



An Impressed Grey Vessel of Chaltasian: A New Socio-Economic Evidence of Iron Age Societies of the Iranian Central Plateau

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Abstract: Studying and understanding the social, economic, and political structures of Iron Age communities is a significant aspect of archaeological research of this period. Until now, much of the archaeological research on the Iron Age in Iran has focused largely on the typological study and comparison of findings from cemetery excavations, with less attention given to the study and reconstruction of the various aspects of the social, economic, and political structures of communities from this period. Most researchers to date have regarded the people of the Iron Age in Iran as communities lacking organized administrative and political structures, and based on the limited number of settlement sites, have described them as nomadic herders. However, the study, interpretation, and analysis of findings from settlement sites of this period in Central Iran have revealed new perspectives on the presence of socio-economic and political institutions and organizational structures. The discovery of a piece of grey pottery with a cylinder seal impression at Chaltasian Tepe, Varamin, alongside other evidence from significant and large settlement sites of the Iron Age, provides us with evidence of socio-economic institutions during the Iron Age.

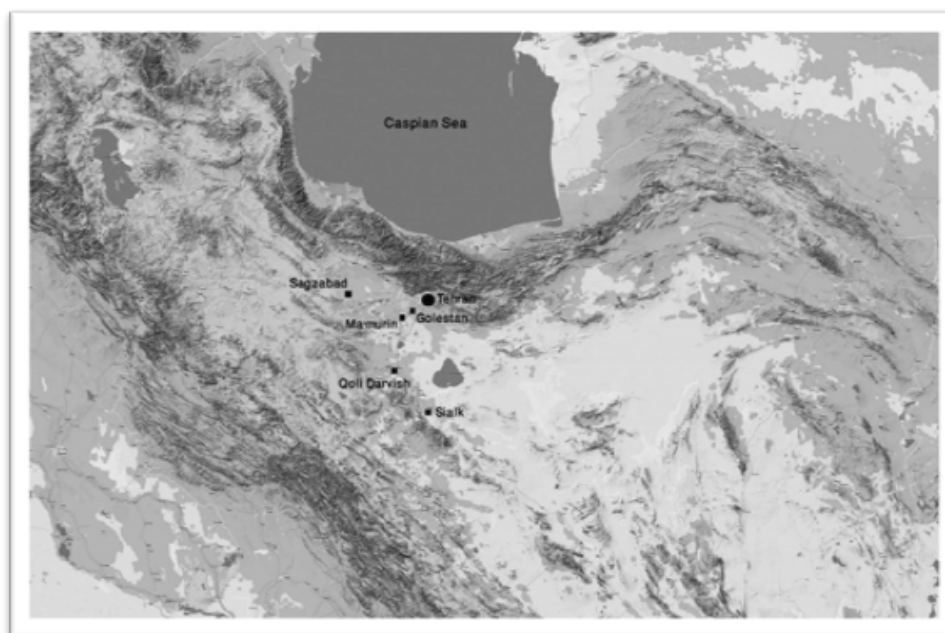
Keywords: *Iron Age, Central Plateau, Chaltasian Tepe, Impressed Sealed Pottery, Socio-economic Institutions.*

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Introduction

The extent of archaeological knowledge regarding the Iron Age in Iran has traditionally been limited to sites in the northern, northeastern, and northwestern regions of the Iranian plateau, except Sialk. As evident, many of the existing chronologies and timelines have been based on results from sites such as Hasanlu (Fahimi, 2012: 256). Additionally, much of our understanding comes from cemetery sites like Qeytariyeh, Khorvin, and the Sialk Tepe. However, in the past two decades, Iranian teams have surveyed and excavated numerous newly identified Iron Age sites, some of which contain settlement remains. Significant Iron Age settlement sites and cemeteries that have been examined include Mamourin Tepe in southwestern Tehran; Pishva in Varamin; Ozbaki Tepe in western Tehran; Saram Tepe in southwestern Qom; Pardis Tepe in the Tehran plain; Vason and Zarbolagh in northern Qom; Qoli Darvish in southwestern Qom; the southern mound of Sialk; and the fortress and ramparts of Shamshirgah in southern Qom (Fahimi, 2010: 166) (Pic. 1). The settlement patterns of Iron Age sites in this region show a marked difference from earlier periods. The study of these patterns indicates that smaller sites are located at varying distances around larger ones, suggesting intra-regional economic connections and cultural homogeneity in pottery and burial practices across the sites. The examination of public building remains from excavations at sites such as Sagzabad and Qoli Darvish, alongside the emergence and growth of iron smelting and processing technology, leads to the conclusion that the political structures of these communities were as advanced as those of earlier, more developed societies (Tala'i, 2002).



Pic 1: The Location of Iron Age Settlement provided the Impressed Pottery Pieces (Alibaigi & Khosravi 2014: 54)

The Art of Seal-Making

The art of seal-making has been in use since the Neolithic period in the ancient East. Initially, these seals were created as stamp seals and were used for various purposes (Rashad, 1990: 210). Seals served multiple functions, including indicating ownership and responsibility, controlling access to storage facilities, or acting as amulets or personal adornments. Since their

invention in the Neolithic period, one of the primary functions of seals was to imprint repetitive carved designs onto soft materials, most commonly clay. Many researchers and archaeologists believe that the iconography and imagery of seal impressions had no direct connection to administrative activities. However, some scholars view this imagery as part of the administrative management process in prehistoric times, arguing that an image engraved on an administrative tool could be contextually meaningful within various administrative frameworks (Pittman, 1997: 138). The most apparent reflection of this is the "increasing symbolic complexity" found in archaeological evidence, which was utilized in administrative contexts (Pittman, 1997: 134). From the outset, this symbolic sharing manifested in a "shared ideological system," which facilitated communication between elites in prehistoric societies for the first time. This level of shared similarities suggests that these groups were aligned in fundamental ways of life and perhaps in core beliefs, possessing a mutual awareness of each other and comparable levels of informational complexity and hierarchical organization.

Stamp Seals:

Stamp seals, along with their impressions, have typically been found in archaeological sites dating back to the early 7th millennium BCE. The earliest known example of using stamp seals to create designs has been identified in an area near the Euphrates River (Pittman, 2001: 231). By the mid-5th millennium BCE, the use of stamp seals became widespread in Iran, with discoveries in the regions of Khuzestan, Luristan, and Fars. During this period, intricately carved stamp seals featuring geometric designs were employed across various sites on the Iranian plateau (Rashad, 1990: 223).

Cylinder Seals:

The art of seal-making, which began with stamp seals, advanced with the invention of cylinder seals, a crucial tool in this economic management system (Pittman, 1994: 171). During the Middle Uruk period, a fundamental shift occurred both in seal-making styles and in the administrative system. Cylinder seals first gained popularity in southern Mesopotamia, while in surrounding regions, they spread in a relatively short period, largely as an adaptation. Cylinder seals allowed for a significant increase in the complexity of designs relative to the size of the seal. For instance, the available surface area for creating designs on a stamped seal with a diameter of two centimeters is 14.3 square centimeters. In contrast, the available area on a cylinder seal with a height of two centimeters and a diameter of one centimeter is 28.6 square centimeters, allowing for designs of indefinite length (Johnson, 1973: 139). The rolling motion of the cylinder seal over the desired surface created a continuous and repetitive pattern as the hand moved sequentially and parallel to the surface to be covered. The purposes of early seals and their impressions undoubtedly changed over time and across different regions. Nevertheless, there is no doubt that from the outset, they were tasked with conveying valuable social information through symbolic meanings (Pittman, 2001: 231). The fact that the design on the seal was intended to convey information was articulated by Johnson: "The simple use of seals does not imply a specialized administrative structure, but rather suggests the transmission of certain types of information. The development of complex managerial organizations within an economic system likely prompted the previous use of seals to multiply the number of seal impressions. A significant increase in the complexity of seal designs can be expected with this advancement" (Johnson, 1973: 99). Indeed, the form of the message can be seen as part of the formula for transmitting information to others in seals and seal impressions. In general, the style and motifs on seals can be regarded as the form of the message in the information transmission process (Rothman, 1994: 99). Therefore, it appears that the scenes depicted in seal designs



represent specific activities and, in particular cases, indicate the organization and discipline in managing economic and social affairs, controlled by a political institution or organization.

Geographical Location of Chaltasian Tepe

The Chaltasian archaeological site is located on the western outskirts of Pishva County, approximately 5 kilometers from the town. The village of Chaltasian is situated 2 kilometers northeast of Varamin, just north of the Varamin-Pishva road. The Chaltasian mound lies about 1 kilometer north of the village, within the Pishva District of the Asgariéh Rural District. The geographical coordinates of the site are N:3519176, E:0514135, with an elevation of 941 meters above sea level and 5 meters higher than the surrounding land (Pic. 2).

This site comprises three relatively low and damaged mounds, which were excavated and studied in the fall of 2012 for stratigraphy, determining the extent of the site, and proposing preservation measures (Pic. 3). The location of the site within agricultural lands has led to significant encroachments and consequent damage. Archaeological activities at the site have provided definitive evidence of three cultural periods: the Middle and Late Neolithic (Sialk III4-5, Sialk III6, and Sialk IVa) and the Iron Age I. Despite the site's damage exceeding seventy percent, cultural traces are still observable over an area exceeding 9 hectares. Considering the site's rare expanse (of which only small portions remain as three mounds in the northern, central, and eastern areas, covering a maximum of just 1.5 hectares), further research may reveal more evidence of the Bronze Age and the transition to the Iron Age. This transition is one of the most challenging issues related to the cultural sequence and chronology of the Central Iranian Plateau. Additionally, the proximity of this site, characterized by Bevelled-rim pottery, to the significant Proto-Elamite site of Tappeh Sofalin may provide answers to many questions regarding the formation and spread of social complexities in the late 4th millennium BCE and the extent of external influences in this process.

A large portion of the ceramic data from the Chaltasian mound belongs to the Iron Age (Maryam Hosseinzadeh, 2011; Shima Ahmad-Saffari, 2013). The Grey pottery, including bowls, jars, and plates, found both plain and decorated, can be compared with those from adjacent sites. In terms of decorations, which include parallel and diagonal incised lines, engraved motifs with simple, diagonal, grooved, and zigzag patterns, as well as added button-like decorations seen in one or two rows beneath the vessel's rim or on the body, similarities can be drawn with Tappeh Sofalin (Hassari, 2007), Tappeh Hissar IIIc (Schmidt, 1937), Sialk A and B (Ghirshman, 1935), Qabristan (Fazeli Nashli, 2006), the first millennium BCE cemetery of Pishva (Tehrani Moghaddam, 1997), and Qoli Darvish A2 (Sarлак, 2011). The similarity of the Chaltasian pottery in terms of construction, form, and decoration with those found at Qoli Darvish Jamkaran (Si-amak Sarлак, 2010) and Tappeh Ozbaki in Savojbolagh, Karaj (Yousef Majidzadeh, 1995) is undeniable. Based on the evidence, it can be inferred that the Chaltasian site in Pishva during the Iron Age I had close cultural and possibly economic connections with these two sites (Maryam Hosseinzadeh, 2011: 218). During the excavation, two trenches were established on the main and eastern mounds. The location of the trench on the central mound was selected based on surface pottery studies and measured 2.5 × 2.5 meters. The excavation of this trench continued until virgin soil was reached. A stratigraphic trench measuring 1.5 x 1.5 meters was dug on the eastern mound.

Central Mound, Workshop No. 1:

The central mound of the Chaltasian archaeological site represents a prominent area with an elevation exceeding 5 meters and a significant extent. In previous surveys and activities, this

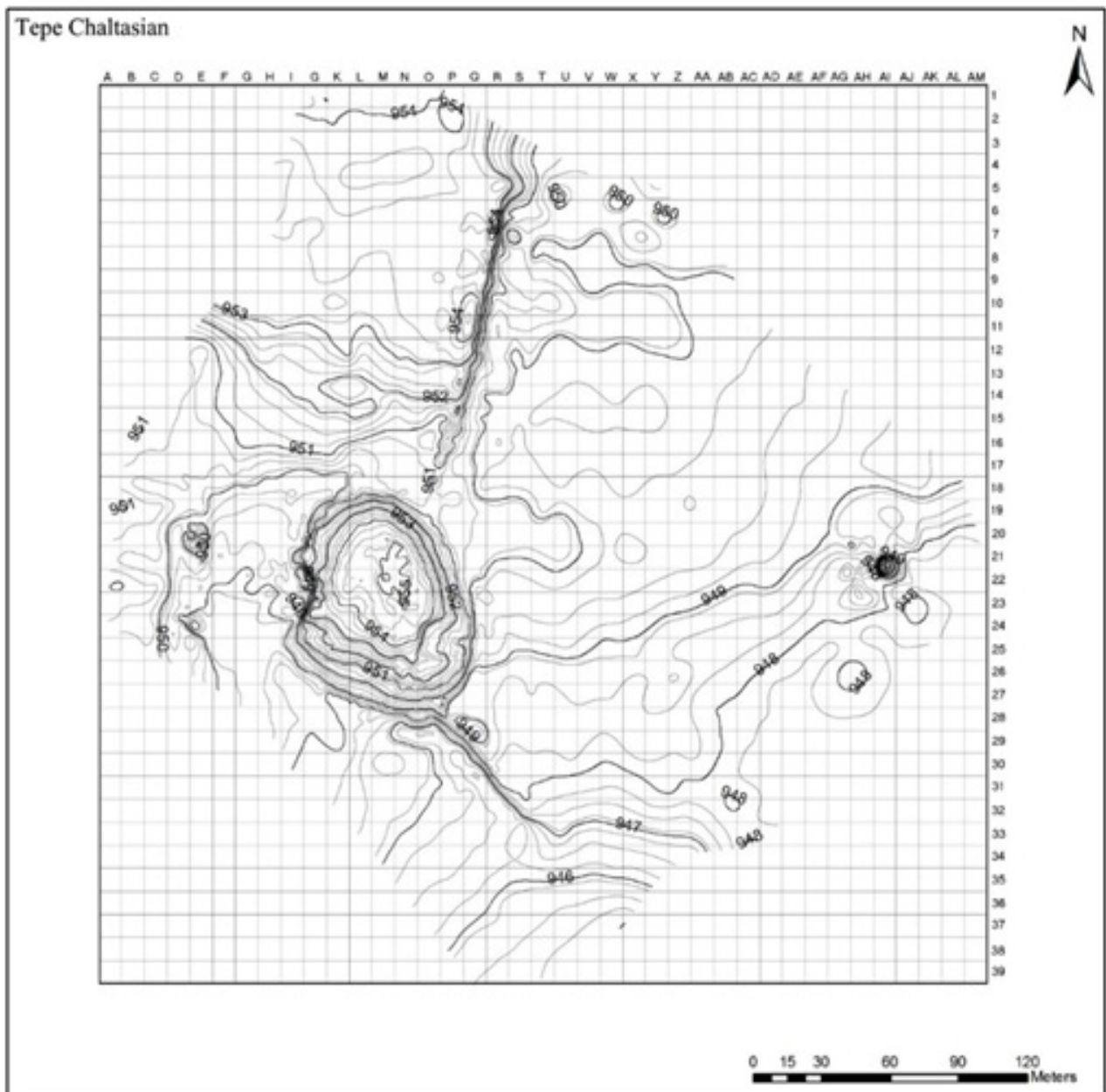


Pic 2: The Geographical Map of Chaltasian (Yousefi Zoshk 2012)

area has consistently been referred to as the main mound, with the assumption that the principal cultural layers of the site should be located and studied here. After this excavation season, it was determined that an artificial structure exists in this area, consisting of five compacted clay layers. Each layer has a thickness of approximately 47 centimeters. Clear and distinct footprints on each layer indicate that the clay had been thoroughly compacted. The outer surface of these layers is coated. A study of surface pottery in this area revealed that this clay structure dates back to Iron Age I, and the surface pottery is comparable to that found at the Ozbaki and Qoli Darvish sites (Pic. 4).

Workshop No. 2:

Workshop No. 2 was established at the easternmost part of the site on a small mound with approximate dimensions of 4.5 × 6 meters, oriented in a north-south direction, and with a height



Pic 3: The Topographic map of Chaltasian (Yousefi Zoshk 2012)



Pic 4: Chaltasian Tepe, Central Mound, Workshop No. 1 (Yousefi Zoshk 2012)

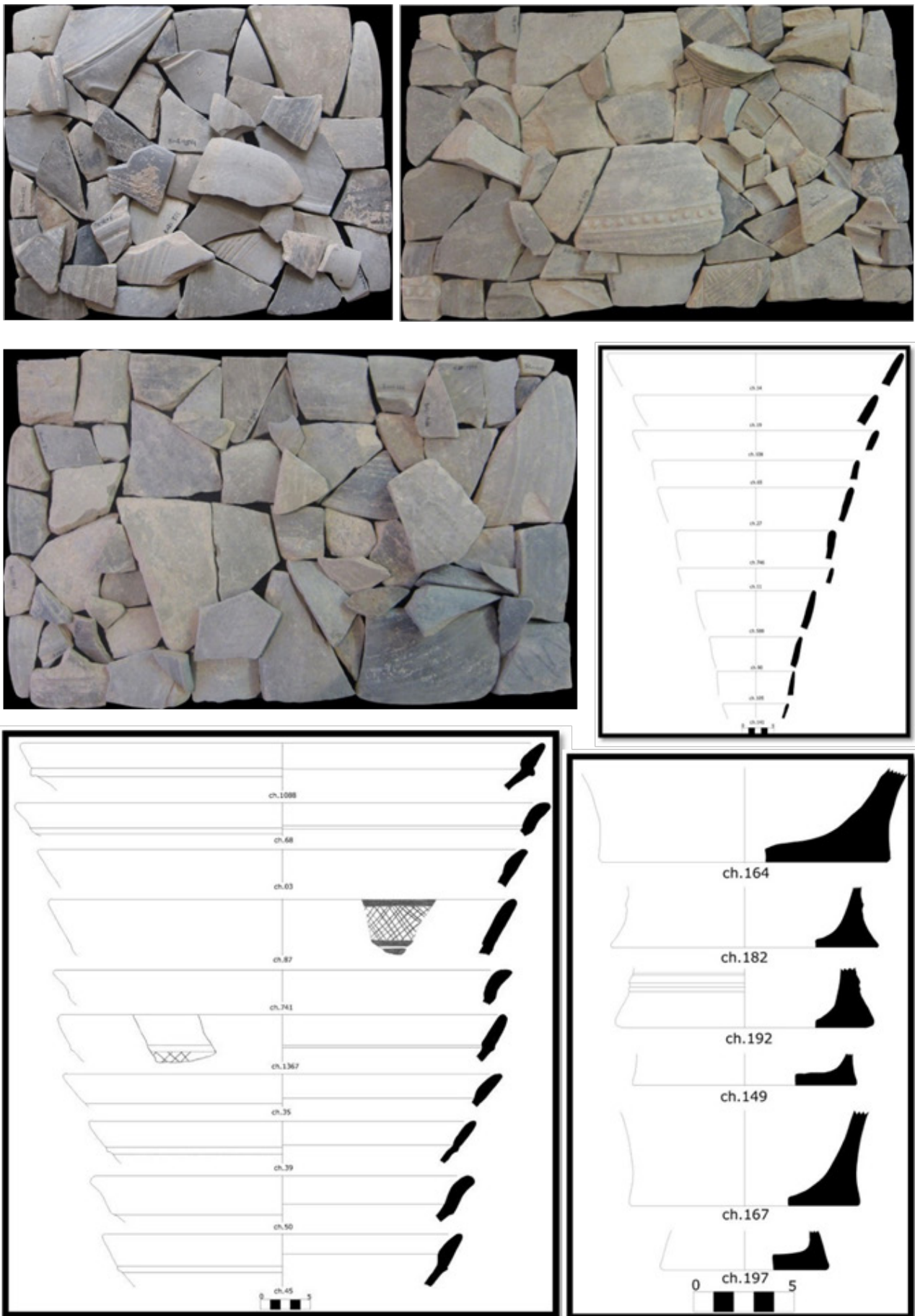
exceeding 5.5 meters. This mound, with a relatively intact western face showing a nearly vertical section, has a base width of approximately 4.5 meters. However, the eastern side has been severely damaged, with a pit measuring over 1.5 meters wide dug from the highest point down to the surface of the surrounding land. This mound, located 215 meters from the center of the central mound, is believed to be the remains of a larger mound, the edges of which were revealed during surrounding site surveys. Chaltasian stamped pottery was found in trench No. 2 from locus 402. In various parts of this locus, a limited amount of pottery and bone was observed, dispersed sporadically (Pic. 5).

Grey Ware of Chaltasian Tepe: This type of pottery, characterized by its Grey paste, constitutes 44% of all pottery related to the study. It includes fine pottery with no added temper and is made from clean paste. All the pottery in this category is wheel-made, with a dense texture and thick clay slip (Pic. 6). Chronologically, this type of pottery spans Iron Age I and II and is comparable to that found at Tappeh Sofalin (Hassari, 2007), Qoli Darvish, Tappeh Sarm Kahak (Sarлак, 2011), and Tappeh Mamurin (Mehrkian, 1995).



Pic 5: Chaltasian Tepe, Workshop No. 2 (Yousefi Zoshk 2012)

A grey pottery fragment from Tappeh Chaltasian, Varamin, bearing a stamped design: On a shard from a jar-like vessel, there is a raised pattern that is unique. This pottery fragment, measuring 16 cm in length and 10 cm in width, originates from the shoulder of a jar retrieved during excavations in what is likely a settlement context. The relief design, consisting of two identical and similar rows, was created by rolling a cylindrical seal, approximately 3 cm in size, over the surface. It appears that after the first rolling, which left an initial row of raised impressions, a second rolling was performed, resulting in the design being imprinted twice on the vessel.



Pic 6: The Grey Wares of Chaltasian, Pictures and Drawings (Yousefi Zoshk 2012)

Although the upper row is incomplete due to breakage, it mirrors the lower row, and the alignment of the two rows indicates that they were precisely positioned in a straight line. The lower row, however, remains intact, showing the repeated motif three times, each measuring 6 cm in length. This motif is composed of six elements, which are described as follows (Pic. 7, Figure 1).

In the lower right corner of the composition, a snake is depicted, with its slithering posture evident. Above this, an animal is shown in a vertical, front-facing position, oriented downwards, with upward-curving horns that exhibit a slight bend. Due to the frontal view, the animal is depicted with two legs in the front part of its body. Adjacent to this animal, there is an image of a crescent moon, which the artist has skillfully rendered to emphasize its half-moon shape. In the center of the design, a human figure is shown in full-frontal view, facing forward, but with its head turned towards the right, in the direction of the moon. The figure's arms are extended upward, with open hands and five distinct fingers, which may symbolize various meanings, including submission or, more likely, a display of power. This latter interpretation of power display seems more plausible, given the accompanying animal and celestial motifs. The next element in the sequence is an animal shown in profile, oriented upwards in a vertical position. The animal, with a clearly defined snout, tail, and inward-curving horns, is convincingly depicted as an ibex. Below this animal, an eight-pointed star completes the composition (Figure 2).



Pic 7: The Chaltasian Impressed Piece (Yousefi Zoshk 2012)

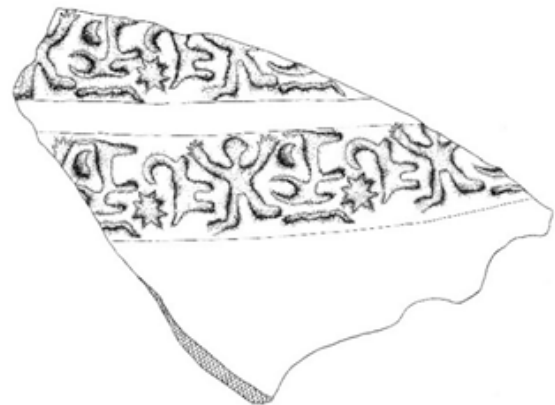


Figure 1: Drawing of Impressed Sherd of Chaltasian (Yousefi Zoshk 2012)

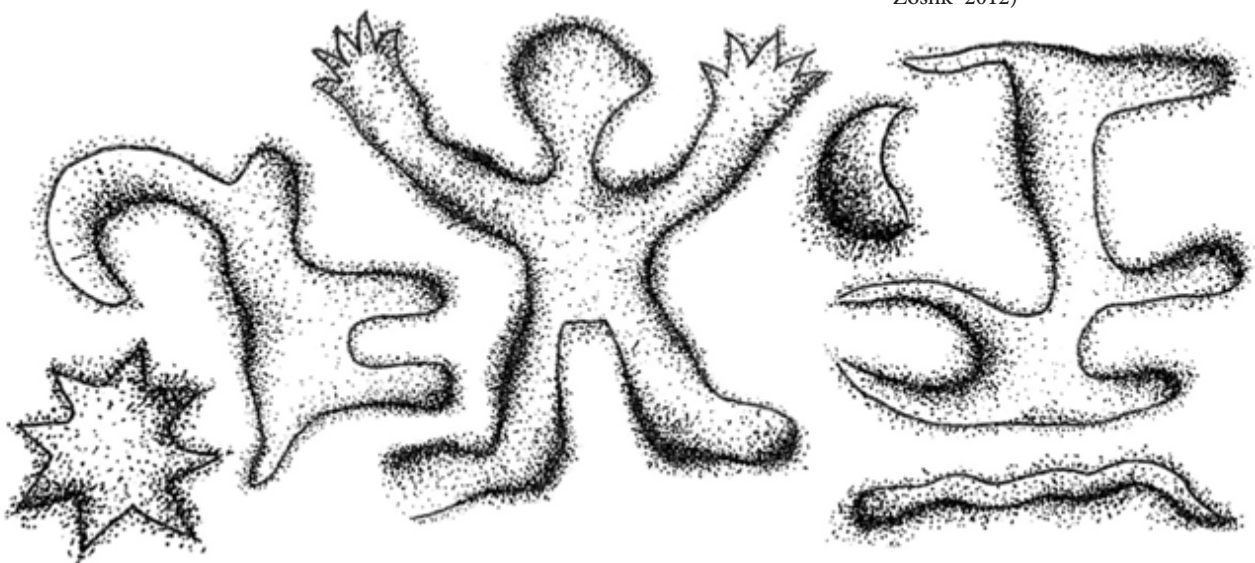


Figure 2: The Motifs of Impressed Seal's Pottery of Chaltasian Tepe (Yousefi Zoshk 2012)



A pottery fragment from Tappeh Sialk, Kashan:

This light brown pottery fragment features an impressed design created by rolling a stamp, with the resulting relief standing approximately 3 cm high. The stamp was rolled twice over the pottery, as indicated by the impressions. The fragment measures 10.5 by 9.5 cm, and the design is located on the shoulder of the vessel, with a narrow cord impression visible at the bottom of the motif. The central motif depicts a tree of life, surrounded by animals. The animal on the right side of the design is facing the Tree of Life, while another animal on the left side is shown reaching up towards the tree (Noroozadeh Chegini 2002: 172) (Figure 3).

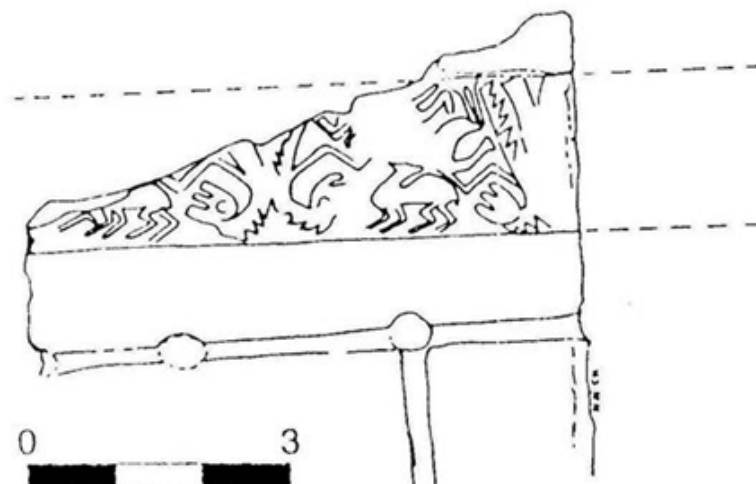


Figure 3: drawing of Impressed Pottery of Tepe Sialk Kashan (Noroozadeh Chegini, 2001: 174)

An Impressed Seals pottery fragment of Tappeh Sagzabad, Qazvin:

According to the archaeologist working on this site, this stamped pottery fragment was recovered from a settlement context, likely alongside several large grain storage jars, clay tokens, and cylindrical seals. The impressed design features a human figure, which was created by rolling a cylindrical seal, 2 to 3 cm in height, over the shoulder of a grey-colored vessel (Ali Beigi 2009: 91) (Figure 4).



Figure 4: The Impressed piece of Sagzabad Qazvin (Sarлак & Malekzadeh 2004: 64)

A stamped pottery fragment from Tappeh Golestan, Robat Karim:

This pottery fragment measures 11 cm in length and 10 cm in width, forming part of the shoulder of a grey-colored vessel with a thickness ranging between 11 and 13 mm (Figure 2). The pottery is well-made, featuring a compact and well-kneaded paste, with a grey slip on both sides, fine sand temper, and a small amount of grog. It was crafted using a potter's wheel. The design on this fragment was created by rolling a cylindrical seal once across the surface. The resulting motif measures 10 cm in length and up to 2.9 cm in width, with the rest of the pattern being a repetition of the same scene (Alibaigi & Khosravi 2009). The depicted scene shows two individuals engaged in daily activities, both characterized by long hair and headbands. Between them stands a sturdy bull with crescent-shaped horns and a long tail. The bull is connected by a long rope tied to its horns, which is held by the figure on the right, suggesting that this person is guiding a plow. The figure on the left appears to be trying to pull the animal by gripping a ring attached to its mouth. Another motif on this pottery fragment is a large scorpion with a curved tail, depicted with three legs on one side and four on the other, with its tail and head facing left. This scene likely represents an agricultural activity, particularly plowing with the aid of oxen (Ali Beigi 2009: 87) (Picture 8, Figure 5).



Pic 8: The Founded Piece of Tepe Golestan (Alibaigi & Khosravi 2008: 99)



Figure 5: The sketch of Impresses Grey Ware of Tepe Golestan, Robat Karim (Alibaigi & Khosravi 2008: 99)

A stamped pottery fragment from Tappeh Mamourin, Robat Karim:

On a grey pottery shard from the shoulder of a jar-like vessel, a unique relief design is depicted. This relief shows two individuals restraining a quadruped (Mehrkian 1991: 86). The fragment, measuring 6 cm in length and 4 cm in width, originates from the shoulder of a jar uncovered during excavations in a settlement context (Figure 9). The human figure in the design is a standing man with a long garment and headband, slender legs, and forward-bent knees. Facing this human figure is an animal with crescent-shaped horns, bent legs, and a short body, likely representing an ox or a deer. The man is shown trying to move the animal by pulling a rope or ring attached to the animal's snout or nose. In the upper left corner, there is a partially broken depiction of another animal, most likely a dog. This scene likely illustrates plowing and agricultural activity (Ibid.) (Picture 9; Figure 6).



Figure 6: The sketch of founded one at Tepe MaMourin, (Alibeigi & Khosravi 2008: 99)

Pic 9: The Piece of Tepe MaMourin (Alibeigi & Khosravi 2008: 99)

The Impressed Piece of Qoli Darvish:

The stamped pottery shard from the Qoli Darvish Tepe site in Qom belongs to a gray-colored jar handle, upon which a design is imprinted. This design depicts an animal with an open jaw, a narrow snout, and possibly a tufted beard, facing a vertically positioned scorpion with a long, crescent-shaped tail. The scorpion's tail appears to be connected to the end of a tree trunk. To the right of the scorpion, the lower torso of a human figure with thin, forward-bent legs is visible, standing and facing toward the right (Sarлак & Malekzadeh, 2005: 61) (Pic. 10).



Pic 10: The impressed Ware of Qoli Darvish, Qom (Sarлак, 2010: 245)

Conclusion:

Given the limited number of stamped pottery fragments and the scant information regarding their chronology and secure contexts, any conclusions drawn in this regard are prone to error and limitations. Only six stamped pottery fragments have been recovered from Tappeh Mamourin, Tappeh Qoli Darvish, Tappeh Golestan, Tappeh Sagzabad, Tappeh Sialk, and Tappeh Chaltasian. An examination of the geographical distribution of these fragments across the Central Iranian Plateau suggests that a homogeneous cultural tradition existed during the Iron Age in this region. In most cases, the stamped designs were impressed on the shoulder of grey jar-like vessels. Therefore, by synthesizing information about the designs, their placement on the vessels, the themes depicted, and their contexts, one can infer that the stamping of vessels was likely done to indicate ownership or to convey a particular meaning (Collon 1978: 141). The only securely dated fragment from Tappeh Qoli Darvish was retrieved from contexts corresponding to 1400-1300 BCE, during Iron Age I. Therefore, it is plausible to attribute the stamped pottery traditions from Sagzabad, Mamourin, Tappeh Golestan, and Chaltasian to Iron Age I. The fragment from Tappeh Sialk was found on the southern mound, alongside the inscribed bricks of Sialk, which have been the subject of considerable debate. However, given the undeniable similarities between this fragment and the others mentioned, assigning it to the Iron Age would be beneficial. Animal motifs, particularly scorpions, bulls, and dogs, are prominently featured in most of these designs. The scenes depicted in the fragments from Golestan, Mamourin, and Qoli Darvish show notable similarities. These stamped pottery pieces were discovered in contexts outside of cemeteries, within large and significant settlement sites from the Iron Age, where economic and social activities were likely prevalent. In prehistoric times, temples and shrines played a significant role as economic centers for the accumulation and distribution of goods. Thus, the evidence of agricultural activities observed in the remains of Iron Age settlements in the Central Iranian Plateau may indicate the existence of managerial or supervisory institutions related to agriculture, possibly embodied in institutions such as temples and shrines, as in earlier periods. A relevant example is the temple at Tappeh Qoli Darvish, where numerous clay sealings on jars and spherical clay tokens have been found, possibly indicating that the religious institution of the Iron Age society at Qoli Darvish managed commercial and economic affairs (Sarлак 2007: 195). Additionally, the differences in settlement spaces, the types of materials, and architectural techniques used, suggest the presence of societies with social and economic hierarchies (Ibid.). Alongside these, the thick fortifications of sites such as Godin Tepe and Shamsirgah, the distinctive halls and rooms at Hasanlu and Babajan, and the ritual temples such as those at Qoli Darvish and possibly Chaltasian in Varamin, may provide insights into the political, economic, and social institutions of the Iron Age in the Central Iranian Plateau.

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Conflict of Interest: The authors declare that they agreed to participate in the present paper and there is no competing interests.

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