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Shahdad and Tepe Yahya: Dual Perspectives on Trade and Cultural Interaction in the Third Millennium BCE in Eastern Iran; A Study of Economic and Cultural Structures Based on Archaeological Evidence

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Abstract

The study of cultural and economic interactions in the southeastern part of the Iranian Plateau during the third millennium BCE is a key issue for understanding the processes underlying the formation of interregional exchange networks and the emergence of early urban societies. The two major archaeological sites of Shahdad, located in the Takab Plain, and Tepe Yahya, in the Soghan Plain, occupied strategically significant positions along the communication routes linking Central Asia, the Indus Valley, and Mesopotamia, and therefore played distinct yet complementary roles within these networks. The main objective of this research is to examine the economic and cultural status of each site within the Bronze Age exchange system and to analyze the nature of their relationships with neighboring regions. The study aims to provide a comparative analytical approach to archaeological data in order to identify patterns of production, distribution, and transmission of cultural elements across southeastern Iran. The central research question focuses on how differences in communication routes affected the economic organization, production technologies, and cultural expressions of the two sites. The working hypothesis suggests that Shahdad, through its direct connections with the Bactria–Margiana Archaeological Complex (BMAC), functioned as an intermediary center between Central Asia and the Iranian Plateau. In contrast, Tepe Yahya, with its extensive chlorite vessel production and administrative evidence, such as Proto-Elamite tablets and Persian Gulf , type seals, served as a major industrial and commercial hub along the southern trade corridor. The methodology relies on a comparative and interdisciplinary analysis of archaeological data from both sites and their contemporaneous neighboring regions. The results indicate that the cultural and material differences between Shahdad and Tepe Yahya reflect their participation in two distinct yet interconnected exchange systems. Consequently, Shahdad embodies the direct influence of Central Asian cultural elements, while Tepe Yahya retained structural ties with the Elamite, Mesopotamian, and Indus worlds. These findings demonstrate that southeastern Iran during the third millennium BCE was a dynamic intersection of independent yet interconnected cultural systems.

Keywords: Bronze Age, Shahdad, Tepe Yahya, BMAC Culture, Cultural-Trade Communication.

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Introduction

The Iranian Plateau serves as a natural corridor connecting the East and the West; however, due to specific geographical constraints, east–west communication has historically been possible only through a limited number of well-defined routes. These include: 1) the northern path along the Alborz mountain range, extending east–west across its northern slopes; 2) a central route situated between the southern slopes of the Alborz and the northern edge of the Dasht-e Kavir (Kavīr Desert), stretching eastward toward modern North Khorasan and westward toward present-day Kermanshah—later referred to in historical texts as the "Khorasan Road" or the "Silk Road"; and 3) a southern route running below the Lut Desert through the Kerman region, connecting Sistan with Khuzestan (Ghamari Fatideh, 2017; see: Fig. 2). Archaeological evidence indicates that these corridors—particularly the northern ones—were used from the earliest human migrations, over one million years ago, enabling Homo erectus to disperse from the eastern Mediterranean to as far as China (Vahdati Nasab & Ariamanesh, 2015; Vahdati Nasab et al., 2013). In later periods—especially with the emergence of long-distance trade around 5000 years ago, during the Bronze Age and the so-called "Urban Revolution"—these routes not only facilitated the exchange of goods but also acted as channels for the transmission of cultural traditions and technologies (Amiet, 1993; Brumfiel & Earle, 1987; Earle, 1997; Wright & Johnson, 1975: 267).

Archaeological findings further suggest that the southern communication and trade route across the plateau was closely connected with the greater Khorasan Road (see: below). This corridor passed through the southern Iranian Plateau, linking the Indus Valley, the Indian subcontinent, and the southern Himalayas with the western regions of Iran. The route, extending from Sistan toward present-day Kerman, emerged during the Bronze Age as the principal axis of trade networks across southern Iran, functioning as a vital crossroads among Sistan, Khorasan, Central Asia, the Indus Valley, Khuzestan, the littoral regions of the Persian Gulf, and ancient Mesopotamia (Seyyed Sajjadi, 2010a: 364–368; Hākami, 2006: 44; Ascalone, 2016: 61, 68–69, 134–179). Owing to this strategic position, major urban centers such as Shahr-i Sokhta, Shahdad, and Tepe Yahya emerged and flourished. The pivotal roles of Shahdad and Yahya in the cultural and commercial exchanges of the third millennium BCE are well established. Nevertheless, the dynamics of these networks and the specific positions of Shahdad and Tepe Yahya within them necessitate close analysis of the archaeological record and its correlations with adjacent regions and settlements.

Cultural materials recovered from Shahdad, located in the Takab Plain, and from Tepe Yahya, in the Soghan Plain, reveal marked differences despite their geographical proximity; differences arising from distinct modes and routes of interaction with

surrounding cultural spheres (see: below). The archaeological assemblages from Shahdad, dated to Takab III (ca. 2500–2000 BCE), (Eskandari, 2019: 63), are broadly contemporary with and comparable to the Bactria–Margiana Archaeological Complex (BMAC) or Greater Khorasan Culture (ca. 2500/2300–1400/1300 BCE), (Tahmasebi-Zaveh, 2019: 276, 307–308). These finds include commemorative burials, miniature columns, stone scepters, headdresses, bronze mirrors, trumpets, axes (decorative, simple, crescent-bladed, and animal-headed), double-headed picks, steatite vessels, marble containers, cosmetic applicators, metal vessels, mosaics, openwork metal seals, and lapis lazuli artifacts (Hākami, 2006; see Figs. 3–16).

In contrast, finds from Tepe Yahya of the same general chronological horizon correspond to Phase IVC (ca. 3100–2800 BCE), which is contemporaneous with the Late Uruk and Early Jemdet Nasr periods in Susa and Mesopotamia, as well as with the Middle Banesh phase at Malyan in modern Fars. The Yahya assemblage includes administrative buildings, seals and sealings, and Proto-Elamite tablets associated with commercial transactions (Majidzadeh, 1989: 142). Phases IVA–B at Yahya (ca. 2400–1800 BCE) overlap with Takab III at Shahdad. During Phase IVB1, evidence emerges for the production of stone vessels in an interregional style comparable to those discovered in Mesopotamian temples and royal tombs, indicating localized manufacture of such artifacts (Kohl, 1978: 464). Taken together, these data underscore the complexity of trade and cultural interaction linking Shahdad and Tepe Yahya with neighboring regions.

The present study seeks to analyze the roles of the archaeological sites of Shahdad and Tepe Yahya in regional and interregional exchange networks during the third millennium BCE and to elucidate their connections with adjacent cultural landscapes based on archaeological evidence.

The discussion first reviews the geographical and cultural context of the Iranian Plateau, followed by an examination of the material assemblages from both sites and an interpretation of their respective economic and cultural roles.

Southeastern Iran: Geographical Features and Cultural–Trade Routes

A plateau is a broad, elevated landform bordered by steep slopes or mountain ranges. Such geomorphological units typically form through tectonic uplift and erosional processes, rising prominently above the surrounding lowlands. The Iranian Plateau was created through the collision of the Arabian and Eurasian tectonic plates. Its topographical configuration has profoundly influenced the region's climate, hydrology, and communication routes. Notable landforms include the Alborz and Zagros mountain ranges to the north and west, the two vast deserts of the Lut Desert and the Dasht-e Kavir in the center, and three major bodies of water: the Caspian Sea to the north, and the Persian Gulf and Gulf of Oman to the south (see: Figs. 1 and 2).

Table 1: Comparative Chronology of Shahdad and Tepe Yahya (Authors, 2023)

<table>
<tr><th colspan="2">Yahya
(Lamberg-Karlovsky, 1970; 1971; 1972; 1973; 1976; 2001; Lemberg-Karlovsky & Beale, 1986: 11)</th><th colspan="2">Shahdad
(Hakemi, 2006; Ascalone, 2006a; Eskandari, 2019)</th><th>Chronological range (BCE)</th></tr>
<tr><td rowspan="3">VII</td><td>VII_C</td><td colspan="2" rowspan="6">–</td><td rowspan="3">4500- 3900</td></tr>
<tr><td>VII_B</td></tr>
<tr><td>VII_A</td></tr>
<tr><td rowspan="2">VI</td><td>VI_C</td><td rowspan="2">4000-3700</td></tr>
<tr><td>VI_A-VI_B</td></tr>
<tr><td rowspan="3">V</td><td>V_B</td><td rowspan="3">3700-3000</td></tr>
<tr><td>V_A</td></tr>
<tr><td>–</td><td rowspan="3">Takab IV</td><td rowspan="2">Takab IV_2</td></tr>
<tr><td rowspan="4">IV</td><td>IV_C</td><td>3000-2700</td></tr>
<tr><td>–</td><td rowspan="2">2700-2500</td></tr>
<tr><td>IV_B</td><td>Takab IV_1</td></tr>
<tr><td rowspan="2">IV_A</td><td colspan="2">Takab III</td><td>2500-2100</td></tr>
<tr><td colspan="2">Takab II_2</td><td rowspan="2">2100-1800</td></tr>
<tr><td colspan="2" rowspan="2">–</td><td colspan="2">Takab II_1</td></tr>
<tr><td colspan="2">Takab I</td><td>1500</td></tr>
<tr><td colspan="2">III</td><td colspan="2" rowspan="3">–</td><td>700-535</td></tr>
<tr><td colspan="2">II</td><td>473-275</td></tr>
<tr><td colspan="2">I</td><td>223 B.C -200 A.D.</td></tr>
</table>

Fig. 1: Geographical location of the Shahdad site in the Takab Plain and Tepe Yahya in the Soghan Plain, southeastern Iran (Authors, 2023: based on ASTER satellite imagery).

As previously noted, during the fourth and third millennia BCE, three principal trade routes traversed the Iranian Plateau. Shaped by natural barriers and sustained by commercial and cultural interactions with major civilizations such as the Indus Valley, Mesopotamia, and Egypt, these routes primarily developed along an east–west axis. The first route began in Greater Khorasan, crossed the northern slopes of the Alborz Mountains, and extended westward across the plateau to reach northern Mesopotamia (Fig. 2, Route 1). The second route, also originating in Greater Khorasan, passed south of the Alborz and connected the western Iranian Plateau to northern Mesopotamia; this route has, in recent decades, been erroneously identified as the "Silk Road" (Fig. 2, Route 2). The third route originated in southeastern Iran, traversed the regions of modern Sistan, Kerman, Fars, and Khuzestan, and linked the Indus Valley with Mesopotamia (Fig. 2, Route 3).

In addition to these primary arteries, subsidiary routes also existed. Unlike the dominant east–west orientation, these secondary routes extended north–south, serving as connectors between the major trade corridors. One of the most significant was the route linking northeastern Iran and Central Asia with the southeast of the plateau (Fig. 2, Route 4).

Undoubtedly, one of the key factors contributing to the growth and prosperity of settlements in southeastern Iran was their strategic location along these vital trade routes. The presence of two great civilizations on either side of the plateau—the Indus Valley to the east and Mesopotamia to the west—and their mutual desire for interaction, driven by the diversity of resources available in both regions, inevitably fostered cultural and commercial exchange. The most practical pathways for such contact lay either across the northern or the southern margins of the plateau. Yet, owing to its distinctive topography, only certain defined corridors provided feasible passage (Fig. 2).

The cultural variability observed among Shahdad, Tepe Yahya, and their neighboring regions must therefore be sought in their respective material cultures and in the distinct roles each played within the cultural–trade networks of the third millennium BCE. This question is explored in the following sections.

The Shahdad Site and Analysis of Archaeological Findings

Shahdad is located in the Takab Plain, situated between the western foothills of the Lut Desert and the Khabis region in Kerman Province. The city's prosperity and development were likely due to its strategic geographical position: this location served as a central junction for terrestrial communication routes that continue to connect the modern provinces of Kerman, Khorasan, and Sistan and Baluchestan (see: Seyyed Sajjadi, 2010a; Hākami, 2006; Ascalone, 2016).

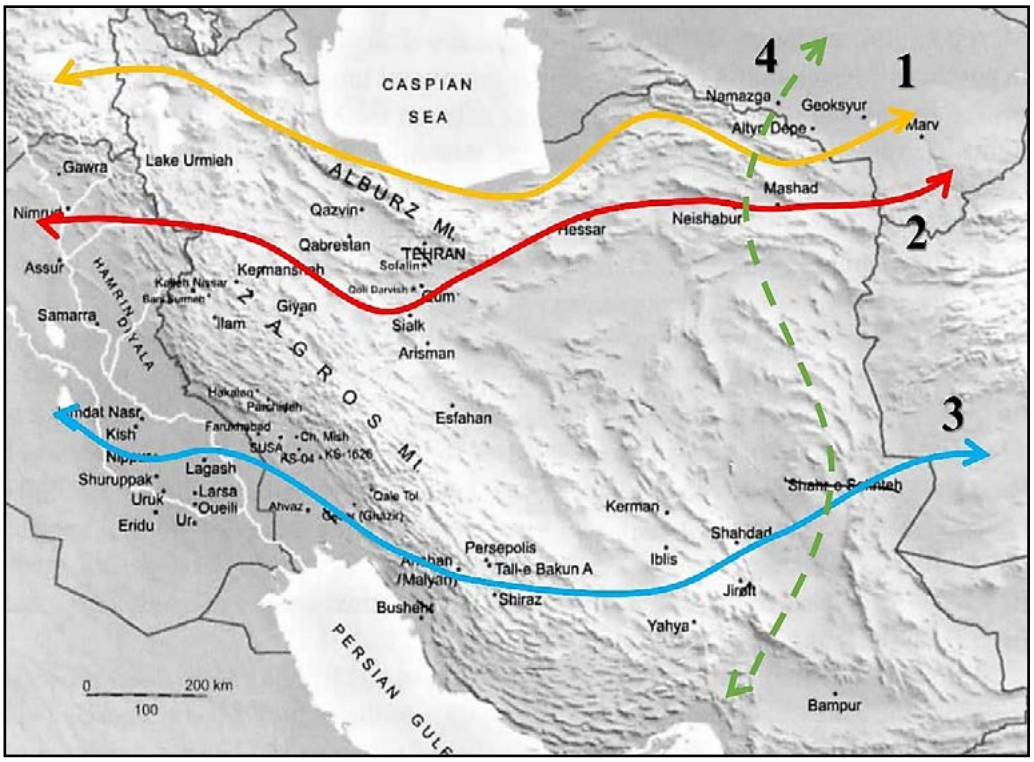

Fig. 2: Approximate routes of the east–west cultural and trade networks (1, 2, and 3) and the possible north–south route (4) across the Iranian Plateau during the third millennium BCE (base map from: Alizadeh, 2021: 11, modified by the M. Entezarian)

As Ascalone notes, "Shahdad played a significant role in the expansion of roads and trade networks, functioning as an alternative route to the famous Silk Road (Greater Khorasan Road), linking northern provinces and regions up to the [Takab] plain near Mashhad" (Ascalone, 2016: 68).

The Shahdad site was first identified in 1967 during geographical surveys of the Lut Desert conducted by the Geography Department of the University of Tehran. Excavations began in 1969, following a twenty-day survey near the main cemetery (Cemetery A), and continued until 1977 (Hākami, 2006: 75). Further excavations were carried out between 1994 and 2003 under the direction of Mir-Abedin Kaboli, focusing on the residential areas of Shahdad (Kaboli, 2012: 101).

The cultural sequence at Shahdad extends horizontally across the Takab Plain due to its distinctive geographical characteristics. In the site's chronology, the period from 2500 to 2000 BCE has been designated as Takab III. During this interval, archaeological materials from Shahdad display strong similarities with the Bactria–Margiana Archaeological Complex (BMAC), also known as the Greater Khorasan culture.

Comparative chronologies indicate that Shahdad and the Bactria–Margiana culture were contemporaneous between approximately 2500 and 1700/1600 BCE. However, based on the archaeological evidence from Shahdad, the direct connection and material

Table 2: Comparative Chronology of Shahdad and the Bactria-Margiana (BMAC) Culture (Authors, 2023).

<table>
<tr><th colspan="3">Shahdad
(Hakemi, 2006; Ascalone, 2006a; Eskandari, 2019)[1]</th><th colspan="2">BMAC Culture
(Tahmasbi-Zaveh, 2019)</th><th>Chronological range (BCE)</th></tr>
<tr><td colspan="3"></td><td colspan="2" rowspan="3"></td><td>4th millennium</td></tr>
<tr><td rowspan="2">Takab IV2</td><td rowspan="2">Takab IV</td><td rowspan="2"></td><td>3000-2500</td></tr>
<tr><td>Takab IV1</td></tr>
<tr><td colspan="2" rowspan="2">Takab III</td><td rowspan="2"></td><td>Ia</td><td rowspan="2">Period I</td><td rowspan="2">2500-2000</td></tr>
<tr><td>Ib</td></tr>
<tr><td>Takab II2</td><td rowspan="2">Takab II</td><td rowspan="2"></td><td>IIa</td><td rowspan="2">Period II</td><td rowspan="2">2000-1500</td></tr>
<tr><td>Takab II1</td><td>IIb</td></tr>
<tr><td colspan="3">Takab I</td><td colspan="2">Period III</td><td>1500-1300</td></tr>
</table>

similarity between the two appear to have been limited to a narrower five-century span (ca. 2500–2000 BCE; Takab III).

Among the settlements of southeastern Iran, the site of Shahdad exhibits the greatest similarity in material culture and artifacts to the Bactria–Margiana Archaeological Complex (BMAC), also referred to as the Greater Khorasan culture (Namazgah V), (Tahmasebi Zaveh, 2019: 277). These similarities include:

• **Commemorative (cenotaph) burials:** This type of burial—known as a cenotaph—was prevalent at Shahr-i Sokhta between ca. 3000 and 2500 BCE. Such graves lack human skeletal remains but contain grave goods. According to Seyyed-Sajjadi and Tahmasebi Zaveh, they were likely constructed in memory of individuals who had died far from their homeland and whose bodies were not returned. Given the extensive cultural and commercial interactions between Shahr-i Sokhta and regions in southern Turkmenistan and northeastern Iran from Phase I through Phase VI, it may be inferred that this burial practice was transmitted from Shahr-i Sokhta to the Bactria–Margiana cultural sphere through expanding networks of exchange (Seyyed-Sajjadi, 2010a: 435; Tahmasebi Zaveh, 2019: 143–144).

During the excavations at Shahdad, archaeologists identified graves without skeletal remains (Hākami, 2006: 88–89; Hiebert & Karlovsky, 2007: 11; Lamberg-Karlovsky & Hiebert, 1992: 135). These are comparable to commemorative burials documented at Gonur Depe (Sarianidi, 2007: 53), Ulug Tepe (Lecomte, 2013), Tepe Hesar Damghan (Schmidt, 1937), Shakrak-e Firouzeh, Nishapur (Basafa & Rahmati, 2012: 617; Basafa, 2014: 262), and the Chelow site in Jajarm (Vahdati & Biscione, 2014: 321), as well as other sites distributed across the broader geographical extent of the Bactria–Margiana cultural horizon (Fig. 3).

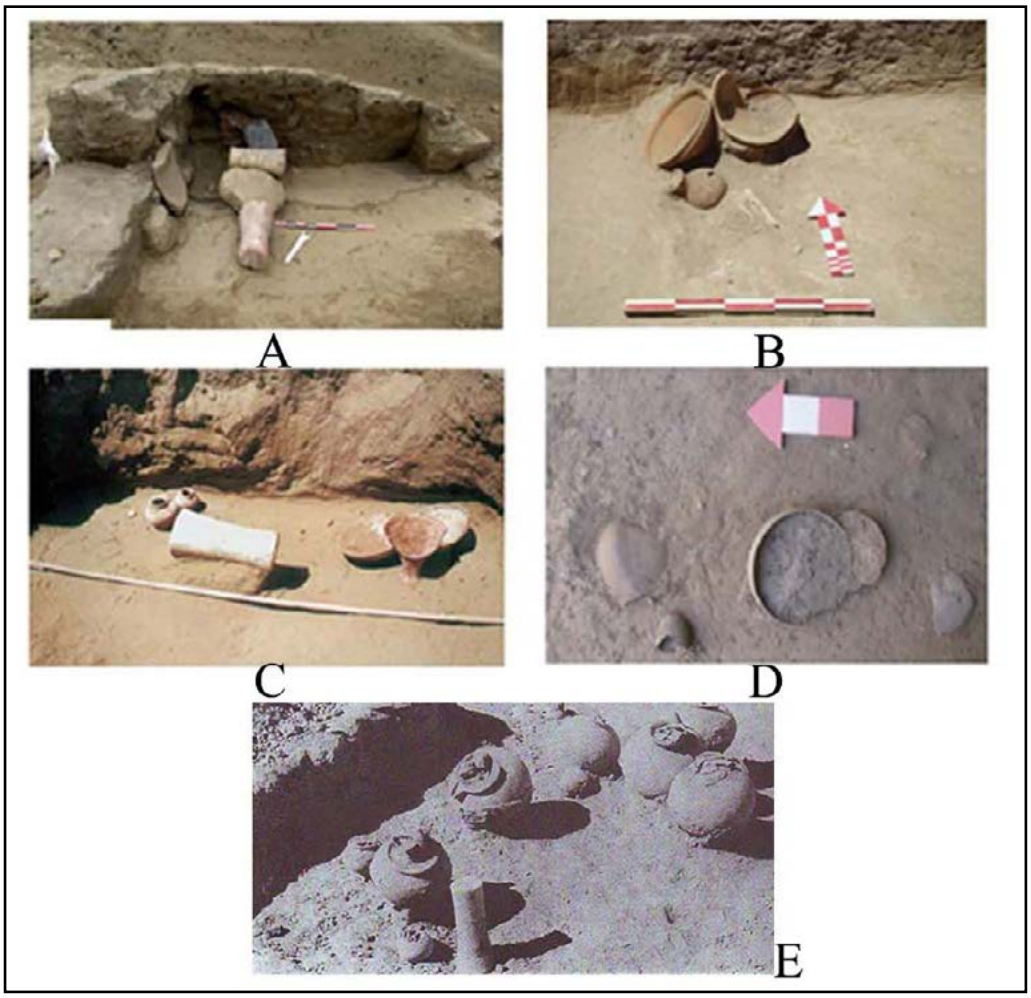

Fig. 3: Commemorative burials in eastern Iran and Central Asia: a) Alag-Tepe (Lecomte, 2013: 182), b) Rizeh Darmian (Soroush & Yousefi, 2014), c) Gönur (Sarianidi, 2007: 51), d) Firouzeh settlement (Basafa, 2009), e) Shahdad (Hākami, 2006).

• **Miniature columns:** Among the most important grave goods of the Bactria-Margiana Archaeological Complex (BMAC) are miniature columns, which are typically found together with round stone disks in cemetery contexts and ritual spaces (Sarianidi, 2005: 277). These objects have been recovered across a wide geographical range, including the Iranian Plateau, Turkmenistan, Afghanistan, Uzbekistan, Tajikistan, and Pakistan (see: Entezarian & Basafa, 2025). It is likely that miniature columns and round stone disks functioned as elite ritual-status items in the major urban centers of Central Asia (Ibid). At Shahdad, twenty-two miniature columns were identified in the burials of Cemetery A; Hākami assigns these columns to the Takab III1 period (ca. 2200–1900 BCE), (Hākami, 2006: 246; Fig. 4).

• **Stone scepters:** These objects are made of stone, carved as single cylindrical pieces that taper at the distal end. They are interpreted as scepters or symbols of power and royal authority (Tahmasebi Zaveh, 2019: 280). Six stone scepters were recovered from Shahdad, comparable to examples from Gönur Tepe (Sarianidi, 2007: 33; Luneau,

2014: 150–154; Sarianidi, 2005: 225, Fig. 88), Altyn-Tepe (Masson, 1988: 54 & Pl. XXVIII), Tepe Hesar (Schmidt, 1937: 310), Cemetery Mehrgareh VIII (Santoni, 1984: 52), and Quetta (Jarrige & Hassan, 1985: 150–166), (Fig. 5).

• **Headbands:** Headbands, used as decorative items, were made from metals such as gold, silver, and bronze (Tahmasebi Zaveh, 2019: 117-118). Several silver headbands, comparable to examples from Gönur Tepe (Sarianidi, 2007: 94) and Tepe Hesar (Schmidt, 1937: Pl. LVI, H3221 & H2362), have also been recovered from Shahdad (Fig. 6).

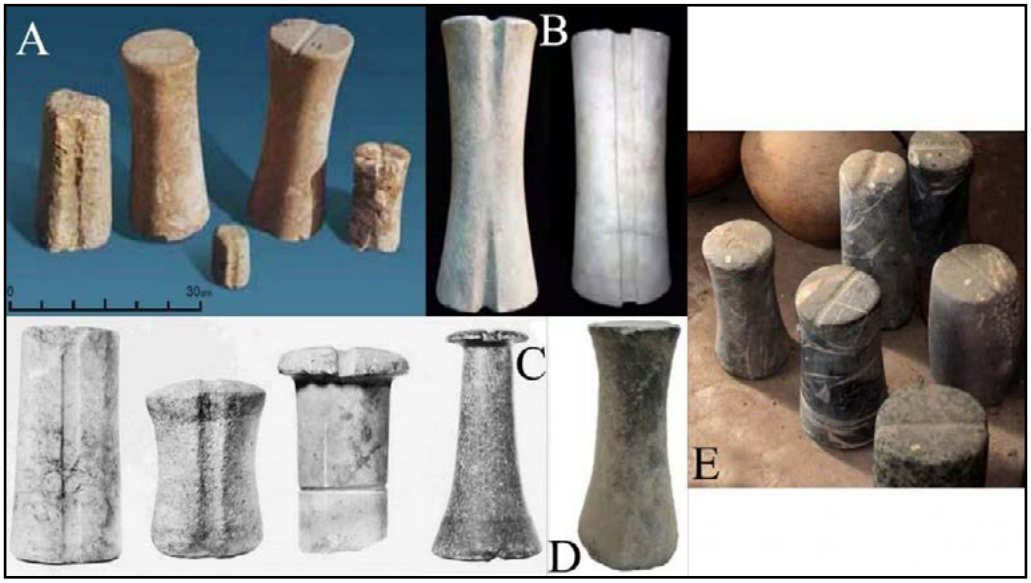

Fig. 4: Miniature columns recovered from: a) Gönur Tepe (Sarianidi, 2007: 110), b) Tepe Hesar (Amanollahi, 2008), c) Altyn-Tepe (Masson, 1988: 215, Plate XXXV), d) Rizeh site, South Khorasan (Farjami, 2015: 21), and e) Shahdad (Eskandari Damne, 2021: 254).

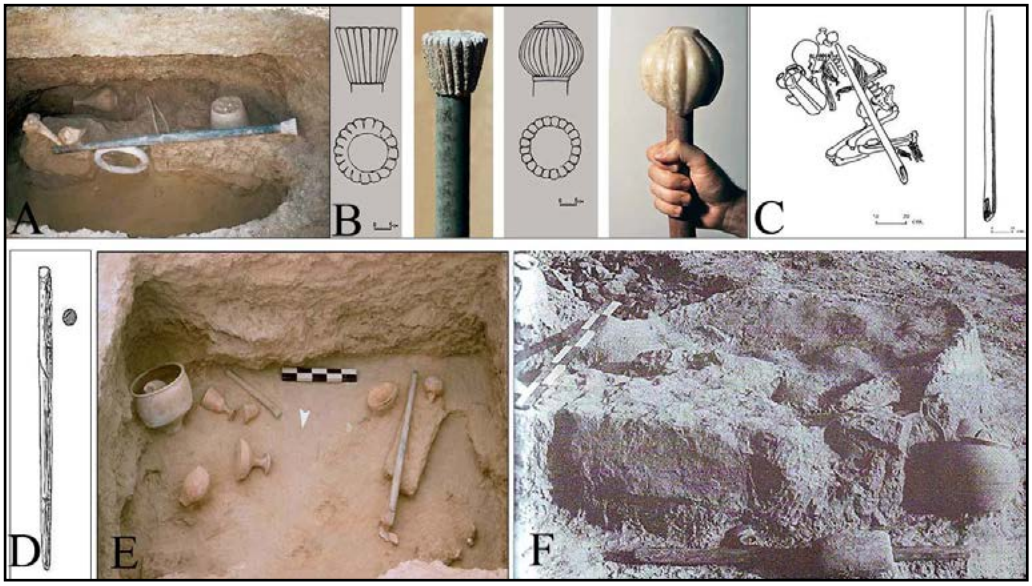

Fig. 5: Stone scepters recovered from: a–b) Gönur Tepe (Sarianidi, 2007), c) Altyn-Tepe (Masson, 1988: 54 & Pl. XXVIII), d) Tepe Hesar (Schmidt, 1937: 310), e) Mehrgareh VIII (Didier & Sarmiento, 2014), and f) Shahdad (Hākami, 2006: 484).

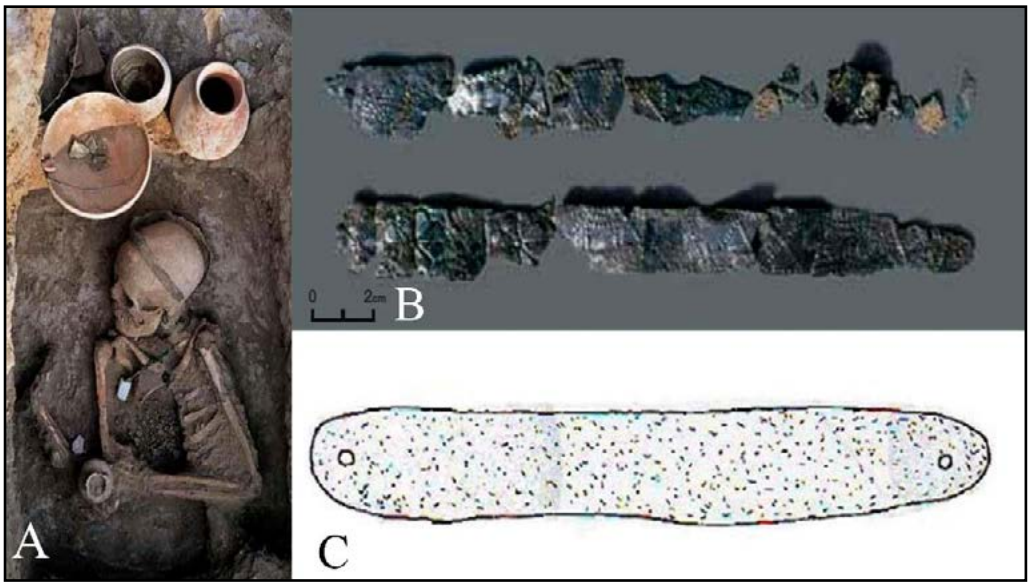

Fig. 6: a–b) Burial of a woman wearing a headband at Gönur Tepe (Sarianidi, 2007: 94), c) Silver headband from Shahdad (Hākami, 2006: 294).

• **Bronze mirrors:** Metal mirrors of the Bactria-Margiana Archaeological Complex (BMAC) were generally made of bronze (copper and arsenic) and shaped as flat circular discs (Tahmasebi Zaveh, 2019: 116). Bronze mirrors have been recovered across the BMAC region, including Gönur (Sarianidi, 2007: 293), Altyn-Tepe (Masson, 1988: 43), and Farokhabad in Afghanistan (Kohl, 2015: 300). Several of these mirrors have also been discovered at Shahdad (Fig. 7).

• **Sornas:** These objects are small, handcrafted instruments made of copper or bronze, and occasionally of gold or silver. They feature a bell-shaped flared end, a jointed mouthpiece, and a length of less than 15 cm, with a smooth surface. Rarely, they

Fig. 7: a) Bronze mirrors recovered from Bactria (Sarianidi, 2008: 281), b) Mirror discovered at Shahdad (Hākami, 2006: 294).

are decorated with human head figurines (Sarianidi, 2007: 82). These instruments have been identified from the late third millennium BCE to the early second millennium BCE in eastern Iran, northern Afghanistan, and southern Turkmenistan. Excavations at Gönur Tepe have clearly confirmed their association with the Bactria-Margiana Archaeological Complex (BMAC), (Tahmasebi Zaveh, 2019: 114; Sarianidi, 2007: 81). A single bronze sorna with a human figure was discovered at Shahdad (Hākami, 2006: 369, 733; Fig. 7).

• **Axes:** Three types of axes have been identified at Shahdad, including decorative axes with crescent-shaped blades, simple axes, and axes featuring animal figurines on the handle (Hākami, 2006). Similar axes have also been discovered at Bactria-Margiana Archaeological Complex (BMAC) sites such as Gönur Tepe (Sarianidi, 1998: 60), (Fig. 9).

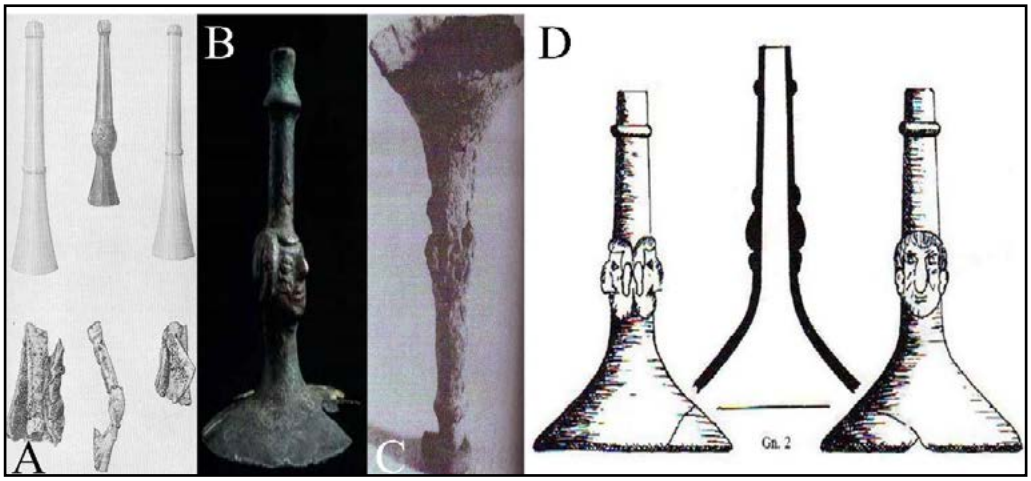

Fig. 8: a) Surnas recovered from Tepe Hesar (Schmidt, 1937: 210), b) Gönur site (Sarianidi, 2007: 82), c–d) Shahdad (Hākami, 2006: 369).

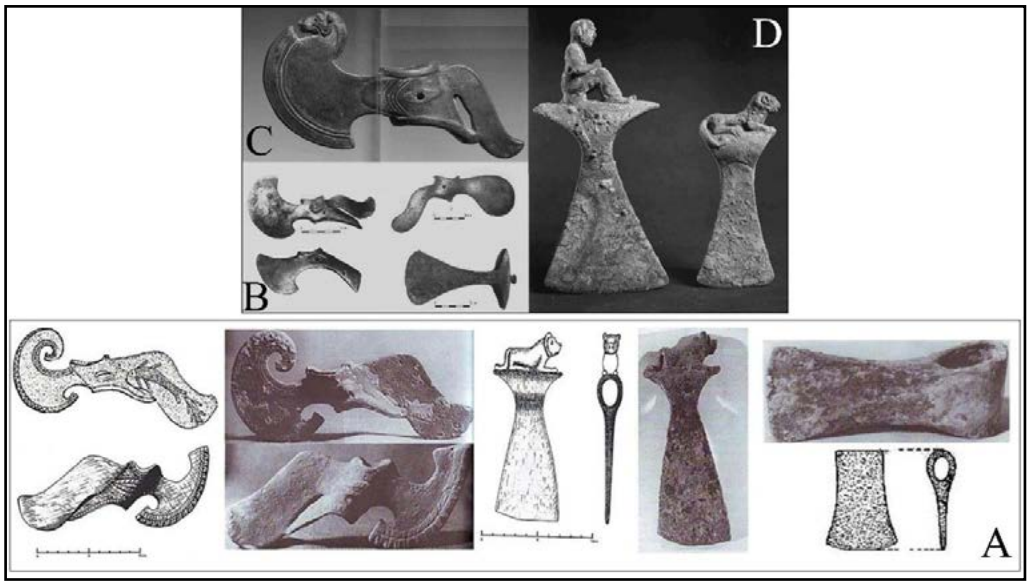

Fig. 9: Axes recovered from: a) Shahdad (Hākami, 2006), b) Gönur Tepe (Sarianidi, 1998: 60), c–d) other Bactria-Margiana Archaeological Complex (BMAC) sites (private collections), (Salvatori, 1988).

• **Pickaxes or adzes:** The pickaxe recovered from Shahdad is a double-headed type (Hākami, 2006: 434). Similar examples have been discovered at Tepe Hesar (Schmidt, 1937: Pl. LII, H2710 & 3247) and at the Gönur site (Sarianidi, 1998: Fig. 25), (Fig. 10).

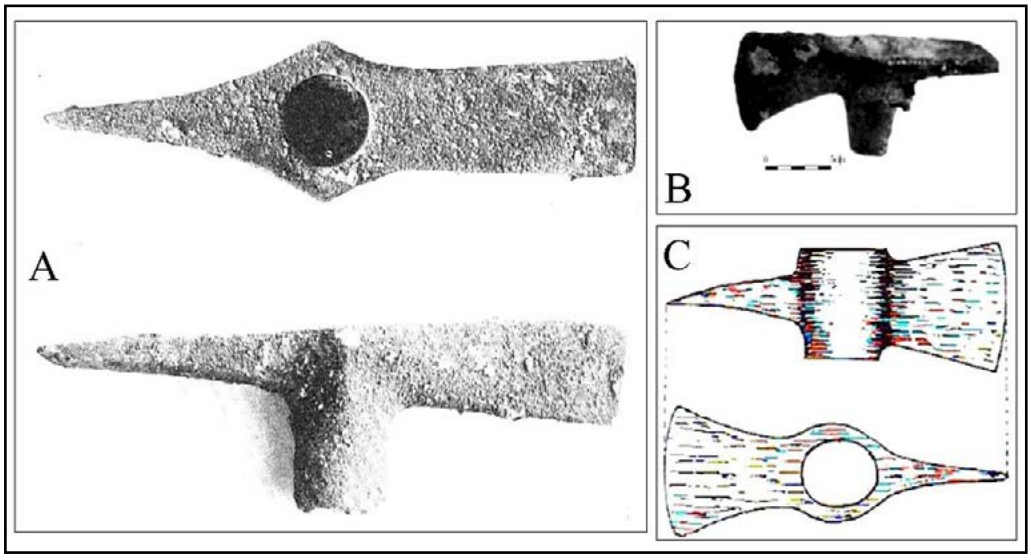

Fig. 10: Pickaxes recovered from: a) Tepe Hesar (Schmidt, 1937: 204), b) Gönur (Sarianidi, 1998: 60, Fig. 25), and c) Shahdad (Hākami, 2006: 434).

• **Soapstone vessels:** Among the various types of stone artifacts, the production of prestige goods made from soft stone, specifically soapstone (chlorite), was widespread in southeastern sites during the third millennium BCE (Basafa, 2024: 138). At Shahdad, both simple soapstone vessels and shallowly carved, lightly decorated vessels, referred to as "late-style vessels," have been recovered (Tahmasebi Zaveh, 2019: 282). These vessels are comparable to examples from Gönur Tepe in Turkmenistan, Chelow in northern Khorasan, other southeastern and southwestern Iranian sites, and regions along the Persian Gulf. Additionally, the multi-part vessels from Shahdad (Hākami, 2006: 710) show strong similarities to examples from Gönur Tepe in Turkmenistan (Sarianidi, 2005: 243, Fig. 103), (Fig. 11).

• **Marble vessels:** Marble vessels are among the most common stone artifacts and have been reported from major sites in Iran, Mesopotamia, Central Asia, the Indus Valley, and Egypt (Casanova, 2008). The marble vessels produced at Shahdad show clear similarities with the Bactria-Margiana Archaeological Complex (BMAC) culture (Sarianidi, 1998: 139), (Fig. 12).

• **Kohl containers:** The small stone kohl containers from Shahdad, particularly those decorated with concentric circle motifs (Hākami, 2006: 714–717), resemble examples from Gönur Tepe (Sarianidi, 2007: 92–94; Sarianidi, 1998: 139, Fig. 71), (Fig. 13).

• **Metal vessels:** Considering the discovery of metallurgical workshops in Area D and the large number of metal artifacts at Shahdad, along with the diversity of production and stylistic variations, metallurgy at Shahdad can be regarded as a local industry.

Fig. 11: Upper images: Soapstone vessels from Shahdad (Hākami, 2006); lower images: Soapstone vessels recovered from Gönur Tepe (Ligabue & Salvatori, 1989; Lombard, 2020).

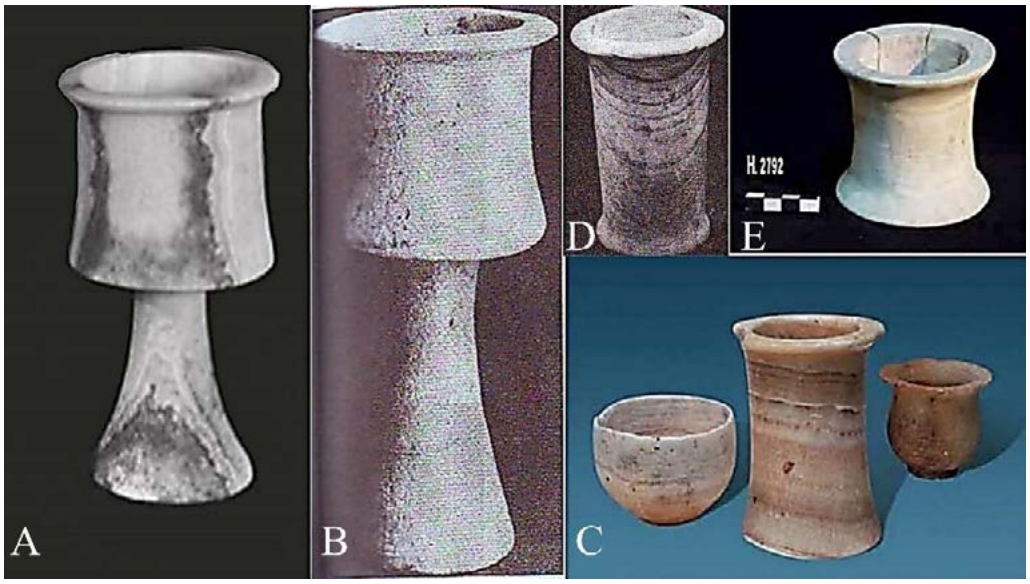

Fig. 12: Marble vessels recovered from: a) Ulug Depe (Bendezu, 2021: 414), b–c) Shahdad (Hākami, 2006), d) Tepe Hesar (Amanollahi, 2008), and e) Gönur Tepe (Sarianidi, 2007).

However, similarities with metal artifacts from the Bactria-Margiana Archaeological Complex (BMAC) are also evident (Hākami, 2006; Tahmasebi Zaveh, 2019: 283). These similarities include tubular metal vessels (Hākami, 2006: 728; Sarianidi, 2007: 85, Fig. 89) and trumpet-shaped vessels (Hākami, 2006: 730; Sarianidi, 2007: 84, Fig. 8) from Gönur Tepe (Fig. 14).

Fig. 13: Upper images: Stone kohl containers recovered from Gönur and other Bactria-Margiana Archaeological Complex (BMAC) sites (private collections), (Salvatori, 1988; Sarianidi, 2007); lower image: Kohl containers from Shahdad (Hākami, 2006: 715–718).

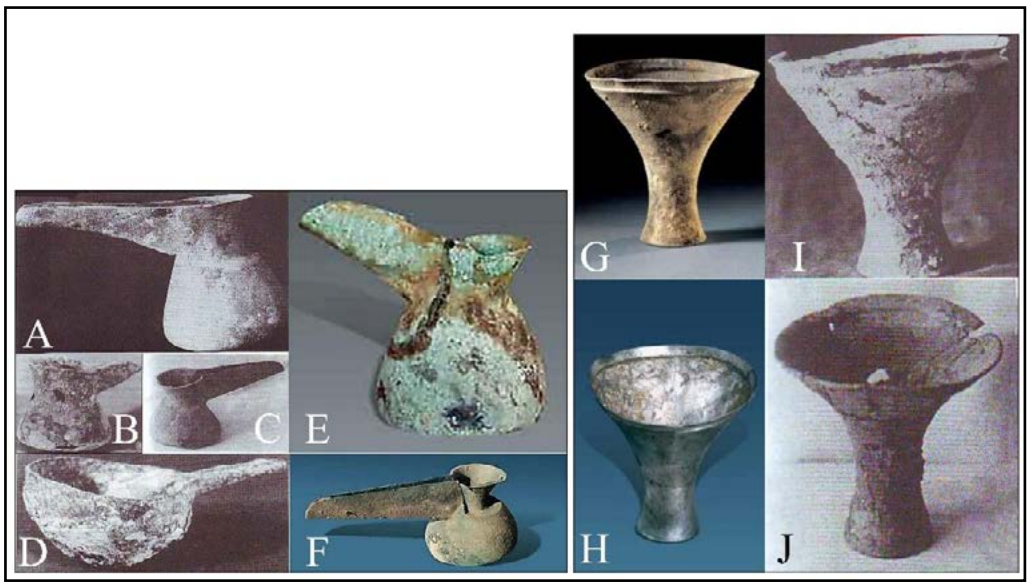

Fig. 14: Tubular metal vessels recovered from Shahdad (a–d), (Hākami, 2006) and Gönur Tepe (e–f), (Sarianidi, 2007); Trumpet-shaped metal vessels from Gönur Tepe (g–h), (Sarianidi, 2007) and Shahdad (i–j), (Hākami, 2006).

• **Mosaics:** Mosaics are a distinctive feature of the Bactria-Margiana Archaeological Complex (BMAC) culture, typically used as colored decorations for the walls of funerary structures (Tahmasebi Zaveh, 2019: 283). These mosaics often combine geometric, vegetal, and mythological motifs, made from gypsum, other stones, and occasionally bone. Such mosaics have been identified in the funerary contexts and burial pits of Gönur Tepe (Sarianidi, 2007: 114). Similar examples, in the form of scattered diamond-shaped pieces with various colors, have been found at the Shahrak-e-Firoozeh site in Nishapur (Basafa, 2024: 149–150). At Shahdad, a model house was recovered, decorated with colored mosaics featuring geometric and spiral motifs (Hākami, 2006: 760; Fig. 15).

Fig. 15: Mosaics recovered from: Gönur Tepe (a–b), (Sarianidi, 2007: 185; Lamberg-Karlovsky, 2013: 37; Dubova, 2020: 272), Shahrak-e-Firoozeh, Nishapur (c), (Basafa, 2024: 150), Shahdad (d), (Hākami, 2006: 760, 633).

• **Metall stamp seals:** Archaeologists argue that the primary impetus for the emergence of seals during the Bronze Age was the advancement of interregional and Interregional trade, which led to increasing specialization in societies of this period (Talāei, 2019: 40). Metall stamp seals, which were among the most significant markers of trade in eastern Iran and Central Asia, were common from the early third millennium to the mid-second millennium BCE (Ibid: 16). Such seals have been recovered from Shahdad (Hākami, 2006: 757–758) and bear strong resemblance to seals from major Bactria-Margiana Archaeological Complex (BMAC) sites such as Gönur Tepe (Sarianidi, 2007: 101), Altyn depe (Masson, 1988: 209, Pl. XXIX), and Kelleli (Salvatori, 2008: 101), (Fig. 16).

In addition to the aforementioned similarities, the use of semi-precious stones, particularly lapis lazuli—which was common as grave goods at Shahdad (Hākami, 2006)—demonstrates economic and trade connections with northeastern Afghanistan

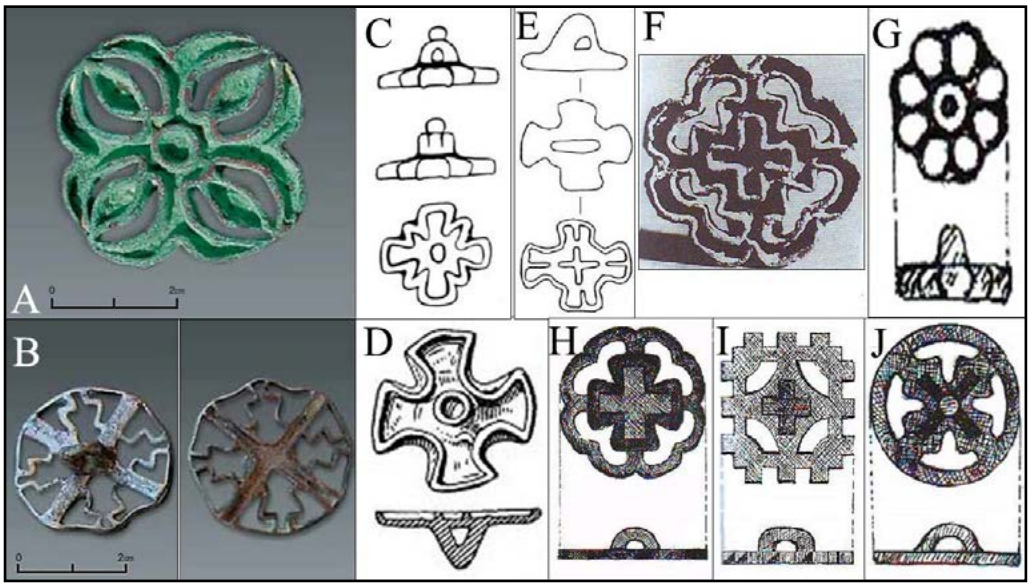

Fig. 16: Metal stamp seals recovered from: a–c) Gönur Tepe (Sarianidi, 2007: 101), d) Tepe Yahya (Lamberg-Karlovsky, 1972), e) Altyn-depe (Masson, 1988: 209, Pl. XXIX), f) Kelleli (Salvatori, 2008: 101), and g–j) Shahdad (Hākami, 2006).

through the Bactria-Margiana Archaeological Complex (BMAC) culture (Tahmasebi Zaveh, 2019: 282), (Fig. 16).

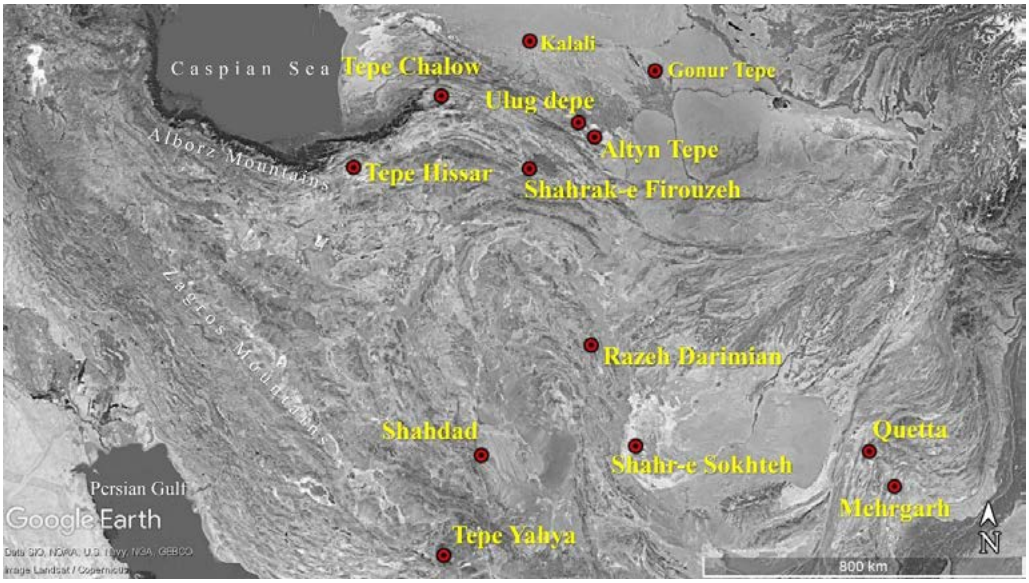

Fig. 17: Geographical distribution of the mentioned sites (Drawing by: M. Entezarian based on Google earth satellite imagery).

Tepe Yahya and Archaeological Findings

Tepe Yahya is located in the Soghun Plain near the village of Baghin, approximately 250 km southeast of modern Kerman. The site was discovered in 1967 during archaeological surveys conducted by C. C. Lamberg-Karlovsky of Harvard University and was subsequently excavated continuously between 1968 and 1973. The Soghun

Plain contains abundant steatite (soapstone) deposits, which served as the primary raw material for producing vessels and various other objects at Tepe Yahya during the 3rd millennium BCE.

Tepe Yahya encompasses six occupational phases, with Period IV corresponding to the 3rd and 2nd millennia BCE. Researchers have proposed various chronologies for this period, which is further subdivided into subperiods IVA to IVC (Lamberg-Karlovsky, 1970; 1971; 1972; 1973; 1976; 2001; Kohl, 1971, 2001; Amiet, 1986; Potts, 1981, 2001; Beale, 1986). In the present study, Lamberg-Karlovsky's chronology is adopted as the primary framework, providing a consistent basis for the temporal correlation of different site phases and for understanding the cultural development and interregional interactions at Tepe Yahya.

The proposed Bronze Age chronology of the site is as follows: Period IVC (3100/3000–2800/2700 BCE), Period IVB (2500/2400–2200/2100 BCE), and Period IVA (2100–1800 BCE), (Lamberg-Karlovsky, 1970–2001; Lamberg-Karlovsky & Beale, 1986: 11). Periods IVB and IVA correspond chronologically with the Takab III and II2 phases at Shahdad (Table 1).

Period IVC at Tepe Yahya is contemporaneous with the Late Uruk and Early Jemdet Nasr periods in Susa and Mesopotamia (Table 3). The discovery of proto-Elamite tablets, along with seals and seal impressions, in buildings from this period suggests an administrative function, likely related to trade, with the tablets produced locally (Majidzadeh, 1989: 142). The material culture of this period exhibits a clear influence from the western regions of the Iranian Plateau and is associated with proto-Elamite phases in that area (Seyyed-Sajjadi, 2010a: 294; Ascalone, 2016: 61).

Period IVB is subdivided into IVB1 and IVB2 (from top to bottom). Soapstone vessels from Tepe Yahya are comparable to those recovered from temples and royal tombs in Mesopotamia during the Early Dynastic III period (2600–2350 BCE), in cities such as Adab, Khafajah, Uqair, Ur, Nippur, and Mari (Ascalone, 2006b). These IVB1 vessels appear to have been produced under the supervision of a local authority at Tepe Yahya (Ghamari & Sheikhi, 2010: 5).

Other evidence of regional and interregional connections includes the so-called "Persian Gulf–type" seals recovered from the "Persian Gulf Room" at Tepe Yahya. Similar seals have been found in the Indus Valley (Mohenjo-daro, Harappa, Lothal, Chanhu-daro), the Iranian Plateau (Susa, Tepe Yahya, Luristan), Mesopotamia (Ur, Kish, Tell Brak, Girsu, Babylon, and other sites), and Persian Gulf coastal sites (Qal'eh Bahrain, Ras al-Qala, Failaka, Tell Abraq in the UAE), (Laursen, 2010).

These seals are classified into two main types—"Old" and "New"—and a subsidiary type known as "Dilmun". All are stamp seals, generally produced in square or circular

Table 3: Comparative Chronology of Tepe Yahya, Shushan Plain, and Mesopotamia (Authors, 2023).

Mesopotamia (Alizadeh, 2012: 102)	**Susiana plain** (Alizadeh, 2012: 102)	**Yahya** (Lamberg-Karlovsky, 1970; 1971; 1972; 1973; 1976; 2001; Lemberg-Karlovsky & Beale: 1986: 11)		**Chronological range (B.C.)**
Ubaid		Period VII	VII_D	4900-4500
	Late Susiana 1			
	Late Susiana 2 (Susa I)		VII_C	4500-4000
			VII_B	
			VII_A	
Late Ubaid phase	Late Susa	Period VI	VI_C	4000-3700
Uruk	Susa II		VI_A-VI_B	
		Period V	V_B	3700-3000
			V_A	
			–	
Jemdet Nasr	Proto-Elamite (Early Susa III)	Period IV	IV_C	3000-2700
Early Dynastic Period	Avan (Late Susa III)		–	2700-2500
Akkad Dynasty	–	–	IV_B IVB2	2500-2100
Ur III	Shimeshki		IVB_1	
Old Babylonian	Sukkalmakh		IV_A	2100-1800
	Transitional Period (Haft-Tappeh)	–		1700 / 1600-1500
Kassite / Middle Babylonian / Middle Assyrian	Middle Elamite	–		1500-700
Neo-Babylonian / Neo-Assyrian	Neo-Elamite Period	Period III		700-535
Achaemenid Empire	Achaemenid Empire	Period II		473-275
Parthian Empire	Parthian Empire	—		275-223
		Period I		223 B.C-200 A.D
Sasanian Period	Sasanian Period			

forms. The Old type depicts engraved motifs such as cattle, goats or gazelles, and human footprints accompanied by reptiles or scorpions. The New type features motifs of maritime activity, feasting, animals, human figures, combinations of human and animal motifs, and possibly mythological or sexual scenes. Some seals bear inscriptions in Harappan (Indus) or cuneiform scripts (Abdi, 1992; Laursen, 2010).

Two examples of these seals were recovered from Tepe Yahya in layer IVB2 (Porada, 1971: 331). Kamyar Abdi (1992: 52) assigned these seals to the Early Dynastic III period (2600–2350 BCE). Potts (2001: 105) dated this layer to the late 3rd millennium BCE (2300–2200 BCE), whereas Lamberg-Karlovsky (2001: 276) rejected this, proposing a range of 2400–2100 BCE based on the Persian Gulf–type seals. Laursen (2010) critically re-examined this chronology, highlighting interpretive errors in Lamberg-Karlovsky's reading of Mitchell (1986) and proposing a narrower range of 2150–2050 BCE for the Persian Gulf seals at Tepe Yahya—a conclusion that, based on detailed data analysis, appears the most reliable (Fig. 18).

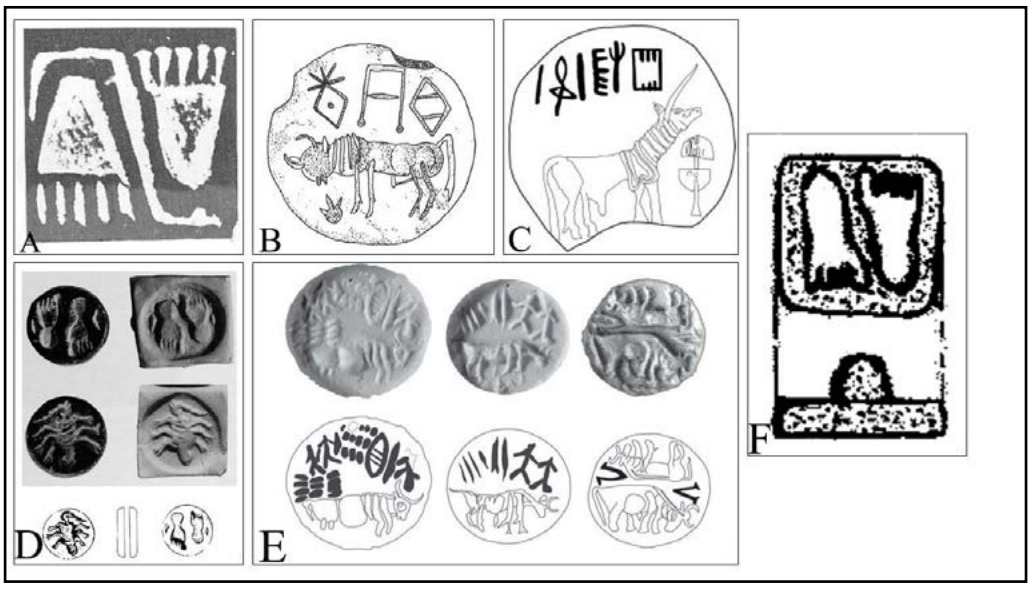

Fig. 18: a) Stamp seal from the Jemdet Nasr period, Tell Brak (Abdi, 1992: 52), b) Stamp seal from western Iranian plateau (Winkelmann, 1999: abb. 2), c) Stamp seal from Chanhu-daro (Mackay, 1943: pl. LI/23), d) Biface stamp seal from Tepe Yahya (Lamberg-Karlovsky, 2001: 154, Fig. 5.15), e) Dilmun-type stamp seals from Karzkan and Al-Janbiyya cemeteries, Bahrain (Laursen, 2010: 98; Al-Sindi, 1999: no. 160), f) Stamp seal from Shahr-e Shadad (Hakemi, 2006: 758).

Artifacts from Period IVA at Tepe Yahya were recovered from Workshops A and B and from the BW trench in the southern excavation area (Potts, 1980: 575). The pottery assemblage of this phase can be compared with the decorated buff wares of the Keftari phase at Tell Malyan (Potts, 1980: 570–571; Sumner, 1974: 173). Soapstone vessels from this period correspond to what Miroschedji (1973) termed the "new style" and are contemporaneous with the Susa VB phase and the Neo-Sumerian/Ur III period (Ascalone, 2016: 67–68; Potts, 1980: 581).

A notable feature of this period is the widespread use of diverse metal alloys, including tin bronze, leaded tin bronze, pewter, and low-zinc brass (16.9–19.4 wt% Zn). Thornton and Lamberg-Karlovsky (2004: 268) interpret this as evidence of an increasing influence from Central Asian material culture during the 3rd millennium BCE. This influence appears to have originated in the northeast during Period IVC and intensified through Periods IVB and IVA.

Their argument is supported by two key observations. First, only the arsenical copper objects not found in Trench X contain minor amounts of tin (0.5–1.25 wt%); second, these new metal alloys occur almost exclusively in Trenches A and B, corresponding to the IVA phase. This distribution indicates substantial cultural affinities with the Bactria-Margiana Archaeological Complex (BMAC) assemblages (Ibid: 268).

These affinities, which first emerged during Period IVB, include stone weights (Lamberg-Karlovsky, 2001: 141–143), soapstone vessels, and pottery (Ascalone, 2016: 68, 98; see Fig. 19).

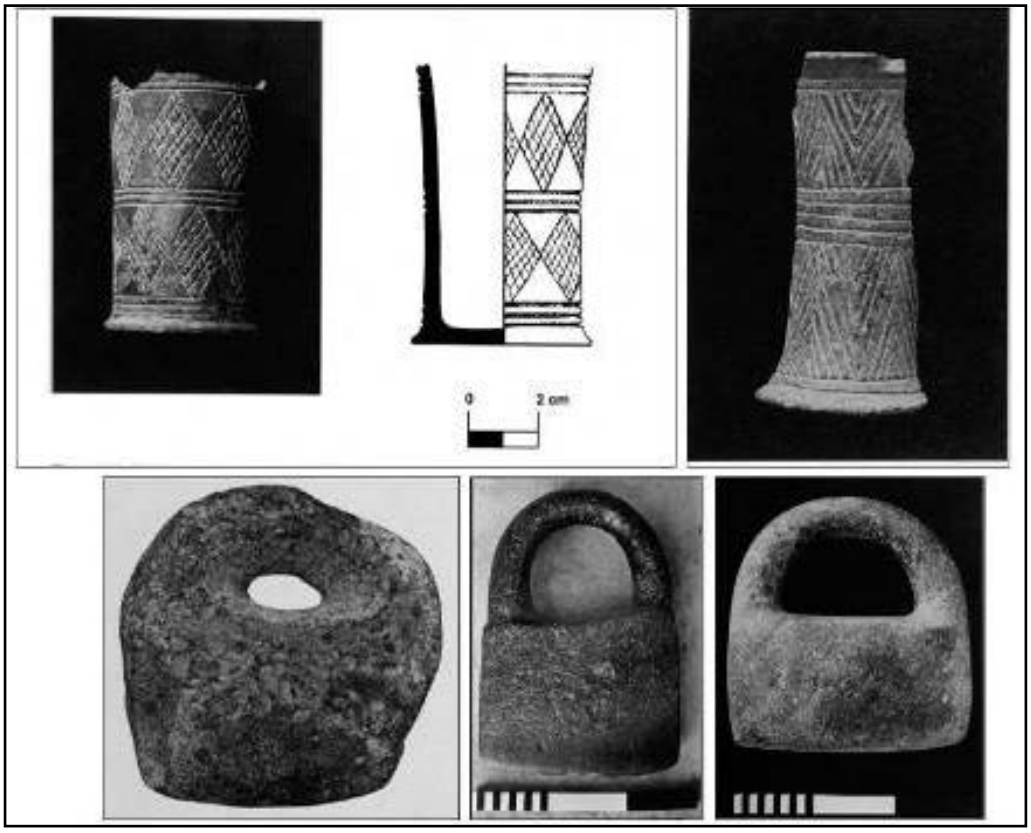

Fig. 19: Soapstone vessels and stone weights recovered from Tepe Yahya (Lemberg-Karlovsky, 2001).

This linkage becomes clearer when considering that Shahr-e Shadad functioned as a major settlement from the mid-3rd to the mid-2nd millennium BCE, distinguished by advanced metallurgy, pottery production, and the large-scale utilization of semi-precious stones, alongside intensive interactions with Central Asian cultures. Thornton

and Lamberg-Karlovsky (2004: 269) inferred that raw materials for metallurgical production were imported from Central Asia to Shadad, where they were processed and subsequently distributed to southeastern Iranian sites such as Tepe Yahya and possibly Jiroft. Thus, Shadad acted as a conduit through which Central Asian cultural elements and technological innovations—including tin-bronze alloys and material styles associated with the Bactria-Margiana Archaeological Complex (BMAC)—were transmitted to smaller settlements like Tepe Yahya and the Khinman cemetery.

Furthermore, it is noteworthy that copper deposits in the Anarak region (approximately 650 km northeast of Shadad) and the surrounding Lut Desert likely supplied part of the raw material requirements of southeastern Iranian communities and possibly even those of the Indus Valley (Heskel & Lamberg-Karlovsky 1980: 258–259; Pigott, 2004: 30; Kenoyer & Miller 1999: 116–117; cited in: Eskandari 2019: 58), (Fig. 20).

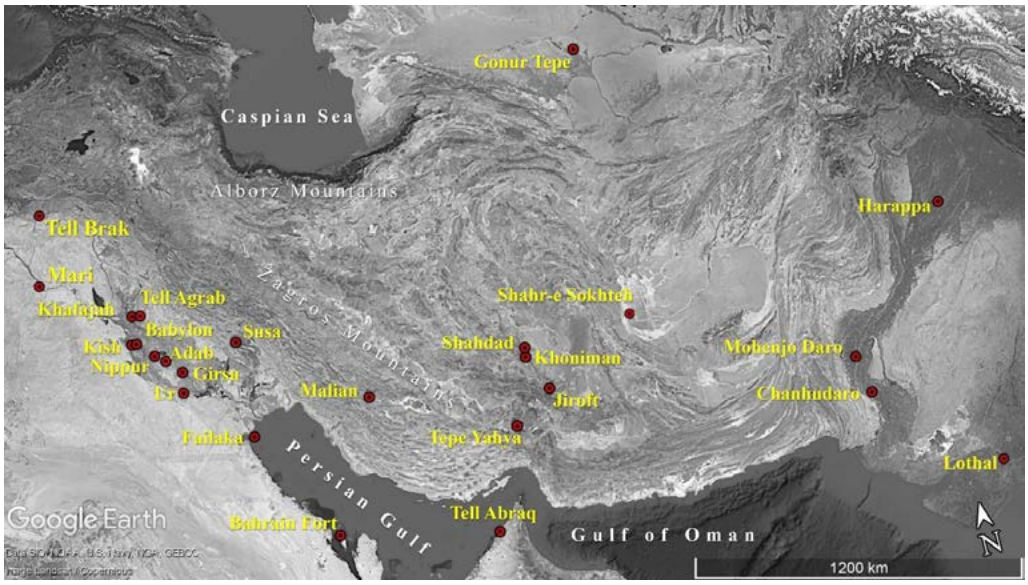

Fig. 20: Geographical distribution of the mentioned sites (Drawing by the M. Entezarian based on Google earth satellite imagery).

Interpretation and Discussion

To better understand the position of the discussed sites within the trade and cultural networks of the 3rd millennium BCE—the main focus of this study—it is essential to interpret and contextualize the archaeological findings from Shahr-e Shadad and Tepe Yahya.

As previously noted, Shahr-e Shadad was strategically situated on the edge of the Lut Desert along major trade and cultural routes. In terms of its material culture—particularly funerary traditions and grave goods—it represents the closest settlement in southeastern Iran to the Bactria-Margiana Archaeological Complex (BMAC). The similarities between Shadad and BMAC, coinciding with the formation of the latter

and the absence of a prior local tradition for these traits and productions in Shadad, suggest the influence of BMAC on the Shadad community. These parallels are most convincingly interpreted as resulting from the migration of small groups of specialized individuals from the BMAC region to Kerman and Baluchistan (Ascalone, 2016: 99–100; Tahmasbi-Zaveh, 2019: 289, 307; Hiebert & Lamberg-Karlovsky, 1992: 1).

The settlement of these BMAC groups in this region can be explained by Shadad's geographic position. The site lay along a probable north–south route linking Central Asia and northeastern Iran to southeastern Iran, and near an east–west route connecting the southern Iranian Plateau with the Indus Valley and Mesopotamia. It should also be noted that BMAC maintained active connections with the Indus Valley through Afghanistan and Pakistan. Evidence of these mutual interactions can be observed at sites such as Kulli, Mehi, Sibri, Quetta, Mehrgarh, and Nosharo in Pakistan, as well as Kelleli 6, Altyn-Tepe, Gonur-Tepe, Jarkutan, and Dashly-3 (Frenez, 2017: 3; Hiebert & Lamberg-Karlovsky, 2007: 6).

The presence of BMAC groups in southeastern Iran can be attributed to their efforts to control trade routes, manage marketing and distribution of manufactured goods, and secure the economic needs of their culture (Tahmasbi-Zaveh, 2019: 289–290). Although the strongest evidence of BMAC presence is found at Shadad, limited but noteworthy traces have also been documented at other southeastern Iranian sites such as Tepe Yahya (Ascalone, 2016; Lamberg-Karlovsky, 2001), Jiroft (Piran & Hessari, 2005; Majidzadeh, 2013), Nisa cemetery in Bam (Joudaki Azizi, 2014), Bampur (Seyed-Sajjadi, 2010b: 208; Ascalone, 2016: 88), Khorab (Hiebert & Lamberg-Karlovsky, 2007: 10), Daman (Tosi, 1970; Stein, 1937), and the Rajab site (Cemetery No. 14), (Rahbar, 2017). The period of BMAC influence and interaction with southeastern Iran appears to have extended from approximately 2500 to 2000/1900 BCE. In Shadad, these interactions were limited to the Takab III period (2500–2000/1900 BCE), while during Takab II (2000–1500 BCE), the site's cultural orientation shifted toward the Elamite sphere (Ascalone, 2016: 83).

The cultural materials from Shadad, while reflecting regional and Interregional interactions with contemporary cultures, also indicate the development of an urban center with distinctive local traditions during the Early and Middle Bronze Age in the western Lut Desert (Eskandari, 2019: 75).

Tepe Yahya also maintained long-term connections with Central Asia, beginning in Period IVC (3000–2700 BCE). These interactions reached their zenith in Period IVB (2500–2100 BCE) and continued through Period IVA (2100–1800 BCE), (Ascalone, 2016: 58–68; Lamberg-Karlovsky, 2001; Thornton & Lamberg-Karlovsky, 2004). Located in the Soghun Plain, Tepe Yahya occupied a strategic position on a major

southern route linking the Indus Valley to Mesopotamia. In addition to its proximity to abundant soapstone sources, the site was a production center for soapstone vessels, comparable examples of which have been found in Mesopotamia, the Indus Valley, and the Persian Gulf region (Ascalone, 2006a).

Moreover, the discovery of Proto-Elamite tablets and "Persian Gulf type" stamp seals further attests to its administrative and commercial significance. Although evidence for direct interaction between Tepe Yahya and the BMAC is limited, collectively these finds reveal extensive connections with Khuzestan, Mesopotamia, the Indus Valley, and the coastal lands of the Persian Gulf.

While Shadad and Tepe Yahya share a similar cultural and geographical setting, they exhibit both parallels and distinctions. Their primary commonality lies in their connection to the BMAC and the utilization of soapstone artifacts. At Shadad, multiple lines of evidence suggest the physical presence of BMAC populations. In contrast, at Tepe Yahya, where BMAC-related evidence is scarce and no burials of that cultural type have been found, the influence appears to have been transmitted indirectly—most likely through interaction with intermediary centers such as Shadad.

The available data indicate that Tepe Yahya, while maintaining strong local cultural traditions, was simultaneously influenced by Elamite, Mesopotamian, and Indus Valley elements. The differences between the two sites thus arise from the extent and nature of their participation in diverse cultural spheres.

During the Bronze Age, such Interregional networks were not unusual. A comparable example can be found in the Central Zagros region between the sites of Giyan and Godin. Despite being only about 40 kilometers apart, these two sites show both similarities and divergences in their material culture, shaped by different regional influences. Giyan, located west of the Nahavand Plain, yielded decorated buff pottery in Period IV (2500–3000 BCE) that was inspired by Susa D ceramics prevalent in Khuzestan in the early 3rd millennium BCE. The broad distribution of this pottery type—from Hamedan to Susa—likely reflects Elamite cultural influence in Central Zagros (Talai, 2009: 97).

Conversely, Godin, situated in the Kangavar Plain along the Gamasiab River, was influenced by the Uruk/Susa culture during the late 4th and early 3rd millennia BCE, as reflected in Periods VI and V. In Period IV (2950–2400 BCE), a new type of polished gray pottery, sometimes incised, replaced earlier ceramic forms (Ascalone, 2016: 126). This assemblage shows marked similarities to the Early Bronze Age pottery of northwestern Iran, particularly from Yanik Tepe and the Caucasus region (Talai, 2009: 101; Ascalone, 2016: 127). In Godin Period III (2400–1400 BCE), decorated buff

pottery became dominant, while comparable types appear in Giyan II and IV (Talai, 2009: 103–104).

This pattern illustrates the broader mechanisms of cultural and commercial interaction during the Bronze Age—mechanisms that not only facilitated the exchange of raw materials and technologies but also promoted artistic and symbolic transmission. The observed differences in material culture between sites, therefore, reflect the complexity and diversity of long-distance networks that connected distant communities across the ancient Near East.

Conclusion

The archaeological sites of Shahr-e Shadad and Tepe Yahya in southeastern Iran played pivotal roles in the trade and cultural networks of the 3rd millennium BCE. Archaeological evidence indicates that Shadad was predominantly influenced by the Bactria-Margiana Archaeological Complex (BMAC) and functioned as a major center for the exchange of goods and cultural interaction among Central Asia, the Indus Valley, and Mesopotamia. Multiple lines of evidence—including funerary assemblages, stone vessels, and metallurgical artifacts—attest to the presence of social elites associated with BMAC traditions at the site.

In contrast, Tepe Yahya operated primarily as a production and trade hub, maintaining extensive connections with western, southern, and eastern regions, including Mesopotamia, Khuzestan, the Indus Valley, and the Persian Gulf. The discovery of "Persian Gulf type" stamp seals and Proto-Elamite tablets underscores its economic and administrative significance within interregional exchange systems.

Despite their geographical proximity, the cultural assemblages of these two sites exhibit clear differences that reflect their distinct roles within the broader Bronze Age networks. Shadad, situated at a junction linking northeastern and southeastern Iran, demonstrates stronger influences from Central Asian traditions, while Tepe Yahya maintained closer affiliations with Mesopotamian, Elamite, and Indus Valley civilizations.

These distinctions illustrate that even within a shared geographic and chronological framework, settlements could develop unique cultural and economic profiles shaped by the nature of their interregional interactions. The evidence further highlights the role of trade routes, resource distribution, and environmental conditions in shaping cultural identity across southeastern Iran. Overall, the comparative analysis of Shadad and Tepe Yahya reveals the complexity of Interregional interactions during the Bronze Age and underscores the region's significance as a dynamic crossroads of civilizations.

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Author Contributions

This research is derived from the first author's M.A. Thesis. The primary data collection, encompassing all observational and analytical components, was conducted by the first author under the direct supervision and mentorship of the second author.

Conflict of Interest

In adherence to ethical publication standards, the authors affirm that there are no conflicts of interest, either personal or financial, that could have influenced the content or conclusions presented in this research.

Endnote

1. Hakemi has divided the cultural sequence of Shahr-i Sokhta into four main periods and several sub-periods. Altogether, this sequence covers approximately 1,500 years, from the late fourth millennium B.C. to the middle of the second millennium B.C. (Hakemi, 2006). Evidence of the Tekab I period has been obtained from surface surveys and dated to around 1500 B.C. (Ascalone, 2006: 73). Eskandari conducted a revision of this chronology in 2018 (Eskandari, 2019).

References

- Abdi, K., (1992). "Persian Gulf Seals: Description, Classification, and Chronology". *Majalle-ye Muzeha [Museum Journal]*, 12: 29–56. (In Persian).

- Amanollahi, H., (2009) "Study of the Stone Artifacts of Tepe Hissar, Damghan (4000-2000 BC)." Payām-e Bāstānshenās, 5 (10): 48-62. (In Persian). https://journals.iau.ir/article_704364.html.

- Alizadeh, A., (2012). "The Process of Social and Political Complexity in the Elamite World". *Payam-e Bastanshenas [Archaeology Message]*, 9 (17): 87–102. (In Persian). https://journals.iau.ir/article_703807.html

- Alizadeh, A., (2021). "Susiana in the 4th Millennium BC: Who Was in Charge?". In: Margarete van Ess (Ed.), *Uruk – Altorientalische Metropole und Kulturzentrum. Beiträge zum 8. Internationalen Colloquium der Deutschen Orient-Gesellschaft, 25.* und 26. April 2013, Berlin (Colloquien der Deutschen Orient-Gesellschaft, Bd. 8), Wiesbaden: Harrassowitz Verlag: 1-26.

- Al-Sindi, K., (1999). *Dilmun Seals.* Manama: Ministry of Cabinet Affairs & Information, State of Bahrain.

- Amanollahi, H., (2009). "Study of the Stone Artifacts of Tepe Hissar, Damghan (4000-2000 BC)". *Payām-e Bāstānshenās,* 5 (10): 2009: 48-62. https://dorl.net/dor/20.1001.1.20084285.1387.5.10.4.5

- Amiet, P., (1993). "The Period of Irano-Mesopotamian Contracts 3500-1600 B.C.". In: J. Curtis (ed.), *Early Mesopotamia and Iran: Contact and Conflict c. 3500-1600 B.C.,* London: British Museum Press: 23-30.

- Ascalone, E., (2006a). *Archeologia dell'Iran antico: interazioni, integrazioni e discontinuità nell'Iran del III millennio B.C.* Volume 14 of Nisaba (Messina), DiScAM, ISBN 888268010X, 9788882680107 (In Persian).

- Ascalone, E., (2006b). *Mesopotamia and the Indus: A Study of Trade and Cultural Exchange in the 3rd Millennium BCE.* L'Erma di Bretschneider.

- Ascalone, E., (2016). "The Trade Networks of the Iranian Plateau During the 3rd Millennium BCE". In: F. Valentini (Ed.), *Archaeology of Iran* (pp. 59–76). Firenze University Press.

- Basafa, H., (2009-2012). "Preliminary Report of the first season of archaeological excavations in Shahrak Firuzeh, Neyshabur". [2009] Unpublished manuscript, Archive of Iran Cultural Heritage, Handcrafts and Turism.

- Basafa, H. & Rahmati, M., (2012). "Preliminary Report on the Archaeological Excavation at the Shahrak-e Firouzeh Site, Neyshabur". In: Jamshid Kianfar & Parvin Ostakhri (Eds.), *Mazdak-Nameh,* 5: 613–623. (In Persian).

- Basafa, H., (2014). "Burial practices of the Late Bronze Age in the Nishapur plain (Northeast Iran)". In: M. H. Azizi Kharanqi, R. Naseri, & M. Khani-Pour (Eds.), Proceedings of the 4th International Conference of Young Archaeologists (pp. 257–266). Tehran: University of Tehran. (In Persian).

- Basafa, H., (2024a). *Bāstānshenāsī-ye Khorāsān dar Dowreh-ye Mofraġ: Dowreh-ye Shahrneshīnī [Archaeology of Khorasan in the Bronze Age: The Urban Period].* Mashhad: Ferdowsi University of Mashhad Press. (in Persian).

- Beale, T. W., (1986). "The Iranian Plateau and the Mesopotamian World: Interregional Relations in the 3rd Millennium B.C.". *Paléorient,* 12(2): 45–52.

- Bendezu, J. S., (2021). "Funerary rituals and archaeothanatological data from BMAC graves at Ulug Depe (Turkmenistan) and Dzharkutan (Uzbekistan)". in: Lyonnet B. & Dubova N. (Eds.), *The word of the Oxus Civilization:* 405-424. https://www.academia.edu/110226344.

- Brumfiel, E. & Earle, T., (1987). "Specialization, exchange and complex societies: an introduction". in: Brumfiel E. and T. Earle. (Eds.). Specialization, Exchange and Complex Societies, Cambridge University Press, Cambridge: 1-21.

- Casanova, M., (2008). "Prestige Objects Made of Fine and Soft Stone in the Ancient Near East: Production, Use, Distribution, and Value". In: Yousef Majidzadeh (Ed.), *Proceedings of the First International Conference on the Civilization of the Halil Rud Basin: Jiroft,* Tehran: Cultural Heritage, Handicrafts and Tourism Organization of Kerman Province: 375–397.

- Didier, A. & Sarmiento, D. C., (2014). "Excavations at Mehrgarh (1974-1985 and 1997-2000)". *International Seminar on "French Contributions to Pakistan Studies",* Feb 2014, Islamabad; Karachi; Banbhore, Pakistan.

- Dubova, N., (2020). "Polychrome inlayed and painted mosaoce from Gonur Depe (Turkemnistan)". *The World of the Oxus Civilization* (1st ed.). Routledge: 367-386. https://doi.org/10.4324/9781315193359-14

- Earle, T., (1997). *How Chiefs Comes to Power*. Stanford University Press, Stanford California.https://doi.org/10.1515/9781503616349

- Entezarian, M. & Basafa, H., (2025). "Commentary on the prestige artifacts of Middle Asia in the Bronze Age (Case study: Miniature columns and Stone round plates)". *Journal of Greater Khorasan,* 16(58): 129-150. (In Persian). https://doi.org/10.22034/jgk.2024.401088.1128.

- Eskandari Damne, N., (2021). "A Landscape Archaeology in Shahdad Plain (Dasht-e Lut) from the 5th to the 2nd Millennium BC. Archaeology and Prehistory". Université de Lyon; University of Teheran.

- Eskandari, N., (2019). "A Reappraisal of Shahdad: Chronology, Seals, Metal and Clay Objects". *Parseh J. Archaeol Stud.,* 2(6): 53-68 (In Persian). https://doi.org/10.30699/PJAS.2.6.53, URL: http://journal.richt.ir/mbp/article-1-124-en.html

- Farjami, M., (2015). "Newly Discovered Bronze Age Finds in South Khorasan (Case Study: Gound Baghestan Site, Ferdows)". In: Hassan Hashemi Zarjabad (Ed.), *Proceedings of the 2nd National Conference on Iranian Archaeology.* Birjand: Chahar Derakht Publications: 1–31. (In Persian).

- Frenez, D., (2017). "Manufacturing and trade of Asian elephant ivory in Bronze Age middle Asia". *Evidence from Gonur Depe (Margiana, Tuekmenistan). Archaeological Research in Asia:* 1-21. https://doi.org/10.1016/j.ara.2017.08.002

- Ghamari Fatideh, M., (2017). *An Environmental-Geographical Perspective on the Northern Slopes of Iran as an Ancient but Overlooked Passage in Iranian Archaeological Studies, with Emphasis on Third Millennium BCE Findings.* Tehran: Proceedings of the Third National and First International Conference on Quaternary Studies of Iran. (In Persian).

- Ghamri Fatideh, M. & Sheykhi, S., (2010). "Kerman as a Center of Trade and Goods Transit during the Fourth and Third Millennia BCE". *Proceedings of the National Conference on Islamic and Iranian Culture:* "Kerman Studies" Shahid Bahonar University of Kerman. (In Persian).

- Hakemi, A., (2006). *Series of archaeological reports (13): Report of eight seasons of survey and excavation at Shahr-i Shadad (Dasht-e Lut), 1968–1975*. Edited by M. Mousavi. Tehran: Research Institute of Archaeology. (In Persian).

- Heskel, D. & Lamberg-Karlovsky, C. C., (1980). "The Metal Sources of the Bronze Age in the Near East". *Expedition,* 22(2): 24–33.

- Hiebert, F. T. & Lamberg-Karlovsky, C.C., (2007). "Central Asia and the Indo-Iranian Borderlands". *Bâstân-pazhūhī*, 15: 1-24. (In Persian). https://doi.org/10.2307/4299865

- Jarrige, J. & Hassan, U., (1985). "Funerary Complexes in Baluchistan at the end of the third Millennium in the Light of Recent Discoveries at Mehrgare and Quetta. South Asian Archeaology". *Papers from the eighth international Conference of South Asian Archeaologists in Western Europe.* Held at Moesgaard Museum, Denmark,1-5 July 1985. Scandinavian Institute of Asian Studies, Occasional papers 4 (London 1989): 150-166.

- Joodaki Azizi, A., (2014). "A survey and identification of the water pipeline route from Nesa Dam to the cities of Bam and Boruat". In: K. Roostaei & M. Gholami (Eds.), *Proceedings of the 12th Annual Symposium of Iranian Archaeology Tehran: Research Institute of Cultural Heritage and Tourism:* 118–122. (In Persian).

- Kabli, M., (2012). "Shadad: Yesterday and Today". In: Hamid Fahimi & Karim Alizadeh (Eds.), *Namvarnameh: Essays in Honor of Masoud AzarnoushTehran: Iran Negar Publications:* 99–108. (In Persian).

- Kenoyer, J. M. & Miller, H. M.-L., (1999). "Metal Technologies of the Indus Valley Tradition". In: V. C. Pigott (Ed.), *The Archaeometallurgy of the Asian Old World* (pp. 107–151). University of Pennsylvania Museum.

- Kohl, P. L., (1971). "The Early Bronze Age of Iran as seen form Tepe Yahya". *Expedition,* 13: 14-21.

- Kohl, P. L., (1978). "The Balance of Trade in Southwestern Asia in the Mid-Third Millennium B.C.". *Current Anthropology,* 19(3): 463–492. https://doi.org/10.1086/202108

- Kohl, P. L., (2001). "Reflections on the Production of Chlorite at Tepe Yahya: 25 Years Later". in: D.T. Potts (ed.), *Excavations at Tepe Yahya, Iran, 1967-1975: Periods IVC and IVB (3000-2000 BC)*, Cambridge: 209-230.

- Kohl, P. L., (2015). *Archaeology of Central Asia: From the Paleolithic to the Iron Age.* Translated by: Hossein Ramazanpour and Ma'soumeh Moradian. Tehran: Samira Publishing.

- Lamberg-Karlovsky, C. C., (2001). "Tepe Yahya: The Chronology and Cultural Context". In: P. L. Kohl (Ed.), *The Bronze Age World System* (pp. 135–150). University of Chicago Press.

- Lamberg-Karlovsky, C. C. & Beale, T., (1986). *Excavations at Tepe Yahya, iran, 1967-1975: the early periods.* American school of prehistoric research Bulltein 38, Cambridge.

- Lamberg-Karlovsky, C. C. & Hiebert, F., (1992). "The Relation of the Finds from Shahdad to Those of Sites in Central Asia". *Janes*, 21: 135-140.

- Lamberg-Karlovsky, C. C., (1970). *Excavations at Tepe Yahya, Iran 1967-1969*. Progress Report I, Cambridge.

- Lamberg-Karlovsky, C. C., (1971). "The Protoelamite Settlement at Tepe Yahya". *Iran,* 9: 87-95. https://doi.org/10.2307/4300440

- Lamberg-Karlovsky, C. C., (1972). "Tepe Yahya 1971: Mesopotamia and the IndoIranian Borderlands". *Iran,* 10: 89-100. https://doi.org/10.2307/4300467

- Lamberg-Karlovsky, C. C., (1973). "Urban interaction in the Iranian Plateau: Excavation at Tepe Yahya, 1967-1973". *Proceedings of the British Academy,* 59: 1–43.

- Lamberg-Karlovsky, C. C., (1976). "Tepe Yahya Project". *Iran,* 14: 172.

- Lamberg-Karlovsky, C. C., (1978). "The Proto-Elamites on the Iranian Plateau". *Antiquity,* 52: 114-120. https://doi.org/10.1017/S0003598X00071933

- Lamberg-Karlovsky, C. C., (1988). "The Intercultural style carved vessels". *Iranica Antiqua,* XXIII: 46-95. https://doi.org/10.2143/IA.23.0.2014046

- Lamberg-Karlovsky, C. C., (2001). "Afterward: excavation at tepe yahya: reconstructing the past, past". in: D.T. Potts (ed.) *excavation at tepe yahya, iran,1967-1975: periods IVC and IVB (3000-2000 bc),* cambridge: 269-280.

- Lamberg-Karlovsky, C. C., (2013). "The Oxus civilization". *Cuadernos de Prehistoria y Arqueología.* 39. https://doi.org/10.15366/cupauam2013.39.002

- Laursen, S. T., (2010). "The westward transmission of Indus Valley sealing technology: Origin and development of the 'Gulf Type' seal and other administrative technologies in Early Dilmun, c. 2100–2000 BC". *Journal of Anthropological Archaeology*, 29(2): 190-205. https://doi.org/10.1111/j.1600-0471.2010.00329.x

- Lecomte, O., (2013). "Activites Archeologiques Francaises au Turkmenistan". *L archeology francaise en Asie Centrale,* 21/22: 165-190.

- Ligabue, G. & Salvatori, S., (1989). *Bactria an ancient civilization from the sands of Afghanistan.* Venise. https://www.academia.edu/37594948

- Lombard, P., (2020). "The Oxus civilization/BMAC and its interaction with the Persian Gulf. A review of the evidences". Bertille Lyonnet; Nadezdha Dubova. *The World of the Oxus Civilization*, Routledge: 607-63. https://shs.hal.science/halshs02123710/file/Oxus_Dilmun_Lombard_under%20press.pdf.

- Luneau, É., (2014). "Identifier le prestige: éléments de controverse à propos de quelques objets singuliers de la civilisation de l'Oxus (Asie centrale, âge du Bronze)". In: F. Hurlet, I. Rivoal, & I. Sidéra (Eds.), *Le prestige: Autour des formes de la différenciation sociale, Actes du Xe colloque annuel, international et interdisciplinaire de la Maison de l'Archéologie et de l'Ethnologie, René Ginouvès.* Paris: De Boccard: 147-160. https://www.academia.edu/7402855

- Mackay, E. J. H., (1943). *Chanhu-daro excavations 1935–36.* New Haven, Conn.: American School of Indic and Iranian Studies / Boston: Museum of Fine Arts. https://

ia802909.us.archive.org/21/items/in.ernet.dli.2015.105167/2015.105167.Chanhu-Daro-Excavations-1935-36.pdf

- Majidzadeh, Y., (1989). *Iran at the Beginning of Urbanization.* Tehran: University Publishing Center. (In Persian).

- Majidzadeh, Y., (2013). *The Treasures of Jiroft Collection.* Under the supervision of D. Akbarzadeh; edited by S. Piran. Tehran: National Museum of Iran. (In Persian).

- Masson, V., (1988). *Altyn-depe.* Translated by: henry n.m: chal. The university museum. University of Pennsylvania Philadelphia.

- Miroschedji, P. de., (1973). "Le "Nouveau Style" de Yahya et les Relations entre l'Iran du Sud-Est et les Civilisations Mésopotamiennes". *Paléorient*, 1(1): 43–56.

- Mitchell, T. G., (1986). "Indus and Gulf type seals from Ur". Pages 278–285 In: Al-Khalifah, H. & Rice, M. (eds.), *Bahrain through the ages: the archaeology* (London, Kegan Paul International Ltd).

- Pigott, V. C., (2004). "The Development of Metal Production on the Iranian Plateau: An Archaeometallurgical Perspective". In: J. Curtis, B. Simpson, & N. Tallis (Eds.), *The Archaeometallurgy of the Ancient Near East* (pp. 27–44). Archetype Publications.

- Piran, S. & Hessari, M., (2005). *Marginal culture of Halil Rod and Jiraft*. National Museum of Iran. (in Persian)

- Porada, E., (1971). "Remarks on seals found in the Gulf States". *Artibus Asiae*, XXXIII, 4: 331–338

- Potts, D. T., (1980). "Tepe Yahya: The Iron Age Settlement". In: C. C. Lamberg-Karlovsky (Ed.), *Excavations at Tepe Yahya, Iran, 1967–1975: The Third Millennium B.C.* (pp. 553–592). Peabody Museum Press.

- Potts, D. T., (1981). "Echoes of Mesopotamian Divinity on a Cylinder Seal from South-eastern Iran". *Revue d'Assyriologie et d'Archéologie Orientale,* 75: 135-142.

- Potts, D. T., (2001). *Excavations at Tepe Yahya, Iran, 1967-1975: Periods IVC and IVB (3000- 2000 BC)*. Cambridge.

- Rahbar, M., (2017). "Excavations at Rajab: Cemetery No. 14 and Its Relation to the BMAC Culture". *Iranian Journal of Archaeology and History,* 31(2): 45–68. (In Persian).

- Salvatori, S., (1988). "Early Bactrian objects in private collections". In: G. Ligabue & S. Salvatori (Eds.), *The Bronze Age of Bactria: 181–244,* Venice: Erizzo Editrice. https://www.academia.edu/36784725

- Salvatori, S., (2008). "Unpublished Stamp-seals from the North-western Murghab Delta". In: S. Salvatori and M. Tosi (Eds), *The Bronze Age and Early Iron Age in the Margiana Lowlands: Facts and Methodological Proposal for a Redefinition of the Research Strategies.* Oxford, 99–109. https://doi.org/10.30861/9781407302935

- Santoni, M., (1984). "Sibri and the South Cemetery of Mehrgarh: Third Millennium connections between the northern Katchi Plain (Pakistan) and Central Asia". *South Asian Archaeology 1981,* Cambrige: 52-60.

- Sarianidi, V., (1998). *Margiana and protozoroastrism*. Athens. capon.

- Sarianidi, V., (2005). *Gonur-Depe.* City of Kings and Gods. Miras, Aşgabat.

- Sarianidi, V., (2007). *Necropolis of Gonur.* Kapon.

- Sarianidi, V., (2008). *Margush Mystery and Truth of the Great Culture.* Türkmen döwlet habarlary, Aşgabat.

- Schmidt, E., (1937). *Excavations at Tepe Hissar, Damghan1931-1933*. University of Pennsylvania press.

- Seyyed Sajjadi, S. M., (2010a). *The first cities of the Iranian plateau* (3rd ed.). Tehran: SAMT Publications. (In Persian).

- Seyyed Sajjadi, S. M. S., (2010b). "Archaeological Studies in the Bampur Valley, Southeastern Iran". *Iranian Archaeology,* 1(2): 197–215.

- Soroush, M. & Yousefi, S., (2014). "The Rozeh Site: Evidence of Settlements from the Third Millennium to the Historical Period in South Khorasan". In: Kourosh Roustaei & Mehran Gholami (Eds.), *Short Papers of the 12th Annual Symposium of Iranian Archaeology*, Tehran: Research Institute of Archaeology: 271–273. (In Persian).

- Stein, A., (1937). *Archaeological Reconnaissances in North-Western India and South-Eastern Iran*. Macmillan.

- Sumner, W. M., (1974). "Excavations at Tall-i Malyan 1971-1972". *Iran,* 12: 155-180. https://doi.org/10.2307/4300508

- Tahmasbi Zaveh, H., (2019). "Tracing the Origin of the Bactria–Margiana Culture and Its Expansion in Eastern Iran". PhD dissertation, Archaeology, Prehistoric Studies, Isfahan University of Art, Faculty of Conservation and Restoration, Department of Archaeology. (Unpublished). (In Persian).

- Talai, H., (2009). *The Bronze Age of the Central Zagros: A Comparative Study of Godin and Giyan.* Tehran University Press. (In Persian).

- Talai, H., (2019). *Seals in Iran from the Beginning to the Rise of Islam.* Tehran: SAMT Publications. (In Persian).

- Thornton, C. P. & Lamberg-Karlovsky, C. C., (2004). "A Reassessment of the Metallurgical Evidence from Shahr-i Sokhta, Tepe Yahya, and Central Asia". *Iran*, 42(1): 67–92. https://doi.org/10.2307/4300662

- Tosi, M., (1970). "Excavations at Damin, a Protohistoric Settlement in Makran". *Pakistan. East and West,* 20(1–2): 9–66.

- Vahdati Nasab, H., Clark, G. A. & Turkamandi, S., (2013). "Late Pleistocene Dispersal Corridors across the Iranian Plateau: A Case Study from Mirak, a Middle Paleolithic Site on the Northern Edge of the Iranian Central Desert (Dasht-e Kavir)". *Quaternary International,* 300: 267-281. https://doi.org/10.1016/j.quaint.2012.11.028

- Vahdati, A. & Biscione, R., (2014). "A Brief Report on the Second Season of Excavations at Tappeh Chelow, Jajarm Plain, Northeastern Iran". In: *Proceedings of the 13th Annual Symposium of Iranian Archaeology.* Tehran: Cultural Heritage Publications. Pp. 320–324. (In Persian).

- Vahdati-Nasab, H. & Ariamnesh, S., (2015). *Archaeology of Paleolithic Iran: From the beginning to the dawn of village life.* Tehran: Research Institute of Cultural Heritage and Tourism. (In Persian).

- Winkelmann, S., (1999). "Ein Stempelsiegel mit alt-elamischer Strichschrift". *Archaologische Mitteilungen aus Iran und Turan,* 31: 22–32.

- Wright, H. T. & Johnson, G. A., (1975). "Population, exchange and early state formation in southwestern Iran". *American Anthropologist,* 77: 267–89. https://doi.org/10.1525/aa.1975.77.2.02a00020

۳۳

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محوطهٔ شهداد و تپه یحیی؛ دو چهره از مناسبات تجاری-فرهنگی هزارهٔ سوم پیش‌ازمیلاد: مطالعهٔ ساختارهای فرهنگی و تجاری براساس یافته‌های باستان شناختی

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چکیده

بررسی برهمکنش‌های فرهنگی و اقتصادی در جنوب‌شرقی فلات ایران طی هزارهٔ سوم پیش‌ازمیلاد یکی از مباحث مهم در شناخت فرآیندهای شکل‌گیری شبکه‌های مبادلهٔ فرامنطقه‌ای و پیدایش جوامع شهری اولیه است. دو محوطهٔ باستانیِ شَهداد در دشت تکاب و تپهٔ حیی در دشت سوغان، به‌دلیل موقعیت جغرافیایی راهبردی خود در مسیرهای ارتباطی میان آسیای مرکزی، درهٔ سند و بین‌النهرین، نقش‌های متمایز اما مکملی در این شبکه‌ها ایفا کرده‌اند. مسئلهٔ اصلی این پژوهش، تبیین جایگاه اقتصادی و فرهنگی هر یک از این دو مرکز در ساختار مبادلاتی عصر مفرغ و تحلیل ماهیت روابط میان آن‌ها با حوزه‌های پیرامونی است. هدف مطالعه، ارائهٔ تحلیلی تطبیقی از داده‌های باستان‌شناختی به‌منظور بازشناسی الگوهای تولید، توزیع و انتقال عناصر فرهنگی در جنوب‌شرقی ایران است. پرسش‌های تحقیق بر این محور استوار است که تفاوت در مسیرهای ارتباطی چگونه بر سازمان اقتصادی، فناوری تولید، و بیان‌های فرهنگی در این دو محوطه تأثیر نهاده است. فرضیهٔ پژوهش بر آن است که شَهداد، در پیوند مستقیم با فرهنگ بلخی-مروی (BMAC)، به‌عنوان مرکز واسطه‌ای میان آسیای مرکزی و فلات ایران عمل می‌کرد؛ درحالی‌که تپه یحیی، به‌سبب تولید گستردهٔ ظروف کلوریتی و شواهد اداری نظیر لوح‌های پروتوایلامی و مُهرهای نوع خلیج‌فارس، مرکز کارگاهی و تجاری مهمی در مسیر جنوبی مبادلات به‌شمار می‌رفت. روش تحقیق برمبنای تحلیل تطبیقی و تفسیر میان‌رشته‌ای داده‌های باستان‌شناختی است که از هر دو محوطه و مناطق هم‌زمان همجوار به‌دست آمده‌اند. نتایج نشان می‌دهد تفاوت‌های فرهنگی و مادی میان شَهداد و تپه یحیی حاصل مشارکت آن‌ها در دو نظام ارتباطی و تجاری متفاوت است؛ بدین‌ترتیب، شَهداد بازتاب نفوذ مستقیم عناصر فرهنگیِ آسیای مرکزی است، درحالی‌که تپه یحیی پیوندهای ساختاری خود را با جهان ایلامی، بین‌النهرین و درهٔ سند حفظ کرده است. این یافته‌ها بیانگر آن است که جنوب‌شرقی فلات ایران در هزارهٔ سوم پیش‌ازمیلاد عرصهٔ تلاقی سیستم‌های فرهنگی مستقل، اما درهم‌تنیده، بوده است.

کلیدواژگان: عصرمفرغ، محوطهٔ شهداد، تپهٔ حیی، فرهنگ بلخی-مروی، ارتباطات فرهنگی-تجاری.

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