



Explanation and Analysis of Bronze Pottery Making in Khorassan Case Study: Shahrak-e Firouze Site in the Neyshabur Plain

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(21-37)

Abstract

The study of pottery production and organization in the Bronze Age helps us to know the cultural and technical characteristics. Knowing this issue is done by relying on production technology and recognizing the traditions used in pottery production, as well as by examining the possibility of exchange or trade and internal and external regional actions. Accordingly, it is necessary to know about the explanation and analysis of the Bronze Age pottery-making in the prehistoric settlement, especially in the Bronze Age. In Khorasan, we don't have enough archaeological pieces of information about the Bronze Age and this area consists of many plains such as Neyshabur plain that this plain is one of the most important. The location and suitable environment of Neyshabur plain are the most important reasons for the development of human societies. The basis of this research is the construction of furnaces, production techniques, topology, and distribution of pottery pieces, which have been obtained during the 5 seasons of Shahrak-e Firouze archaeological excavations. Based on this, the process of producing pottery has been done outside the residential zone and has been formed centrally, such as large-scale industrial centers on the outskirts or adjacent to the settlement. Their production technology has also been selected and designed with the aim of mass production. The forms are simple and varied and are dated in a comparative approach in the Middle and Late Bronze Ages, while in their development, the influences of the Bactria Margiana Archaeological complex (Oxus Civilization) are seen as the most important known culture of Central Asia in the Bronze Age. The similarities between the pottery traditions and, in a way, the specialized pottery production organization between the Neyshabour plain and Central Asia show similar traditions on a trans-regional scale. The results of this study show that the pottery making of Neyshabour in the Bronze Age has been associated with Central Asia more than the interior of the Iranian plate.

Keywords: Neyshabur Plain, Shahrak-e Firouze, BMAC, pottery, Bronze

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Introduction

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One of the most important cultural materials is pottery that is very useful in recognizing interactions and studying social changes (Abedi, 2004: 21). Also, it is very important for analyzing and distinguishing the relative chronology (Madjidzadeh, 1992: 5). Recent studies of the Greater Khorasan region in the Bronze Age show that Khorasan has played an important role in economic and cultural developments and connected Central Asia to the Iranian plateau. This area has the same pottery traditions and production. This research focused on the Shahrak-e Firouze archaeological site to explain the pottery organization (Basafa, et al. 2015). Shahrak-e Firouze, which is destroyed more than 90% (Fig. 1) has been excavated in five seasons with 13 trenches under the supervision of the author, and the result is belonging to the Middle and Late Bronze Age, in the comparative approach (Basafa, and Rahmati, 2012).

This site consists of industrial and cemetery zones and its residential and agricultural parts are probably located in the east of the site (Basafa, 2012). Along with stone tools (Rezaei and Basafa, 2018) with agricultural function and production of prestige objects, evidence of administrative and industrial management, very important pottery production has been obtained, which shows the same traditional cultures in the Middle and Late Bronze Age between Central Asia and Khorasan.

Bronze Age technological innovations include discovering and enhancing the capabilities of kilns and pottery wheels (Kohl, 198: 107). Which has a direct role in the organization of pottery production (Abedi, 2004). The innovation of furnaces has been due to the need for mass production due to the expansion of human societies and the formation of complex societies and the reduction of production costs (Rice, 1987: 153). In Shahrak-e Firouze, the remains of two pottery kilns have been found. Furnace number one has been severely destroyed and number two is somewhat intact. Both furnaces are built in parallel and there are probably other furnaces that can be identified by expanding the trench. The complete furnace has a northwest-southeast orientation and is oval and created in the natural bed of the earth and has a dome cover. It is a two-part type and in the division of furnaces is considered as a kind of furnace with upward heat (Fig. 2).

Furnaces are located outside the residential zone, exactly on the periphery of the settlement. They are probably located in the industrial part of the site. Due to the dimensions of the kilns, the pottery was mass-produced and the scale of production was probably in the form of off-site production workshops. These techniques and methods of furnace construction were obtained in Central Asia in the late Bronze Age settlements, such as Gonur Depe and Togolog Depe (Sarianidi, 1998, 35; 2002: 31). Another feature of pottery in Shahrak-e Firouze town is the use of sharp pottery wheels. This tool, along with the type of furnaces used, indicates that it is a specialized production. Simple pots are made quickly and pottery forms are varied. Pottery forms are in a comparative approach and chronological view in the Middle and Late Bronze Age. Most of the pottery in the Shahrak are wheel made and are produced with sharp wheels. Although kitchen handmade pottery has been founded.

Coarse mineral temper with quartz particles and sometimes small pieces of pottery have been used to make hand-made kitchen wares. The reason is the fast production of pottery (Shepard, 1980: 25). This tradition has also been reported in Central Asia, especially in Margiana zone (Sarianidi, 1998, 37; Massimov, 1981: 203). In Shahrak-e Firouze, painted pottery has not been found and most of the pottery paste is in the range of buff to red.

In the Middle and New Bronze Ages, pottery is very diverse in form. Considering the quantitative and qualitative variables, seven main groups have been identified, each of which also has subgroups. These groups include: 1- Small Wessel 2- Large vessels with thin bodies, 3- Large kitchen wares, 4- Funnels 5- Flooded weasels 6- Perforated

cylindrical wares (drains), 7- Containers with bridged gutters and 8- burnished Gray wares (Tables 1 and 2).

Conclusion

According to the pottery kilns of Shahrak-e Firouze, the place of pottery production or industrial zone, is located on the edge of the site, which is one of the characteristics of the Bronze Age settlements. The reason is the creation of environmental pollution by the pottery activity. This pattern, which is important in the economic and social fields of human societies, along with quantitative variables such as the volume and size of kilns in the first step indicates the native production of pottery. Evidence of this hypothesis is interdisciplinary studies with XRD method on pottery and clay mines around the site, which along with studying the geological structure of Neyshabour shows that most of the pottery is produced on site and to make them used from a raw material called Neyshabour soil (Khake Neyshburi). Evidence shows that the process of pottery production in the Shahrak was considered a kind of specialization and had an internal state. So far, there is no conclusive evidence of external specialization. In this regard, the economic system has more intra-regional and regional aspects and there is no conclusive evidence of the trans-regional economic system. With the performed typology, it has been determined that the samples of the Shahrak are comparable in a comparative approach with the three regions of Central Asia, including Kopeh Dagh, Balkh and Merv oasis, and eastern Iran. By examining the variables, it has been determined that the most similarity of the pottery characteristics of the Shahrak is with the Central Asian region, especially with the Merv oasis.