلید واژگان: ؟؟؟